MÆRSK POST

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MÆRSK
POST

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Maersk Line focuses on containers. See articles on pages 3-7 and 10-13.

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Young people are also given a good chance in the A. P. Møller Shipping Companies.

Every year a total of about 200 young people are engaged for training.

Since 1958, we have been operating our own school at Head Office for shipping and office pupils. Coinciding with their work in various departments, these pupils receive the fundamental schooling on which to build their future functioning at Esplanaden and, in many cases, in affiliated offices abroad. The school subjects comprise accounts, managerial economics, EDP, and a number of shipping-technical subjects. Another important section of their training is foreign languages, consisting of not only two or three of the main languages, but later even individual courses of for example Arabic, Portuguese or Spanish.

Of the 33 shipping pupils who completed their basic training in the early summer of 1980, 21 have already been stationed abroad.

Other arrangements are made for young people who wish to take up a maritime career:

The training of navigation officers usually begins with a stay at one of the state maritime schools, followed by a 5-months' term on the sail training ship DANMARK. Next the deck cadets are put through practical training on board the MÆRSK ships, before further theoretical studies to become mates or masters are pursued at one of Denmark's navigation schools. In August this year 50 new cadets commenced their training for deck officers along the lines of the A. P. Møller deck cadet curriculum.

For those who choose a career as engineer, A. P. Møller has established its own workshop school in connection with the Svendborg School of Engineering. A basic training of 21 months is followed by one year's service in MÆRSK ships. After further schooling at one of Denmark's schools of engineering follows another term in the ships. In August this year 70 new engineer cadets started their education at the A. P. Møller Workshop School in Svendborg.

Taken as a whole, A. P. Møller has at present under training: 124 shipping, office, correspondence, and accounts apprentices, 245 deck cadets and candidates for the master's certificate, 291 engineer cadets and candidates for the advanced engineer's certificate.

Later in life follow various supplementary professional courses, which are extremely important.

For the office staff, special courses in this country and abroad, management courses, the Bachelor of Commerce degree, etc.

For sea-going officers, comprehensive supplementary courses – in 1980 alone 27 groups of courses, totalling 197 single courses within the main subjects: Safety, technology, and management. Total number of participants 1,436.

It need hardly be emphasized that all this training and supplementary courses are costly. Thus, the total expenses for 1980 will amount to around 20 million kroner. But A. P. Møller has learnt the valuable lesson that it pays to train one's own staff; and we intend to continue along these lines, convinced that in this way we may further Danish competitiveness and secure a competent staff for our shipping companies, both on a short and a long view.

MÆRSK MC-KINNEY MØLLER

The new containerships are mass-produced, so to speak. In this photograph from mid-October newbuilding no. 83, bearing the name "LAURA MÆRSK", is seen on the left at the outfitting quay. Behind it is no. 84, whilst no. 85 is taking shape in the building-dock.

New container service

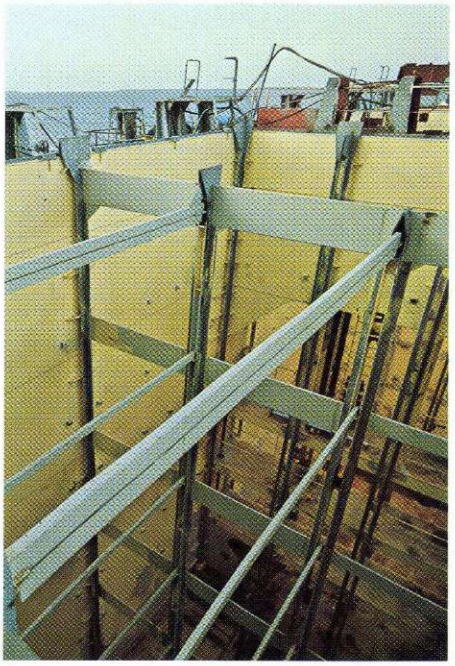
It is still called the Europe Line. But the name and the destinations are about all that remains when, in a month's time, Maersk Line introduces its new, fully containerized Far East/Europe Service.

Large new containerships, thousands of containers of various types, a number of new Maersk Line offices, comprehensive employment of new staff, and EDP systems for operations are some of the many pieces of the big jigsaw puzzle that have now been fitted together for the inauguration of the new Europe Line.

Fortunately, those responsible for putting this jigsaw puzzle together have been able to draw on the experience gained from Maersk Line's USA/Far East Service, as the new Europe/Far East Service is based on the same concept.

Here, as in the USA/Far East Service, a rigid schedule will be indtroduced with fixed dates and hours for arrivals and departures, an advantage for customers which, however, makes very great demands on men and material. In every respect there must be surplus capacity to deal with the unexpected.

Maersk Line has been active in this service sincc 1968, and is, therefore, no newcomer. Still, it differs from the other participants in the Far Eastern Freight Conference through its independent status. This enables Maersk Line to base its work on the concept that it is not the



Slim guides. The newly developed container guide system, which has resulted both in a more compact ship and in greater flexibility when utilizing the cargo space.

Artificial tweendecks, the ideal solution when cargoes are too bulky or too heavy to be stowed in an ordinary container. In this case a single tweendeck sufficed, but if necessary several may be linked together.

"LAURA MÆRSK" at the outfitting quay. The new stern thruster is visible. The ships are also equipped with bow thrusters, enabling them to 'sail sideways'. An ability which will prove valuable during manoeuvres in and out of ports.

cargo or the customers that should adapt themselves to Maersk Line, but Maersk Line that must adapt itself to customers and cargo. This calls for a very high degree of adaptation.

Flexibility

The demands for flexibility had first priority when the new containerships for the Europe Line were developed. The first of these 'Newton' ships, as they have been termed, the "LAURA MÆRSK", was recently taken over from the Lindø Yard.

"LAURA MÆRSK" and the other new containerships would – if built along more traditional lines – have been five metres longer. But a newly developed cell-guide system – known as 'slim guides' – has meant a saving of approximately half a metre in the length of each hatch where the 40′ modules are divided to accommodate 2 × 20′ containers.

The new container guides, together with the ship's other compact design, give great flexibility in combining 20′ and 40′ containers as required. Also, the compact construction contributes to improved speed, manoevrability, and operating economy.

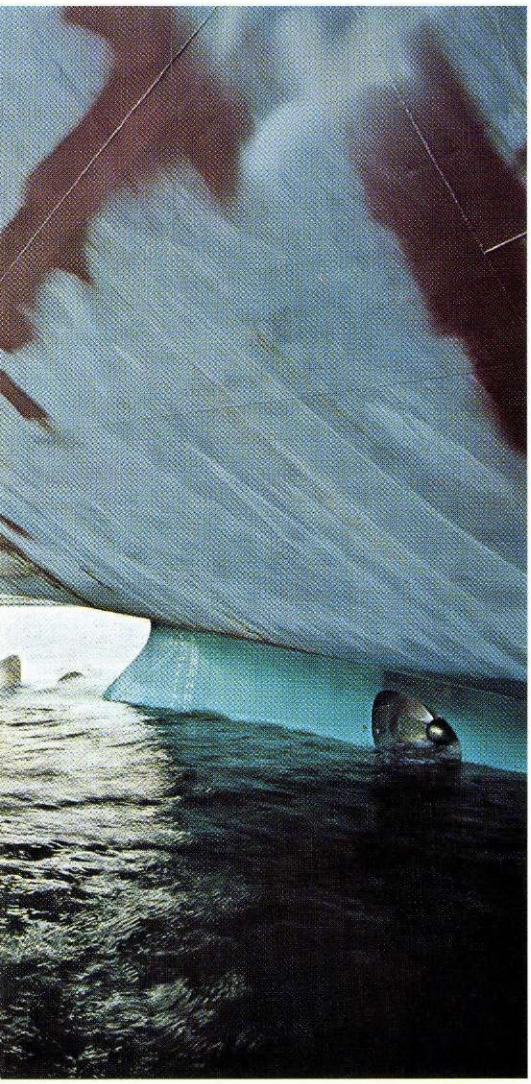
"LAURA MÆRSK" and her sister ships are single-screw containerships using the world's largest diesel engine, which in spite of its 47,000 horsepower has an exceptionally low fuel-consumption. The accommodation is placed aft of the midship section. Each of the ships has a container capacity of about 2,100 twenty-foot equivalents, and the main particulars are as follows:

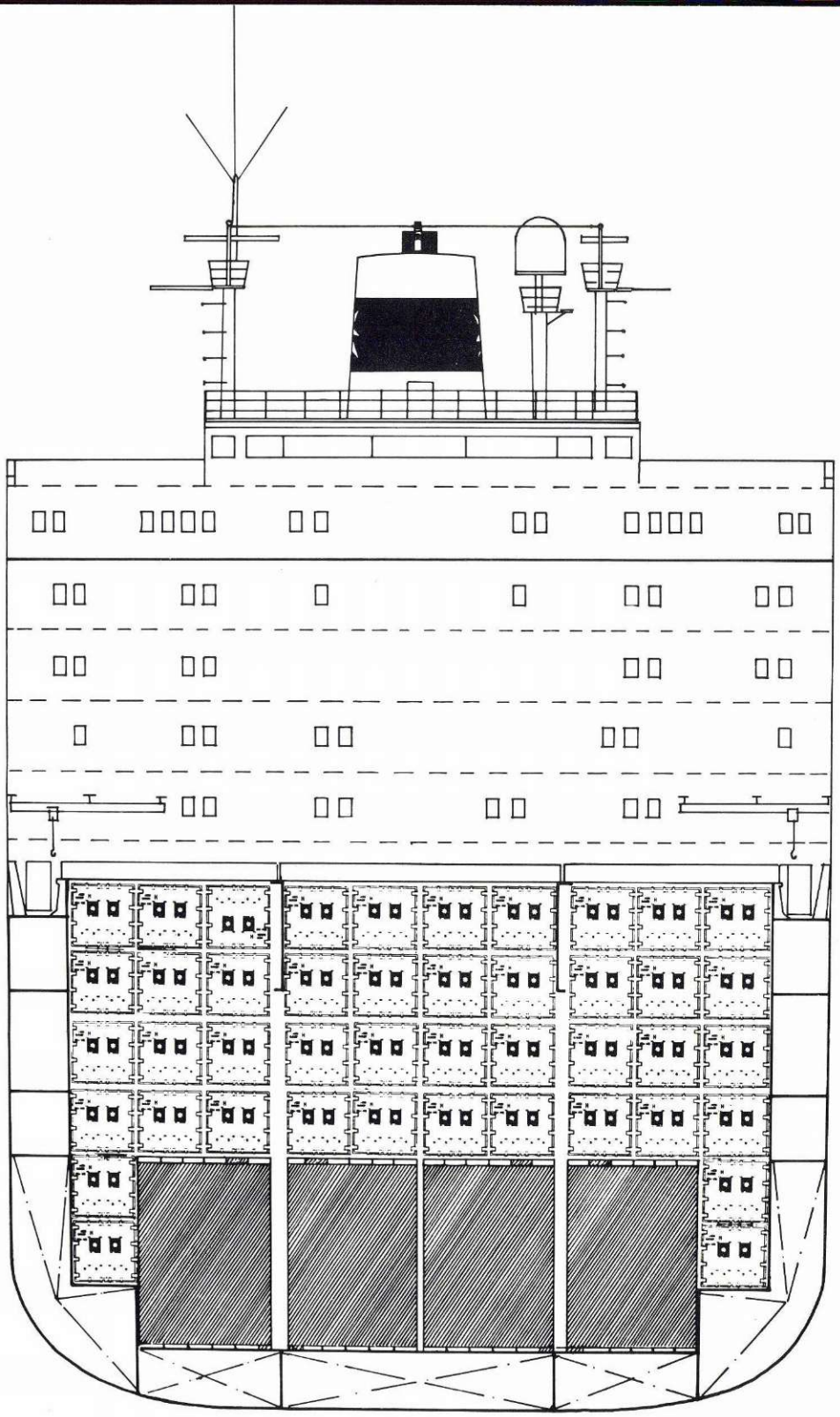
Length o.a.	212.90 m
Length p.p.	202.00 m
Breadth moulded	32.20 m
Depth	19.80 m
Constr. draught mld.	10.17 m
Maximum draught	12.50 m
Deadweight	31,700 tons

Additional staff and new offices

While thousands of people at the Lindø Yard have been working – and are still

In the bottom of each of the new containerships there are tanks for liquid cargoes. They make it possible to carry this type of cargo in quantities too large to be contained in drums, and too small to require tanker transport.





working – at the new containerships, 100 new employees have started work with Maersk Line. They will form the staff of 10 new Maersk Line offices in West Germany, Holland, and Belgium.

In West Germany the new offices are situated in Hamburg, Bremen, Düsseldorf, Frankfurt, Nürnberg, Stuttgart, and Munich. In Holland, in Rotterdam and Amsterdam; and in Belgium in Antwerp. Via telex and Maersk Line's satellite-based online EDP system, these offices will work together with the 17 Maersk Line offices and agents' offices in the Far East as well as with Maersk Line offices in the rest of the world.

EDP systems

During several years the EDP system has proved its efficiency in the USA/Far East Service. All information from a bill of lading is collected in Maersk Line's documentation system. Combined with the equipment control system, it is at any time possible to see where a certain container is, its contents, destination, stowage on the ship, and when it will be at its destination.

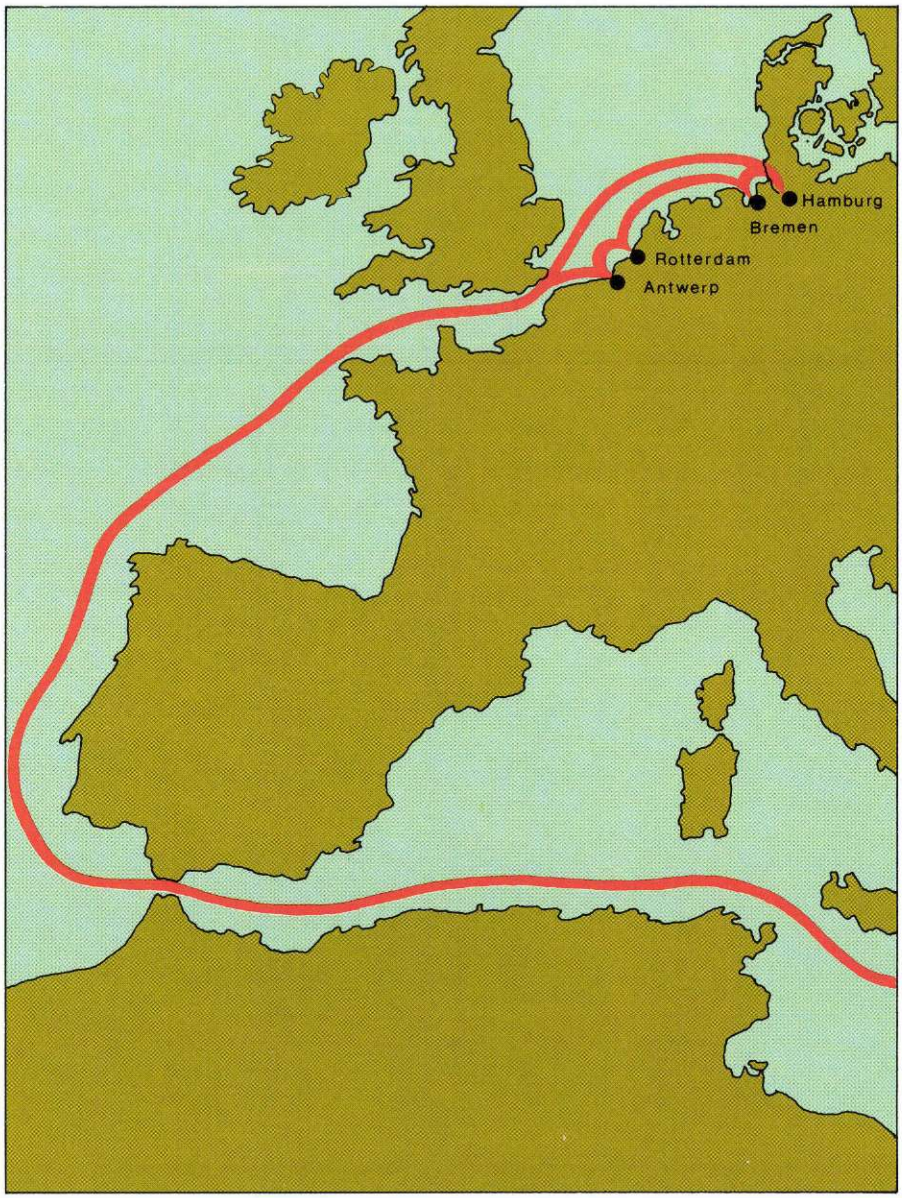
In addition to this container control, the system also offers great operational advantages, allowing full control of loaded as well as empty containers, and ensuring that the right container for an article is in the right place – at the right time; in itself a function that would run into problems without such aid.

Container types

In connection with the introduction of the new Europe Line, Maersk Line has invested about 300 million Danish kroner in new containers. It is a question partly of traditional types, such as dry containers, reefer containers, open tops, and flat racks in 20′ and 40′ units, partly of open-side units and bulkcontainers in 20′ size.

Other cargoes

At the same time investments have been made in a number of untraditional



solutions to problems normally incompatible with a container service.

It may be difficult – if not impossible – to place a bulldozer in an ordinary container. But Maersk Line's new containerships have been built to carry goods of unusual size and weight by means of artificial tweendecks, which fit into the ship's construction of container cells, as if they had been there when the ship was built. If such an item of cargo is too large for one af these units, several tweendecks can be linked together.

Liquid cargoes

Another task which Maersk Line set itself when building up the new Europe Line was how to send 360 cubic metres of vegetable oil from Rotterdam to the Far East, when most services are containerized. The immediate answer is that it cannot be done.

Once again, however, a solution to this problem has been found. Each of the new containerships has been fitted with four tanks for this type of cargo. The ships will be the first containerships in this trade with such tanks – probably the first in the world at all.

The tanks, which are fully coated for the transportation of chemicals and vegetable oils, are built to ISO standards. They are placed in the bottom of the ship, and each of them is supplied with its own loading/discharging equipment, enabling the ship to carry four different cargoes at the same time. Each tank can carry 360 cubic metres, and they are self-draining and of a construction that makes them easy to clean.

Hamburg – Singapore in 17 days

In about a month the giant jigsaw puzzle will have been fitted together, and from then on one of Maersk Line's new containerships will call at Singapore every second Monday, at 0700 hours, all the year round. Only 17 days after it departed from Hamburg. This is the shortest transit time offered at all.

The route of the new service has more or less the traditional pattern.

Ten hours later the ship will again depart from Singapore bound for Hong Kong. Arrival on the Thursday at 0800 hours. Thursday after Thursday.

17 days from Hamburg to Singapore, 20 to Hong Kong, 21 to Keelung, 23 to Busan, 25 to Kobe, and 26 to Tokyo.

Naming at Lindø

On Friday, October 10th, the first of a series of new containerships for the MÆRSK fleet, of the so-called Newton class, was named.

Sponsor was Mrs. Astrid Borch, wife of the Danish Ambassador to the USA, Mr. Otto Borch, and the ship was named "LAURA MÆRSK".

The newbuilding, which is of about 32,000 tdw., will, in the latter part of December, commence Maersk Line's new container service between the Far East and Europe.

The ship is equipped with a B&W main engine, one of the most powerful so far installed in any ship.

The sponsor, Mrs. Astrid Borch, together with her husband, extreme right. Between them Mr. Troels Dilling, managing director of the Yard, and on the left Captain Kurt Brændekilde, master of the new ship.

The newbuilding during the trial run in the Skagerrak.

Master of the newbuilding is Captain Kurt Brændekilde, and Chief Engineer Willy Frede Jensen is responsible for the engine room.

Activities from Gedser to the Skaw

The whole of Denmark is a busy field of work for Dansk Undergrunds Consortium's big staff. More than 650 people are today directly occupied with D.U.C. activities, and to this should be added many hundreds engaged in work connected with the oil and gas projects.

Naturally, the main D.U.C. efforts in the North Sea centre around Gorm, Dan, and the gas fields; but in 1980, activities also include the waters off Vendsyssel in the north, as well as South Jutland and the Baltic around Gedser in the south. Several years of determined planning will, during this year, result in activities in several spheres to an aggregate amount of 1,100 million kroner, all with the common purpose of making Denmark a little richer regarding oil and gas.

It is characteristic of oil and gas projects that the preparatory stage is somewhat longer that most people would automatically imagine. Two examples will serve to illustrate this:

In 1976, D.U.C. decided – after the 43rd dry drilling on land, near Oddesund, – that if any hope should be held out at all of finding oil on land, it would be necessary to go through all information gained through these drillings, combined with new seismic results.

During the past years the seismic technology has experienced a tremendous development, just as the advances of EDP techniques have brought about more efficient processing of seismic results. 1,500 kilometres of seismic investigations have been carried out in South Jutland alone, and after investments of 30 million kroner in this re-evaluation of possibilities on land, the drilling rig T-14 was ready, on July 31st, to start the Løgumkloster-1 drilling. The ensuing production test had to be discontinued, however, as the gas of the drilling was unable to burn because of a high nitrogen content. The elimination of gas is a condition for starting a test production, so it was necessary to break off the test. In consequence of this the drilling rig was moved to Tønder, whilst the technicians go on grappling with the gas problems at Løgumkloster. Another drilling, close to the last one, will be made later.

The Gorm Field is another example of how long the preparatory stage of a new project must necessarily be. Still, it is atypical, because the Gorm project is breaking records in speedy establishment of production installations in the North Sea. Even in this case, however, outside spectators may think it a long time. But let us have a look at the time factor.

In 1975 and 1976 Dansk Undergrunds Consortium carried out the first and second appraisal drillings at the Gorm Field, then known as the Vern Structure. Two drillings among many others, which alone cost about 60 million kroner. Based on the evaluation by technicians of the Gorm Field, it was decided, at the end of 1977, to start up production at the field. Permission from the authorities was given in July 1978, and now things began moving. Orders to an amount of 1,500 million kroner were placed with Danish and foreign undertakings; though delivery limits were tight – it was a question of increasing the Danish energy production – and though the experience gained by Danish contractors from earlier offshore projects was limited, D.U.C. succeeded in placing about one-third of the orders with Danish firms.

Today we know that the Gorm Field will be reality in 1981. The two extraction platforms and the processing and accommodation platform have been positioned 214 km out in the North Sea. The autumn weather was tricky, though not insuperable. With the heavy-weight aid of the floating crane, DB 100, the 3,000 ton, 50 metre tall processing platform was positioned first; next came the 1,700 ton, 20 metre tall deck. The DB-100 floating crane can manage up to 2,000 tons in one lift, and the work at the Gorm Field is its biggest job so far.

In mid-October the seven modules containing the processing and accommodation facilities for Denmark's largest oilfield so far were also installed. The only remaining task depending on a floating crane the size of DB 100, is the positioning of the three-legged flaring-platform. It is at present awaiting towing to the Gorm Field in the port of Esbjerg.

Already now more than 200 men are engaged at the Gorm Field, preparing for the oil to start flowing from one of the extraction platforms soon after New Year. When the field has reached full production next autumn, an annual extraction of between 1.5 and 2 million tons of oil is expected.

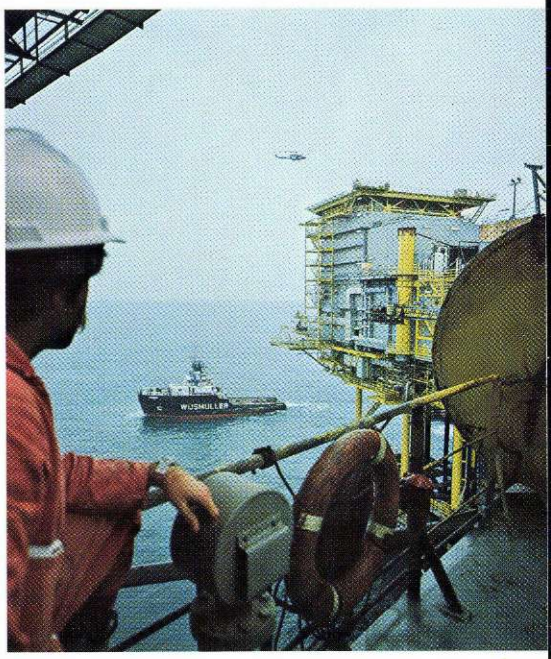
Whilst these two projects are nearing completion, new possible drilling sites are being investigated seismically. During the past year, 1500 km of seismic tests have been made in the North Sea – right from the south-west end of the Danish sector to Skagerrak, besides 600 km in Lolland-Falster and South Jutland, and over 600 km in the Baltic, the Funen waters, and up through the Great Belt and Kattegat.

Two new offshore projects are at present about to be launched. The first order regarding the great gas project has already been given. It concerns the construction of gas extraction platforms, a project that amounts to 250 million kroner. The order has been placed with Danish Offshore Venture at Virum, operated by Rambøll & Hannemann and Petro-Marine.

Also regarding the many subsequent orders for the gas fields it is hoped by Dansk Boreselskab, responsible to

The Gorm Field is becoming a reality: The two extraction platforms and the large central processing platform with the seven processing and accommodation modules are installed in the North Sea. In front the floating crane, DB-100, which has been used for the installation. In the background the MÆRSK EXPLORER, which has started the Gorm production drillings.

A view from the MÆRSK EXPLORER of the central Gorm platform with the hotel module at the top.



Dansk Undergrunds Consortium for the planning and establishing of the processing installations, that there will be considerable Danish participation. It is a question of five extraction platforms, three processing platforms, 12 processing and accommodation modules, and 40 km of gas pipes. Through qualification rounds in February next year, Dansk Boreselskab will invite tenders for the projects.

D.U.C. has also filed a petition for extracting oil from the Skjold Field, situated between the Dan and the Gorm Fields, about 200 km out in the North Sea. At first this project concerns two drillings, an observation well, from where data may be gathered regarding the effect of the production on the field, and a production well, expected to yield from 100,000 to 150,000 tons of oil per year.

All through September the seven modules and the deck for the central platform of the Gorm Field were awaiting favourable weather conditions in the port of Esbjerg, allowing them to be towed to their position in the North Sea.

Maersk Line on line

On August 26th, the MÆRSK fleet took delivery of m.s. "CHARLOTTE MÆRSK", on completion of a major conversion the ship had undergone at the Japanese Hitachi Zosen Shipyard, Hiroshima Works (Innoshima), followed by successful sea trials. A new ship, ballasted with years of experience, was ready to join Maersk Line's new container service from the USA to the Middle East and from the Mediterranean to the USA. Like another bird Phoenix, the "CHARLOTTE MÆRSK" had been converted from a conventional liner to a modern, fully cellular containership in 48 days. Once again the demand for even greater efficiency in cargo-handling – this time container cargo – had been met.

Planning

Twelve years ago, when, as a newbuilding, she went on her trials the first time, »CHARLOTTE MÆRSK« was not only considered to be, but actually was an example of modern top efficiency in liner tonnage – and so were her six sisters. The seven 'C ships' – known around the world as The Seven C's – were famed for their fine, slim lines, high speed, large, easily accessible hatches, a combination of speedy cranes and strong derricks, besides side ports for efficient pallet-handling. The ships were also known for their record-time loading and discharging operations; but the fast development of recent years within the container concept in liner traffic, including the Europe/Far East service where the majority of the C ships were active, tended to make the vessels less and less optimal.

So, it was only natural that A.P. Møller should start contemplating how the ships might be better utilized in the changed competitive environment.

In the service between the USA and the Middle East, Maersk Line was up against strong competition, and when in the summer of 1979 the USA/APG Service took stock of its situation regarding competition and earnings, it became evident that untraditional thinking was needed if this service should remain a profitable business.

Most competitors, and at any rate the most important ones, had brought in or were in the process of bringing in efficient but costly Ro-Ro tonnage. There was a clear tendency in the market pointing towards containerization, now made possible through a marked improvement of Middle East ports. The fact that Maersk Line had established itself, in the eyes of American shippers, as efficient and competent container operators in its USA/Far East Service was, naturally, also considered as an advantage.

The building of new ships would be expensive and take time. Delivery time for five new ships, needed for this service, would also entail a prolonged starting-up period, during which it would be necessary to employ varying tonnage.

Most important of all, however, the prolonged time of delivery might mean that the niche – the demand for a direct container line – now existing in the market would be lost to a competitor.

Our considerations resulted in the decision to convert all seven C ships – five of them for the USA/APG Service, without cranes, and the last two, equipped with gantry cranes, for the Japan/Indonesia Service.

Though this is not the first example, in the history of A.P. Møller or of shipping as such, of ships having been cut in two, with new sections or even full fore-ships being added, it must still be considered as an untraditional though efficient solution to secure suitable tonnage.

Conversion

Five of the ships are converted at Hitachi's shipyard on the island of Innoshima, whereas two are converted at Hitachi's Sakai yard.

In the contract 48 days had been stipulated for the conversion of »CHARLOTTE MÆRSK«, and 40 days for the other ships.

At the arrival of each ship at the yard a new fore-part is almost completed, including the construction of cells and hatches, and the first layers of paint have been applied.

A number of triangular box structures are seen near the dock-side. These 'boxes' will provide the 'fairing' between the new fore-part and the original stern. They will lend to the new ship, now five metres broader than before, acceptable, harmonious lines – not only to please the eye but, especially, to secure optimal speed.

When the old ship arrives, it is docked with the stern end inwards, and hardly has the water been pumped out of the dock, when yard workers start work with their oxygene cutting-tubes. One team will start about 1.5 m in front of the accommodation to cut away a border, 10 cm broad, from the deck to the tank-top. At the same time other teams will start converting the majority of the fore-edge on the first storey of the accommodation to fit in a deck office, which will contain, among other things the control panel for the ballasting-, draining-, and bunkering-systems. Other yard workers again are preparing the 'monkey island' – the roof of the bridge – for the mounting of another two storeys, the uppermost of which will contain the new bridge. This additional height has been necessitated by the demands for a better view for navigation officers. when the ship is carrying four tiers of containers on deck. One team of yard workers is concentrating on hatch no. 6 – in the new ship it will be no. 9 – aft of the accommodation, to prepare it for container modules, including cellular arrangement.

In a few days the fore-part and the stern end will have been parted.

To make sure that the ship will remain stable on the keel blocks, three 'legs' have been welded onto the hull on each side. Once again water is let into the dock, and into the single hatch of the stern end. As the water rises in the dock, the fore-part will become light and float, whereas the stern will remain on the bottom thanks to its ballast. Next the old fore-part can be docked out and the new one docked in.

Preceding measurements and markings guarantee that the new fore-part is positioned with great exactitude against the stern part. The water is again pumped out, whereupon follow the welding together of the two hull parts and the mounting of the 'fairing boxes' mentioned before.

Large building-cranes hoist the two new storeys, completed on land, in position on top of the former bridge house. The new ship is taking shape.

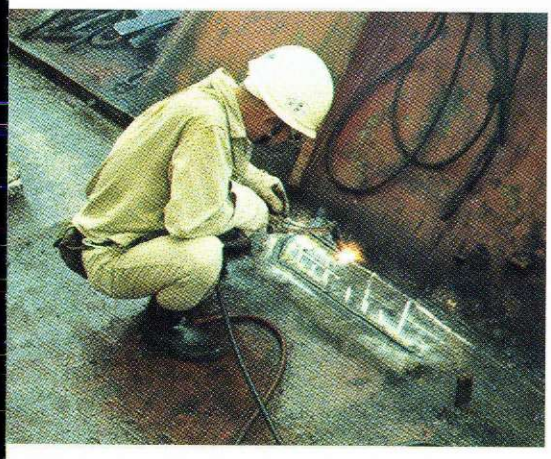
Next follows the time-consuming work of connecting all installations, overhauling the engines, re-arranging the accommodation, etc.

"CHARLOTTE MÆRSK" on her trial run in the Kattegat in 1968.

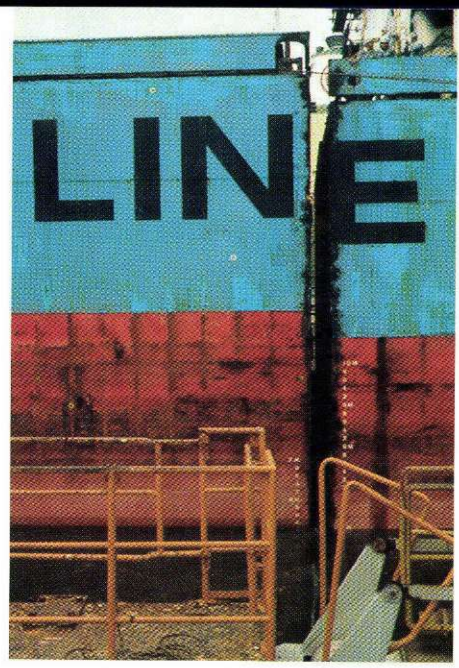
"CHARLOTTE MÆRSK" on her trial run from the Hitachi Zosen yard, Innoshima. 1980.

Launching of new fore-part for "CHARLOTTE MÆRSK".

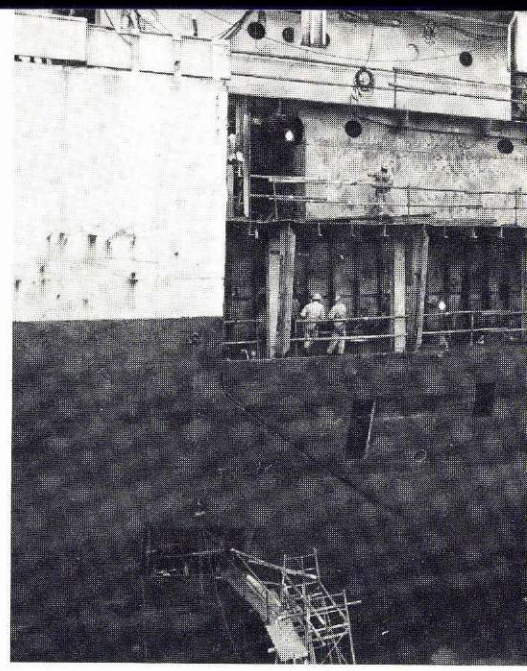
Box structures which will form the fairing between the new fore-part and the old aft-part.



Yard workers start work with their oxygene cutting-tubes.



A border of 10 cm is cut away from the deck to the tank-top.



Trial run

Before the ship is again delivered to its owners, it must pass a long series of demanding tests to ensure that everything on board functions satisfactorily.

During the trial run the ship is checked and tested to ascertain whether the speed is what was expected, that there are no abnormal vibrations in the accommodation or the hull, that the level of noise does not exceed what is permissible, that engines, rudder, bow thruster, anchors, and winches function as they should, and, last but not least, that the ship's seaworthiness, such as manoeuvrability, stopping distance, navigation equipment, etc., is fully acceptable.

»CHARLOTTE MÆRSK« passed all tests with flying colours.

The main particulars of the ship are:

Lenght o.a.	197.07 m
Breadth mld.	29.70 m
Depth mld.	16.00 m
Constr. draught mld.	9.14 m
Corresp. deadweight	19,337 t
Max. draught mld.	10.50 m
Max. deadweight	24,937 t
Gross tonnage	21,609 t
Net tonnage	14,402 t
Container capacity	1,222 TEU
Reefer plugs	60
Speed	21.3 knots
BHP	18,000
R/m	118

Middle East Container Line

After conversion and delivery from the yard the ships will proceed to Houston, from where they will set out on their future schedule.

On October 8th, »CHARLOTTE MÆRSK« departed from Houston, commanded by Captain E.A. Stengaard – the same captain who, five years ago, opened the service to the Middle East as master of m.s. »MARIT MÆRSK«.

During a round voyage of 70 days, calls are made at the following ports: Houston and New Orleans in the U.S. Gulf; Savannah, Baltimore, Philadelphia, and New York on the U.S. Atlantic Coast. From New York the next destination is Jeddah in the Red Sea, passing through the Suez Canal. After Jeddah the ships call at Dubai, Dammam, Jubail, and Bahrain in the Arabian/Persian Gulf. From Bahrain Kuwait is covered by a Maersk Line feeder vessel, as Kuwait cannot yet offer the necessary container facilities to containerships with no gear of their own.

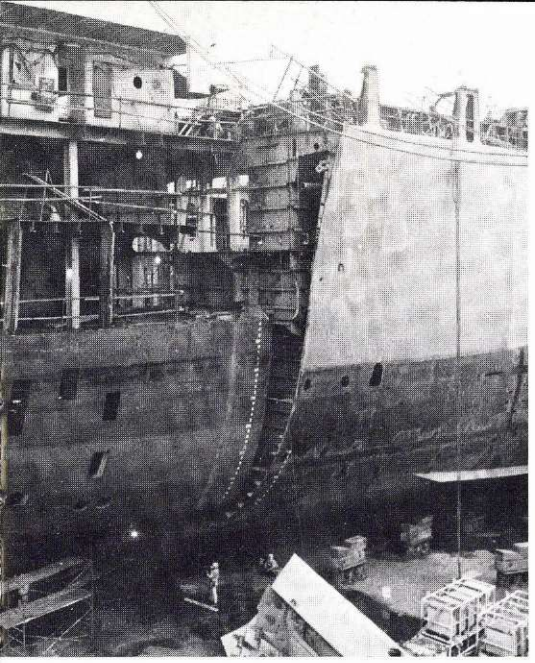
From Bahrain the ships are again bound for the Suez Canal, and having passed this they call at the two Italian ports, Livorno (Leghorn) and Genoa, next proceeding to Marseilles in France, the last loading port in the Mediterranean being Valencia in Spain.

Before a ship is back in Houston to commence its next voyage, it will make calls at New York, Philadelphia, and Baltimore.

Besides the direct ports of call the liner net of the Middle East Container Line (MECL) service includes a great number of 'inland points' by rail and truck connections, in the USA as well as in Canada, Mexico and the Middle East.

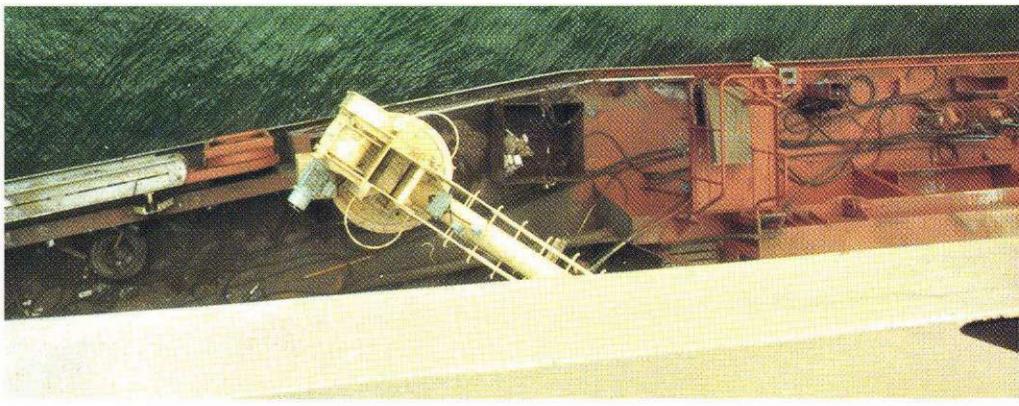
To and from all these destinations all forms of containers are accepted, including 20-and 40-foot 'dry containers', 40-foot 'reefer containers', 40-foot 'high-cube containers', i.e. containers with a height of 9.5 feet compared with the normal 8.5 feet. These higher containers are well suited for light-weight cargo, and appeal particularly to shippers of refrigerators, washing-machines, and the like, as these commodities often pile easily in such a 9.5-foot container.

For cargoes that cannot be stuffed in these standard sizes, various types of containers have been developed – 'open-tops', 'flatracks', and 'artificial tween-decks'. They come in very handy especially regarding machinery, drillpipes, and similar types of commodities, which are traditionally freighted in considerable



The new fore-part is docked in to be joined to the original aft-part; the water is pumped out, and the welding together of the two parts can begin. The difference in breadth is overcome by the 'fairing' boxes.

The new fore-part, right-hand side of photo, seen from above together with the fairing, left.



quantities to the oil industry of the Middle East.

The service to ports in the Mediterranean is a new initiative, as far as Livorno and Marseilles are concerned. Genoa was a port of call of the 'Suez Line', which went round the world until 1968, whereas Valencia was on the schedule of the conventional USA/APG Line.

In spite of our previous experience in this area the start of the Mediterranean service must be considered as a new and considerable innovation of Maersk Line's container services.

In line with what was established for the USA/Far East Service, the new service will, to a very high degree, rely on EDP regarding documentation, statistics, and container control. Thus, in Bahrain and Madrid so-called EDP centres will be established to connect the Middle East and the Mediterranean with Maersk Line's world-wide data network.

To create a solid foundation for the new service, which represents considerable investments, the organization abroad as well as at home has been strengthened. A number of A. P. Møller staff have been stationed in the Middle East and the Mediterranean area, just as the agency organizations in the Middle East have been shaped to suit Maersk Line's specific needs. In the USA the sales organization in particular has been greatly extended, and at Head Office a separate organization has been implemented within the frames of the Line Department, covering Traffic/Operation, Sales and Marketing, Finance, and Systems.

Ulrik Brandt

"CHARLOTTE MÆRSK" as traditional general-cargo/semi-container vessel and as fully cellular containership.

Houston skyline viewed from Sam Houston Park along the banks of Buffalo Bayou.

News from HOUSTON

BY TIMOTHY M. PANEK

In August 1977 MÆRSK POST carried an article about Houston, Texas, by Larry Keller, then traffic manager of the local Maersk Line office. Through this, readers were given a survey of the city's history, and of Maersk Line's efforts to replace the first tentative monthly sailings on the so-called USA/APG line with a regular twice-monthly service, carrying all kinds of cargo.

The article in this issue, by our new local MÆRSK POST correspondent in Houston, Timothy M. Panek, is printed in connection with the recent development in Maersk Line activities: The introduction in October of new, regular liner services on the route USA/Middle East/Mediterranean, served by reconstructed C ships. This means a change-over to a fully containerized liner service. The Maersk Line staff, who have been domiciled in downtown Houston in modest conditions since 1975, moved to new and larger office premises on the western outskirts of Houston on 15 March, 1980. The staff today is of 28.

Houston, Texas began as the scheme of two land speculators less than 150 years ago. Today it is the fifth largest city in the United States and the uncrowned energy capitol of the world. As a city, it has evolved far beyond the plans that the brothers, John and Augustus Allen, had when in 1836 they purchased 4,000 acres of marshy land on the banks of Buffalo Bayou in southeastern Texas, at $1.25 per acre, and set out to make their fortune.

They laid out streets and building plots and named their town after General Sam Houston, who was a very popular hero of the Texas War of Independence. With the use of their considerable political power and the lure of a town named after the newly elected president of the infant republic, the brothers succeeded in having Houston named the first capitol of the Republic of Texas. The city would have this honor for only two years, however. In 1839, the seat of government was moved to Austin, where it remains today.

With the loss of its status as capitol Houston fell on hard times, only three years after its birth. In 1841, a city

3-D International Tower viewed from the east – early morning.

Maersk Line reception area on 10th floor.

Documentation Department.

ordinance was passed that would prove to have far reaching consequences in shaping Houston's future. The ordinance created the Port of Houston Authority, which was charged with the task of promoting and creating a serviceable port and insuring a navigable channel.

This was no simple job as Buffalo Bayou was only 6 feet deep at some points, and the passage from Galveston Bay was 25 twisting miles, along an almost tunnel-like path through the lush subtropical forest. Crew members on early steamers literally hacked a passageway for their boats, while passengers amused themselves by shooting the alligators that were abundant along the river. In time the river was cleared of its hindering vegetation, and in 1869 the Houston Ship Channel Co. began work to deepen and widen the channel to accommodate ocean-going vessels.

Houston grew steadily throughout the late 1800's as a regional trade center. In 1901 the fuse of Houston's explosive growth was lit by the discovery of oil at Spindeltop, a small town about 100 miles from Houston. Only one year later, the largest independent oil refinery in the world at that time was located in Houston along the Houston Ship Channel, and in 1915 the Gulf tanker "Winifred" arrived with the first cargo of foreign oil, from Mexico. A year later, Southern Steamship Company established the first regular cargo service to Houston. Hand in hand, the petrochemical industry and the Port of Houston have led Houston to its prominent position in the world today.

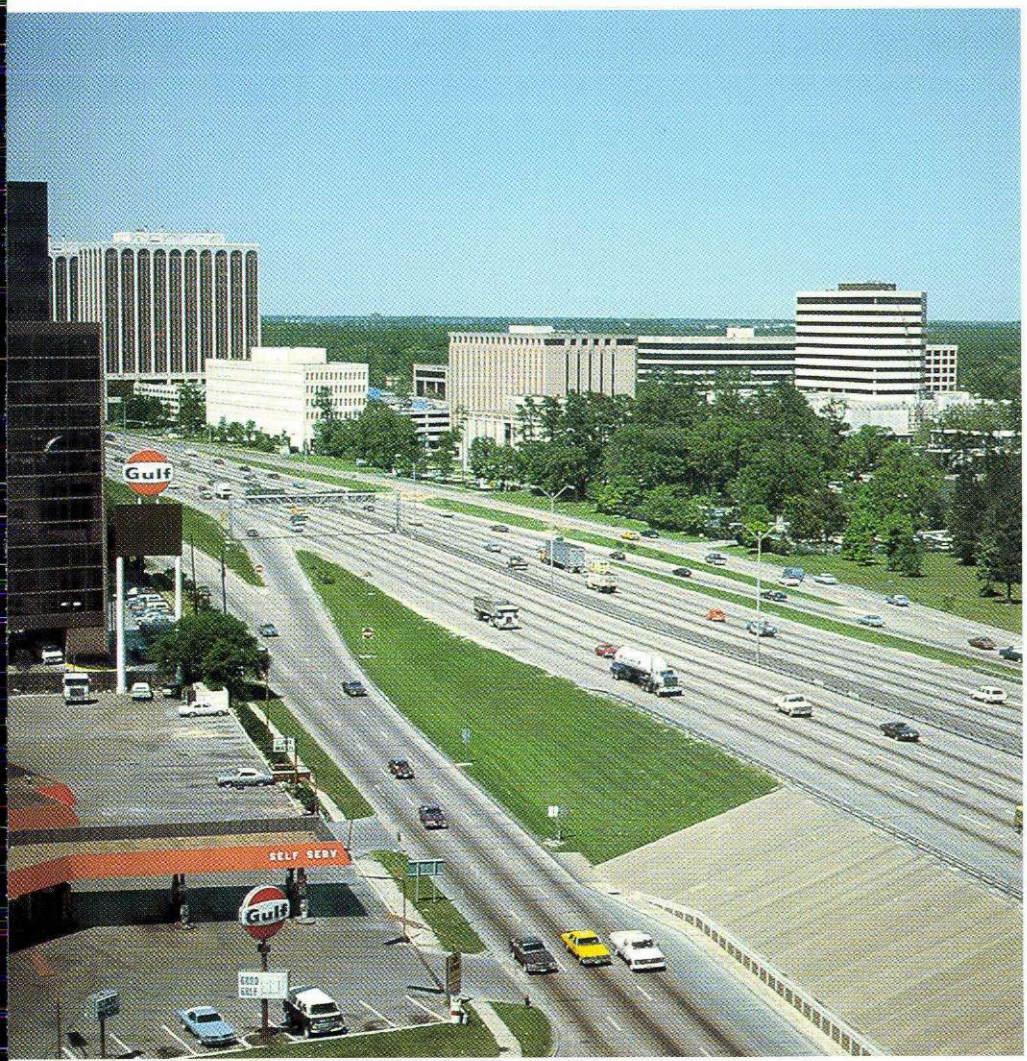
Today, Houston is a city characterized by two things, prosperity and prolific growth. The city's economic boom is a product of many factors: A moderate climate, skilled work force, favorable government regulations and tax structure, and most of all, it is a city with af unified sense of achievement and confidence in the future.

Though these factors foster the boom, it is petrochemical dollars that fuel it. Of the 40 largest oil companies in the U.S. all but one are located in Houston. In 1979 over 31,000,000 tons of oil were imported through the Port of Houston to feed the thirst of the many refineries located in the city and its environs. Houston is also a center for the oil-well tool, supply, and drilling industry, which supplies a world-wide market. Many other businesses which serve the varied needs of the oil industry also make their home in Houston.

Houston's economy, however, is not based solely on oil. It has been the leader among U.S. cities throughout the late 70's in construction starts. Several of the world's largest engineering and construction firms are based here. Many other industries and businesses are represented in Houston, but even further diversification will be necessary in the future, as Houston's economy is weaned from oil and gas, if it is to remain as healthy as it is today.

It is estimated that Houston gains 2000 new people each week, drawn to the city by its promise of a better way of life. Some experts claim that Houston could be the largest city in the U.S. in 25 years, and the largest in the world in 75 years. The city of Houston now covers over 500

Looking north-east along West Loop Freeway from Maersk Line's offices.



Sales Department with background view of Houston skyline seven miles away.

square miles. With a standard Metropolitan Statistical Area of 6955 square miles, nearly devoid of the suburbs and satellite cities that generally spring up around major cities, Houston certainly has physical room to grow in.

One issue that could curtail Houston's growth and popularity is its ability or inability to cope with the growing pains associated with any boom town. With 500 new vehicles registering to operate on Houston streets each week, freeways built 20 years ago are vastly overcrowded, resulting in massive traffic tie-ups. The creation of the Mass Transit Authority by public referendum in 1978 to solve these problems, should help to ease the city's rush hour crush. Among present plans are a complete revamping of the bus system, contra-flow lanes for buses and van pools, and eventual construction of a commuter rail system. Most estimates say it will be 1985 before Houston begins to benefit from public transportation.

Other problems, such as a growing crime rate, housing shortages, and soaring costs are all related to Houston's boom-town status, and will involve a great deal of hard work by residents and local government to keep them at manageable levels.

Though Houston's prosperity has brought problems, they are greatly outnumbered by its blessings. Unemployment is almost non-existant, and the standard of living is higher than the national average. What was once spurned as a cowboy town is now known for its cultural achievements. The city supports its own symphony orchestra, ballet, and critically acclaimed opera company. Its Museum of Fine Arts exhibits a fine selection of works and has several different featured artists exhibited each year. It has many fine repertory theatre groups, offering plays throughout the year, which, in recent years, have begun a trend to introduce more firstrun plays. The city-owned Miller Outdoor Theatre provides a summer program which features free public performances of the symphony, opera, and ballet, as well as a variety of plays, musicals, popular concerts, and special events. Numerous nightclubs offer a wide spectrum of entertainment, from comedy routines to jazz, and rock and roll to extremely popular country western music.

One of Houston's most outstanding achievements is the Texas Center. Located on 200 acres of land, largely donated by oil-rich philanthropists, and consisting of more than 20 hospitals, medical, dental, and nursing schools, it is one of the foremost medical research centers in the world, providing employment for over 20,000 people.

While many of the hospitals are general hospitals, there are several specialty institutes. These include: The Texas Heart Institute, where over 10,000 open heart operations are performed each year on people from over 40 different countries, the M. D. Anderson Hospital and Tumor Institute, which is devoted to the research and treatment of cancer, Texas Children's Hospital, where a boy, born without any of the body's natural immunological systems, has lived for eight years in a germ-free environment, the

Cullen Eye Institute, and the Texas Institute of Research and Rehabilitation. The Medical Center is a tangible example of the commitment of the people of Houston to a better life.

In 1962 the National Aeronautics and Space Administration (NASA) chose Houston as the site for its Manned Spacecraft Center. It became the control center for the U.S. Space Program, and it was from here that man's successful landing on the moon in 1969 was directed. The focal point of the center's work today is the attempt to create a re-usable space shuttle. If successful, it could lead to commercial space flights before 1990. The center is open to visitors with tours daily. Among its many interesting exhibits is a mock-up of the original lunar landing, utilizing much of the actual equipment and gear that went to the moon.

Maersk Line Houston opened its doors in 1975. It was located in a small office on the 11th floor of the World Trade Building in downtown Houston. It was from here that the inland bridge, from the U.S. Gulf to the West Coast, serving the USA/Far East container line, was organized by the original staff of seven. With the growth of traffic in this service and the adding of the USA/APG service, the office soon expanded to the point where it occupied most of the 11th floor.

By 1979, many businesses were leaving the downtown area for new office buildings that were rapidly creating a business district on the city's west side. Many reasons were seen for the shift. Among them were the need for facilities and communication systems to keep up with the growth of business in Houston, and the desire by many companies to occupy a building whose modern architecture would be a visual symbol of their growth and success.

With the introduction of the USA/Middle East/Mediterranean Line, scheduled for late 1980, and the need to expand further to meet the needs of its present and future customers, Maersk Line was again faced with a shortage of office space. It joined the ranks of a number of businesses that were leaving the downtown area. On March 15, 1980, Maersk Line Houston took possession of its new office in the just completed 3-D International Building. This striking building is located in western Houston in the Magic Circle, and commands a picturesque view of the downtown skyline, seven miles distant. The Magic Circle itself contains one of the most modern skylines in the world, as few of its more than 25 office buildings, hotels and high rise condominiums existed before 1970. As of June 1980, at least eight buildings in the area are in various stages of construction, and another ten are on the drawing boards. Each is designed in harmony with a master plan that was created for the area when the original development began 15 years ago.

Maersk Line occupies nearly 7000 square feet on the 10th floor at the southern end of the building. With a present staff of 28, there is ample room for expansion for both staff and equipment in the future, as Maersk Line keeps pace with the demands of boom-town Houston.

THE GULF STREAM

Will textbooks have to be revised?
Does the Gulf Stream not cross the Atlantic?
Is Nothern Europe receiving oceanic warmth through a different, so far hardly known current system?

BY V. J. BRØNDEGAARD

"As we sailed on a southerly course, thus getting farther away from the coast, all three ships were caught by a current during the next few days, against which they could do nothing, even with the help of favourable winds. It did look as if they were making good progress, but they soon found that they were being driven back, and that the current was more powerful than the wind. Two ships near the coast were able to cast anchor, but the current was so heavy that the anchor cables were taut almost to the breaking-point. The third ship, farther out, was unable to locate a ground on which to drop the anchor. It was carried away by the current, and we lost sight of it though it was a clear and quiet day."

Those were the words written by the Spaniard, Ponce de León, in the logbook when his ships were sailing along America's south-east coast, somewhere off Florida. And they mark the discovery of the Gulf Stream.

According to what we learnt at school, and what is told by every encyclopaedia, the Gulf Stream from the Mexican Gulf forms a gigantic 'heating source' for our continent. It carries tropically warm water across the Atlantic, giving rise, together with the atmosphere, to the travelling depression systems that lend a humid and mild coastal climate to West and North Europe. Thanks to the Gulf Stream the Norwegian coasts and their ports are ice-free even during the coldest winters, grain may be grown in Iceland, palms exist on the west coast of Ireland, etc.

This is all correct, and then again it is not. For it has now been proved that the Gulf Stream does not cross the Atlantic after all. There is no doubt that an enormously efficient current of warm water passes from the Gulf northwards through the ocean, warming the waters right up to Spitsbergen and Greenland. However, it is not the Gulf Stream, but some other, still hardly known, so-called 'North Atlantic Current' that takes over the functions of the Gulf Stream. It causes the North Atlantic surface water to become warmer than would otherwise have been the case – about 9°C 'too warm' between Iceland and Norway.

Through four centuries, much evidence was gathered to the effect that the Gulf Stream passes direct from the New World to the Old. For example, tropical plants, carried along by the sea current, have been found on the coasts of Northern Europe; in 1772 a mast was found in Scotland, belonging to a ship that burnt off Jamaica. Bottle messages crossed the Atlantic to Norway. The prince of Monaco was very interested in oceanography, and in 1882 he had 1600 hollow copper balls made in order that he might map the route of the Gulf Stream from New Foundland to the Arctic Sea on the basis of their passage.

Thanks to the electronic measuring and calculating techniques available after the Second World War, it was possible to register at the same time the current and the temperature thousands of metres below the surface of the sea. The techniques made it possible to gather and process amounts of data material it would have taken decades to get before the War.

Now the Gulf Stream was examined more closely. From Florida it carries 30 million cubic metres of water per second; where it turns north-east, it has swollen to no less than 150 million m^3. Here it starts branching to the right and left in enormous swirls of warm water, several hundred kilometres in breadth and reaching as far down as two or three thousand metres. These swirls accompany the Gulf Stream in a backward rotation, so to speak, causing a large proportion of the warm water to be reversed and stream back.

The Gulf Stream ends where the cold Labrador Current attacks its flank, and where underwater mountain ranges, in some places miles high, block the way. The Gulf Stream does not continue towards Europe.

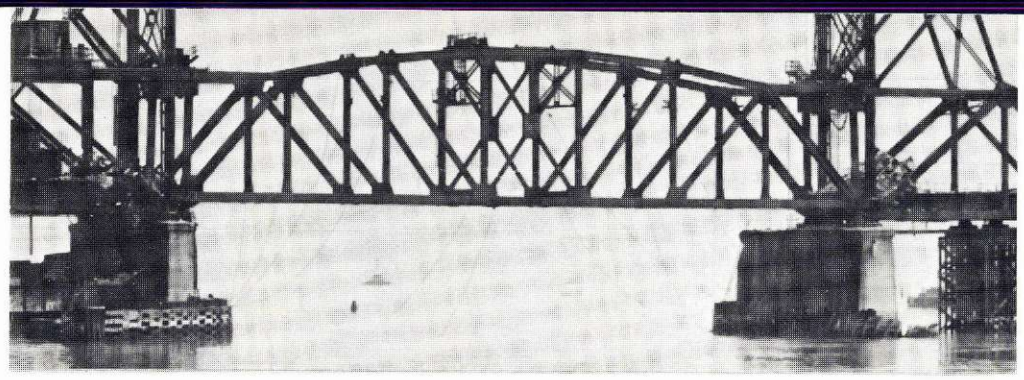
This means that our idea of a Gulf Stream carrying lukewarm water from the American east coast to Europe must be revised. The evidence of its crossing the Atlantic does not hold true; also, it was subject to uncertainty and many mistakes. Temperatures were registered by methods which were rather primitive by our standards; and it is a fact that the wind alone is able to move objects across a large ocean.

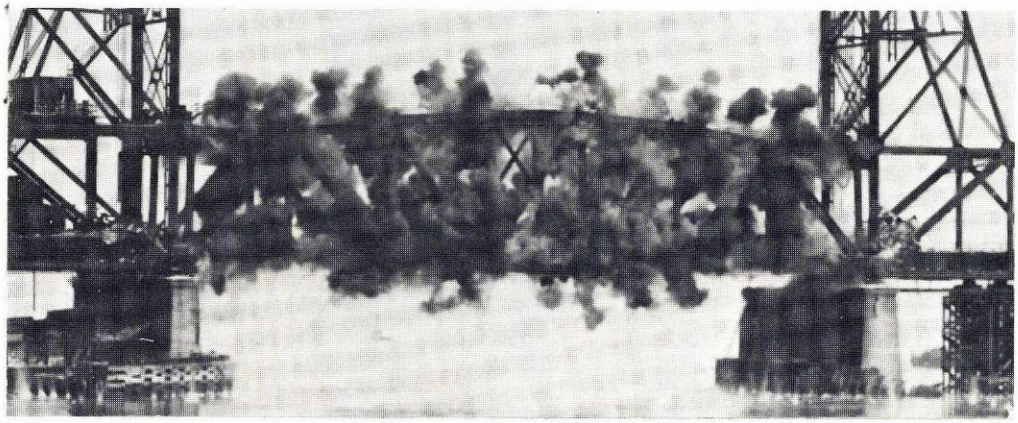
The discovery of the Gulf Stream's successor is so new that so far we only know it exists. Oceanographers are not yet able to explain how these enormous quantities of warm water from the tropical and subtropical Atlantic – the only place where the sun has so great influence on the water temperature – are transported to our part of the world. But it will probably be clarified during the next decade.

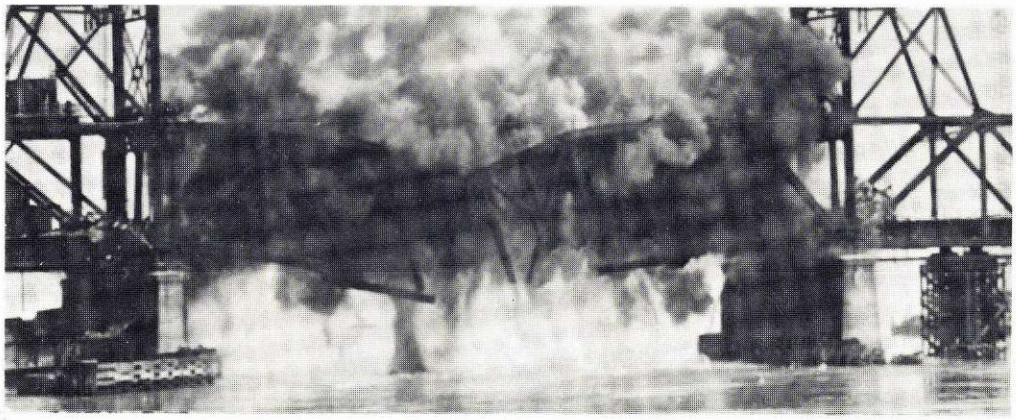
The great Atlantic marine research centres – in North America, France, England, and West Germany – have worked out a long series of research programmes for the study of the 'dynamics of the North Atlantic warm-water sphere'. A dozen marine research ships, three satellites, and thousands of measuring instruments will be collecting millions of data to be processed by computers.

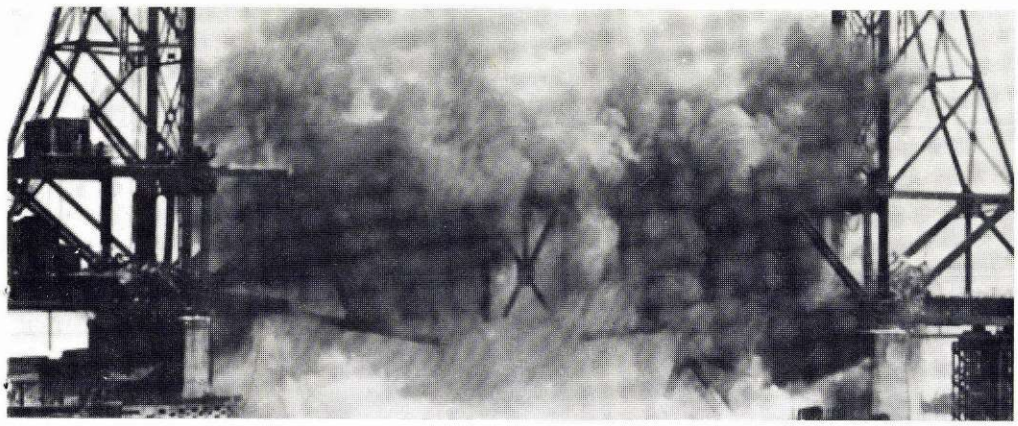
The result may very well be a surprise: That there does not exist any successor, that no oceanic current carries out the function with which the Gulf Stream has so far been credited. It may be a questsion of a system of gigantic swirls that are responsible for this south to north shifting of water masses. So far it is only a hypothesis.

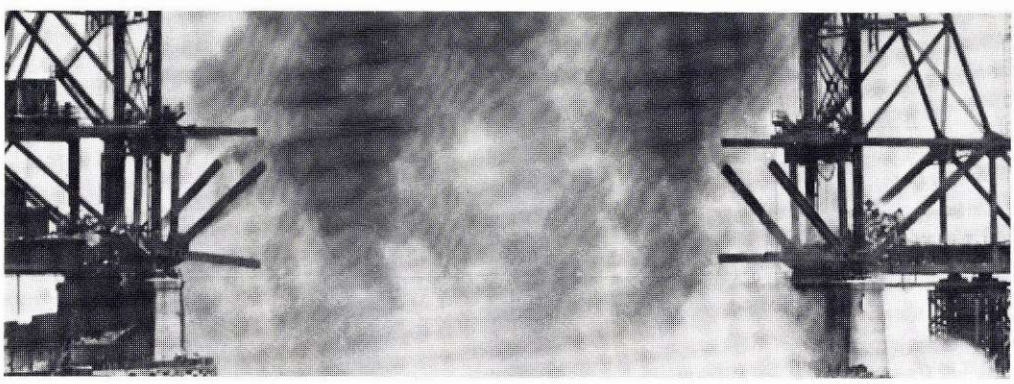
The solution to the mystery interests science, not just because scientists are by nature inquisitive, but even for practical reasons. If the transportation of warm Atlantic water is clarified, we shall also know the circumstances that bring about the changes in weather and climatic conditions in West and North Europe. Meteorologists, shipping, plant-breeding, tourism – will all derive benefit from any knowledge of the Gulf Stream's successor.











News from NEW YORK

Newark Bay Bridge is falling down

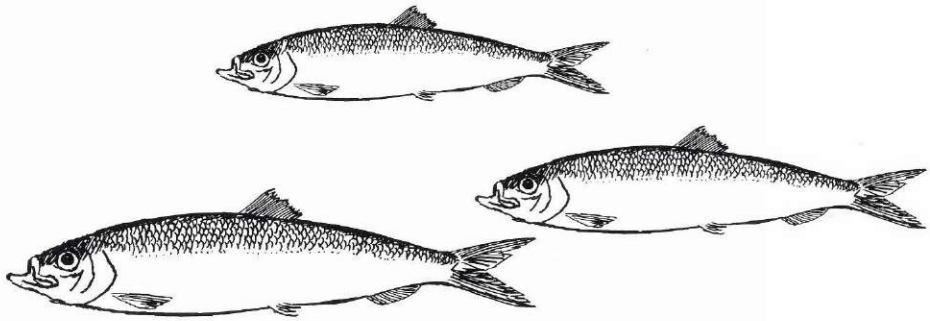
For many years the maritime industry in New York has sought the demolition of the Newark Bay drawbridge. The bridge sits athwart the busy waterway used by ships traveling between the Kill van Kull and Port Newark/Elisabeth Port Authority Marine Terminal. It has long been considered a navigational hazard not only by shipping company operators, but also by the U.S. Coast Guard. It is also one of the factors that were taken into consideration during last year's tugboat strike in New York, when Moller Steamship, in conjunction with Copenhagen, decided to bypass New York and discharge and load all inward and outward cargo on the MCL service at the port of Philadelphia.

The first of many deafening explosions took place July 9, 1980. The photos (Coast Guard photos by Gregory Creedon) cover the demolition of the 134 foot east span of the CNJ Newark Bay Railroad Bridge, which disappeared in a matter of seconds.

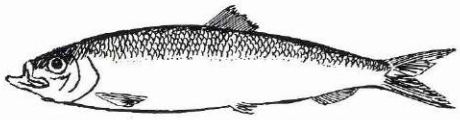
During the demolition periods the Coast Guard closes the harbor to all shipping, but, fortunately, so far they have all taken place during periods when Maersk Line had no vessels entering or leaving the port. The demolition period is expected to take 32 weeks.

Barney Brennan

A strange incident, reported by Chief Engineer Kristjan Djuurhuus, m.t. "JESPER MÆRSK".



A pretty kettle of fish



Some years back it happened not infrequently that during calls at ports ships had their inlet filters clogged with plastic bags, indeed the terror of every engine officer. We all remenber Bangkok harbour before the invention of the 'Bangkok baskets'.

During recent years really efficient measures have been taken in fighting pollution, and most harbours are so clean today that possible reasons for the clogging of inlet filters must be sought elsewhere. This is an account of how it may happen; whether it is a one-time phenomenon remains to be seen.

During one of the many voyages made by »JESPER MÆRSK« between St. Croix and the U.S. East Coast last winter, the cooling-water pressure started falling, which naturally led us to suppose that one of the filters had been clogged by plast and other refuse.

Our 1st engineer, therefore, got really surprised when he took off the cover. Out came, not plastic bags or mussels and other shellfish, but herrings!!! Hundreds of herrings, up to 165 mm in length and 40 mm upright. Many of them were alive and kicking, fat and glossy, ready for the frying-pan.

If we take it for granted that no damage has come to the outside of the sea-chest grating, of which there has been no indication neither before nor since, these herrings have found their way/been sucked in when of baby size. In the sea-chest they have found ample nourishment, as considerable quantities of plankton and other dainties for herrings will be sluiced through a ship's cooling system every day.

As a cooling-water pump has a capacity of 841 m^3/hour, and usually takes in water through only one filter basket, the pressure on this filter has become very great with the growth of the herrings in the sea-chest, where the filter basket has functioned as a strainer. No doubt, the rest of the herrings, which in a more or less minced condition have whizzed through the entire cooling-system, would have provided a further great many platefuls of herring salad.

It might be added that among the many herrings there was a single eel, which vanished under the floor, never to be seen again.

Rescue operation

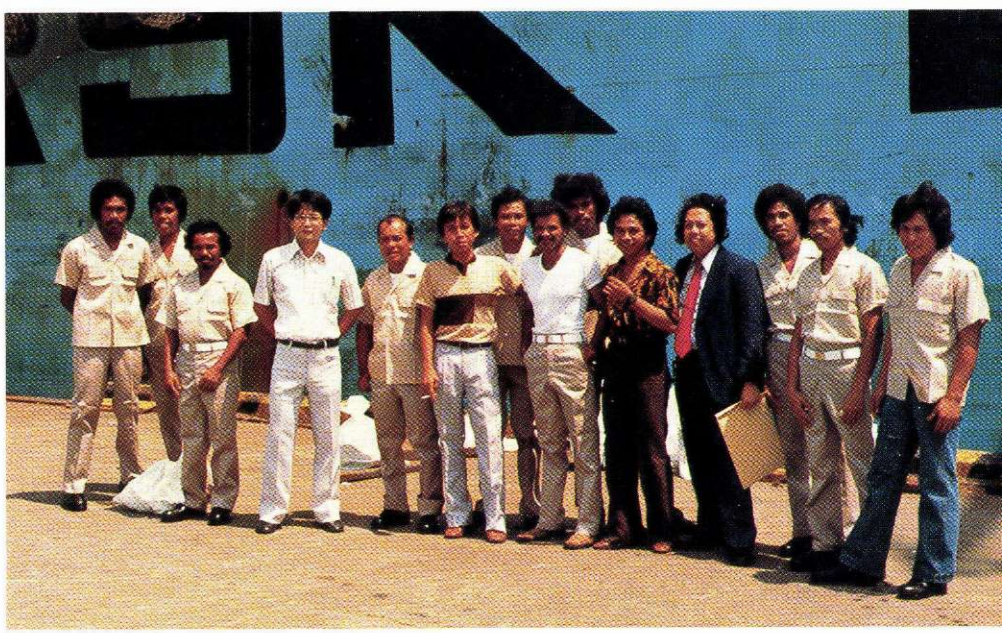
From Chief Steward F.H. Kjær, MÆRSK POST has received this report of how, on August 1st, m.s. »LEDA MÆRSK« tried to save a burning Indonesian freight ship en route from Donggala to Bali with a cargo of copra.

At a position about 5°50′S 114°20′E in the Java Sea, at 1445 hours, we sighted a burning Indonesian vessel on our port bow at a distance of three miles. The weather was clear with easterly wind/sea 4/4. We immediately set our course towards the burning vessel, and as we approached, we observed one man on board and several in the water.

»LEDA MÆRSK« was manoeuvred close to the ship, and we made an attempt to put out the fire. We were too late, however, as the wooden ship, which was carrying a cargo of copra, was already disintegrating. »LEDA MÆRSK« picked up the man from the ship and started searching the area for survivors. At 1630 ten survivors had been taken on board; one had disappeared, presumably due to fatigue, and was never sighted again. The master of the burning vessel told that there had been a total of 11 crew members on the ship.

At 1637 hours »LEDA MÆRSK« proceeded on her original course towards Yokohama, and the owners of the burnt ship were informed. On the arrival at Yokohama the ship was met by staff from Maersk Line Tokyo and the Indonesian Embassy, and with help from Maersk Line new clothes were provided and all survivors repatriated to Indonesia.

The name of the distressed vessel was 'P.L.M. DILI I', she was registered at Surabaja, and she was on a voyage from Donggala in Sulawesi (Celebes) to Bali.



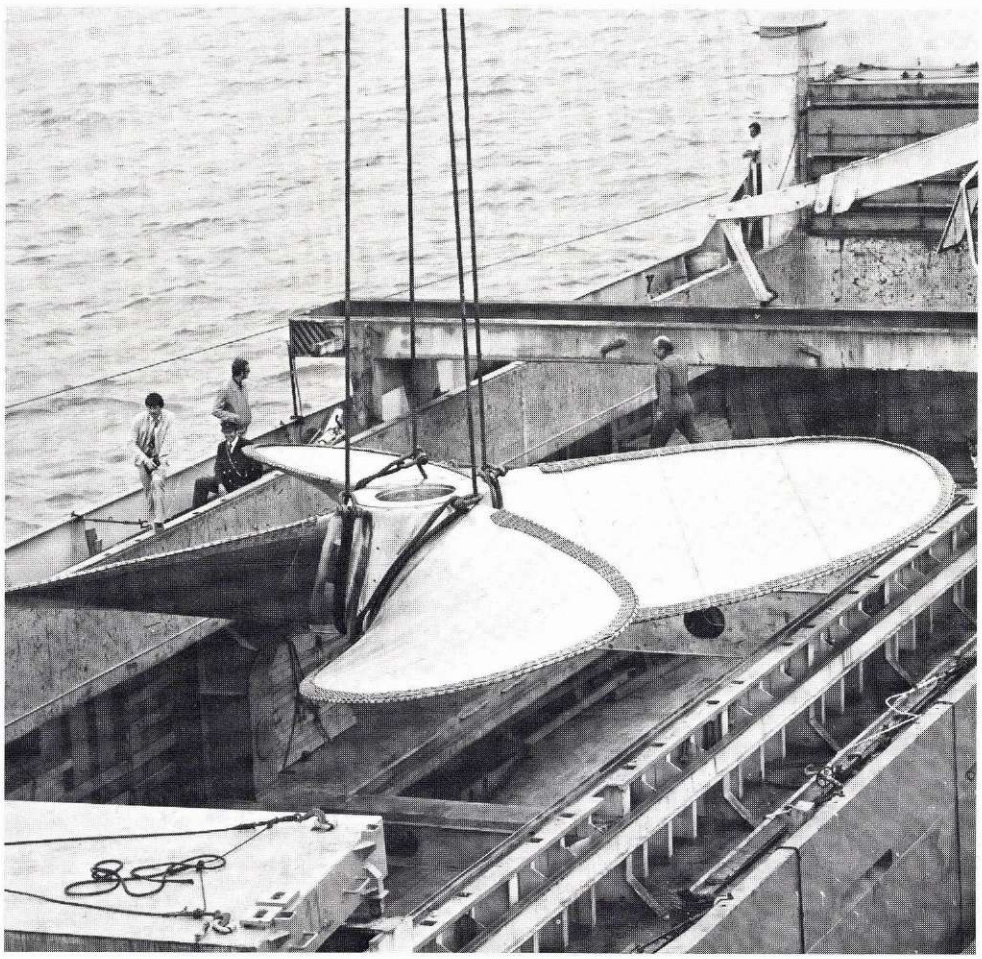
The crew of the burnt ship in Yokohama together with staff members of Maersk Line and of the Indonesian Embassy.

Pictorial News

The quayside along the head office was rammed on August 26th by a freighter on a voyage from Copenhagen to Wilhelmshafen. A large section of the quay was damaged, and several of the heavy granite blocks were broken to bits. One of the stones got wedged in the hole that was made in the bow of the ship. As the ship was able to continue its voyage, the stone was carried along together with the rest of the cargo, which was ... stones.

A. P. Møller technicians are testing a new type of propeller, which aims at a higher degree of utilization of a ship's engine power, especially at low speed. The photo shows a propeller for the supertanker "KATE MÆRSK" being loaded at Rotterdam. The protection of the edges of the blades (wickerwork) is very important, as even slight damage suffered during the handling may be harmful to the smooth running of the propeller. It has a diameter of 10.50 metres and weighs about 59 tons.

On September 6th, the Line Department arranged a boatrace with the participation of the two A. P. Møller H boats and three private boats. 25 of the Department's staff took part, and the race ended at the Flakfortet (tiny island in the Sound), where the lunch hampers were emptied. In the evening all participants with wives and husbands gathered for the festive handing over of the prize, a challenge cup, donated by the head of the Department, Mr. Poul Rasmussen, together with a nice faience dish, to the skipper of the winning boat. Winners were a crew of the Economy Section, with Mr. Jørgen A. Engell at the helm. The photograph shows the two female crew members, Bodil Petersen (left) and Anne Marie Dorph, presenting the cup. The crew also included two young men, Kurt Faudel and Hans Frederik Jørgensen. The inscription on the cup runs: LINIEAFDELINGENS VANDREPOKAL 1980 »PAN« JØRGEN A. ENGELL.



In September the lawn in front of the Esplanaden head office was adorned with a bronze cast of the well-known Poseidon statue which is to be seen in the National Museum of Athens. The original was salvaged by a fisherman from the bottom of the Mediterranean near the island of Euboia, and is believed to have been made around 500 B.C.

Maersk Supply Service is active in many parts of the world, for example in Brazilian waters. 100 miles north-east of Rio de Janeiro the MÆRSK supplyships have their base at Macaé. Here the ships are known by the name 'O Poder Azul', which means literally 'The Blue Power'. The photograph shows six units in port simultaneously.

Thailand, cradle of civilization

From Hagbarth Mogensen we have received this interesting article, which reflects new theories put forward by a number of scientists on the basis of new finds in north-east Thailand. Mr. Mogensen, one of MÆRSK POST's keenest correspondents during his many years in Japan and Thailand, found time, before departing from Bangkok, to pay a visit, camera in hand, to the village of Ban Chiang. This is his account of the local history.

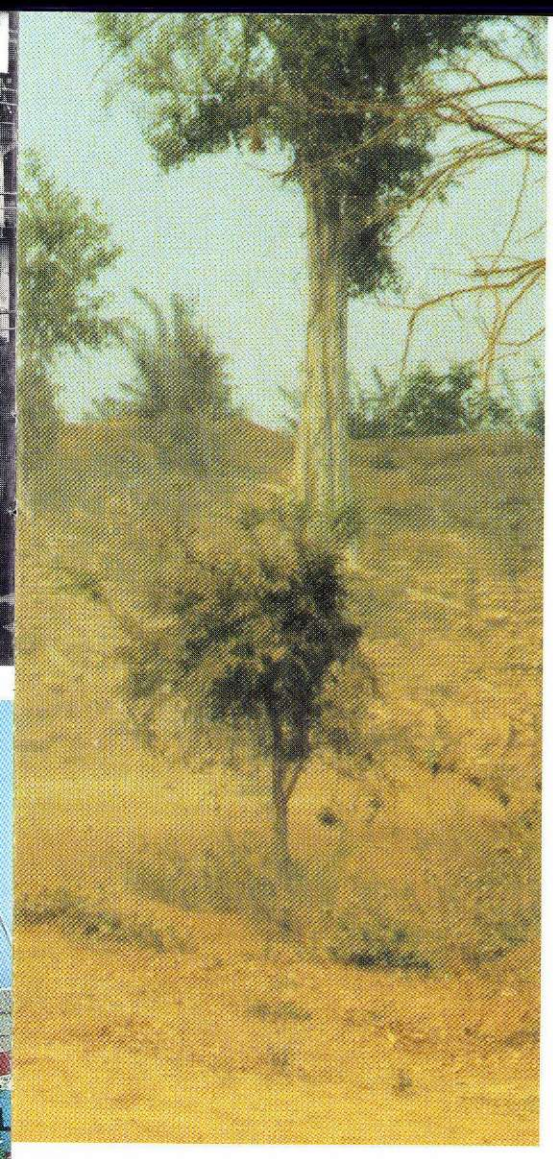
Thailand – cradle of civilization? A bold heading. Admitted, but! The sleepy village of *Ban Chiang* in north-east Thailand appears on few international maps, and until a decade ago it was hardly known outside its own neighbourhood; however, the sensational discovery of ancient bronze and pottery is now likely to have secured Ban Chiang a place in future history books.

At a time when the local population was thought to have lived under primitive, Stone Age conditions – waiting for the light of civilization to penetrate from outside – the inhabitants of Ban Chiang were in fact very advanced. They lived in a settled community, grew rice and probably other crops, made handsome pottery showing a high degree of artistic skill, and, most significantly, they produced sophisticated bronze objects. These have been dated to 3600 B.C. or earlier – i.e. a thousand years before the oldest bronzes of China, and probably up to 500 years older than any found in Mesopotamia.

For centuries historians have believed that bronze originated in the Tigris and Euphrates river valleys around 3500-3000 B.C. Metallurgy, one of the basic advances in technology, presumably spread from there to other parts of the world. Now the finds at Ban Chiang have led some respected archaeologists to assume that the Bronze Age might very well have started on the arid Thai plateau;the inhabitants there fashioned bracelets, necklaces, and rings, cast fine metal arrows, spear- and axe-heads, and carved figures from ivory and bone, besides making strings of beads from glass and semi-precious stones.

Excavations, which eventually got under way in 1974, go as deep as five metres; they have revealed six well-defined levels of burials, the earliest dating from about 3600 B.C. and the latest from 250 B.C., and so far about twenty tons of pottery, stone, and metal artifacts have been extracted from several thousand burials in Ban Chiang. It was at the lowest level that a bronze spear point was discovered which may be the oldest item of this alloy ever found anywhere. It lay buried under a grave and was surrounded by easily datable charcoal.

Middle East bronze invariably consisted of copper and arsenic, until the



The peasants' life near the former majestic capital is to some extent primitive as before; but the people seem happy with their lot.

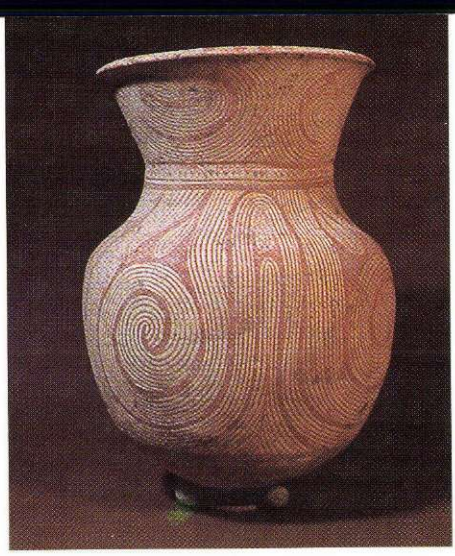
Ruins with headless Buddhas in Wat Prapa Luang.

Wat Mahathat Sukhothai (walled city).

inhabitants there – who had no ready source of tin – happened to come by a supply of this metal »from the East« sometime before 3000 B.C. The Ban Chiang finds suggest that Thailand gave the Middle East its tin – probably by boat via the Arabian Gulf, at least 2000 years before any known contact between those two parts of the world.

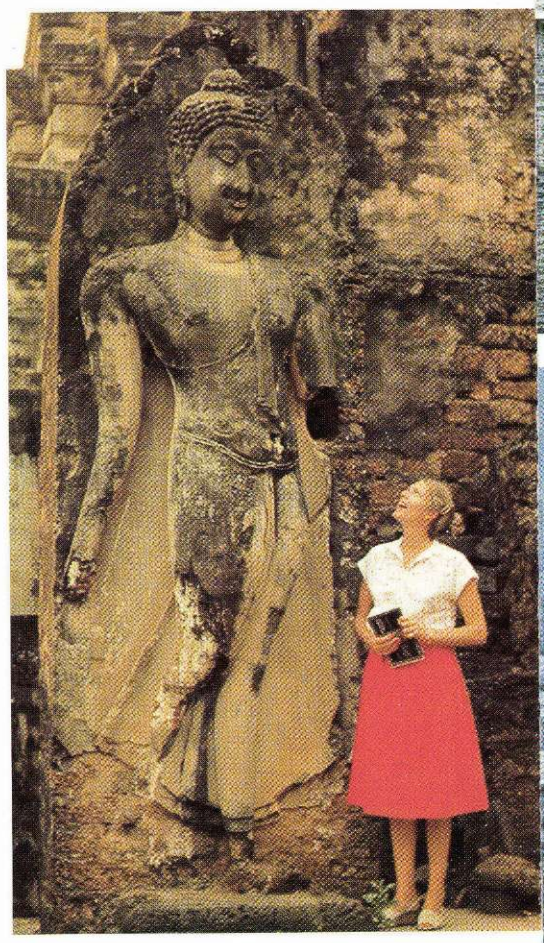
The boundaries of the Ban Chiang culture covered an area of some 50,000 square kilometres; the original settlers of about 3900 B.C. were skilled hunters, craftsmen, and potters. The wealth of bronze, the great number of pots, and the scarcity of weapons bear witness to a long period of prosperity and stability; burials involved many rituals and preparations, and decorated clay rollers found may have been used to print patterns on woven or matted textiles. Culture is now believed to have moved westwards, and the fairly recent discovery of a Thai jar – dating from around 4,000 B.C. – with a pattern almost identical with China pottery from 1500 to 1000 B.C., is part of the increasing evidence that cultural influence moved northwards rather than southwards.

An example of Ban Chiang artifacts, from 3000 B.C.



5,000-years-old Ban Chiang pottery made of cream-coloured clay, decorated with red swirls and loops.

2 smiles – 700 years apart! Mrs. Mogensen and the remarkable stucco figure of a walking Buddha fixed into the wall of Wat Prasi Ratana Mahathat in Si Satchanalai near Sukhothai.



Wat Sra Si Sukhothai (walled city).

The Ban Chiang culture died out approximately at the beginning of the Christian era, and between then and the 14th century very little is known about Thailand's ceramic production. In the interim centuries migrations had taken people from Mongolia to South China and further on to Indo-China, branching out to Thailand, Burma, and Laos. The southward migration received marked impetus during the days of Kublai Khan, who was expanding his empire towards South China in the 13th century.

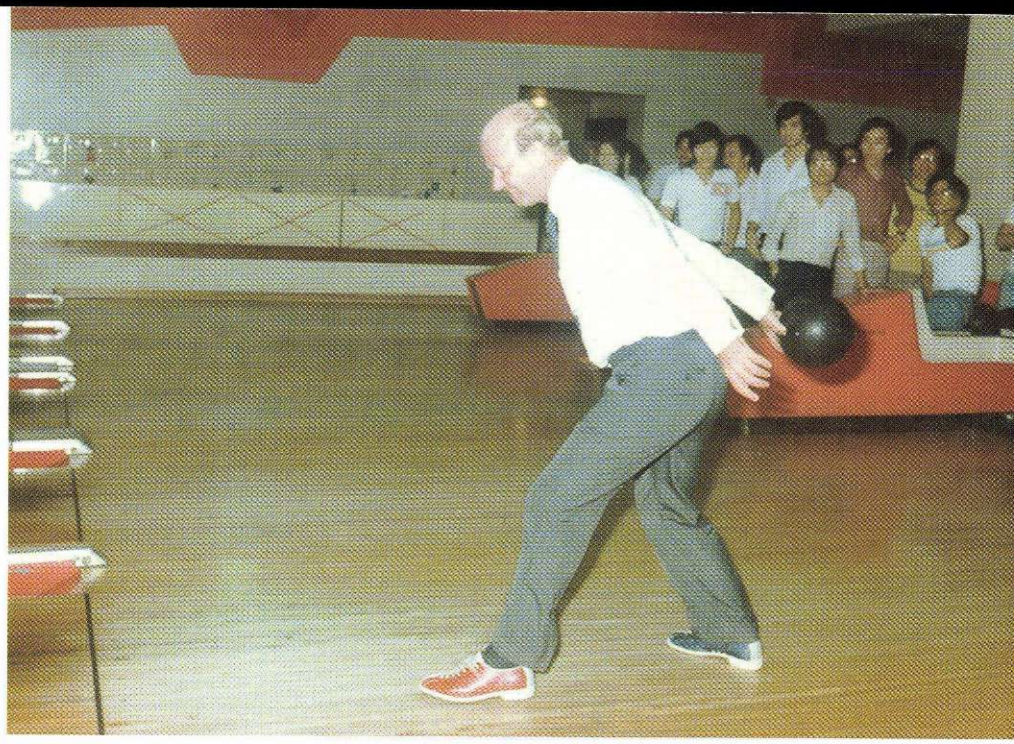
The Thais who came to Thailand combined their forces and fought the Khmers, who had an extensive empire in this part of the world; they drove the Khmers out of *Sukhothai,* one of the outposts of the Khmer Empire, and made it their capital in 1257. Sukhotai, about 500 km north of Bangkok, thus became the first kingdom of the Thais, and it might be said that Thailand was born in Sukhothai, which remained the capital of the land of the Thais for the next 120 years. During the following 400 years the capital was *Ayutthaya,* about 90 kilometres north of Bangkok, the city that became the capital of Thailand in 1782.

A total of eight kings ruled in Sukhothai, named the Phra Ruang Dynasty after the first king, who defeated the Khmers. His successor, his son Ramkamhaeng, is credited with having created the first Thai alphabet, and he visited China in 1300 after Kublai Khan's death. He brought back with him some Chinese artisans, who taught the Thais the art of pottery, and the Thais soon blended their own unique skills with those of Chinese potters to produce the magnificent Sukhothai and Swankhalok (now known as Si Satchanalai) stoneware. From the time of the Kingdom of Sukhothai we again have positive evidence of an active ceramic industry, and glazed stoneware was produced during the 14th and 15th centuries, primarily at the above ceramic centres.

In the 15th century, Sukhothai was eclipsed by the emerging Kingdom of Ayutthaya, and in a war between Ayutthaya and the Burmese, Sukhothai was deserted and fell into ruin; but in 1786 a new city was built close by, from where local inhabitants gradually seeped into the old city, pillaging works of art and wrecking archaeologic remains.

In ancient times the citizens of Sukhothai ordered images of Buddha to be cast in whatever size they could afford, from inch-tall clay tablets to sculptures 13 metres high. Many of the royal palaces and Buddhist monasteries of the Sukhothai era may still be seen in partly restored ruins; today the remains of 36 monuments are to be seen within the four square-kilometre area of the old Sukhothai city, while 90 monuments are located outside the earthen city walls. Despite restoration work during the past decade, jungle growth is still seen among the ruins with their many headless Buddhas and cracked monuments, the result of more than a century of vandalism; however, restoration work will now continue with UNESCO assistance, and Sukhothai may some day once more answer to its name that literally means »Dawn of Happiness«.

News from Hong Kong



Our Managing Director, Mr. P. Jorgensen, was bowling out the first ball to start the 1980 inter-department round.

Bowling

The Maersk Line (Hong Kong) Ltd. inter-department bowling games 1980 started in early July, and we expect to finalize the competition by December so that the prize presentation can be made by our managing director during the annual staff party next January.

Supporting our league are teams from various departments, including Documentation, Accounting, Sales/Marketing, Conference, and Brigantine, making a total of ten teams. The league expects to have one round of 18 weeks with 'position rounds' every second week. This will add extra excitement to the competition, as only the team which has the most steady performance can be the winner.

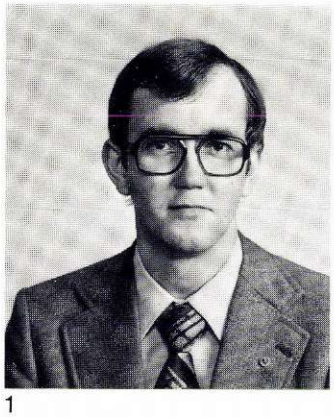
Last year the champion team was the 'Documentation D' team, who won the Overall Championship together with the Team High Series and the Team High Game awards. Getting very close was the 'Acoounting A' team, the winner and the first runners-up being decided only during the last match. The 'Sales/Marketing A' team was also competing well up to the last match but one, in which they were defeated by the 'Documentation D' team, and the hope of being champions vanished. 'Documentation D' has managed to win the Champion Award for two consecutive years so far, and we shall now see whether they can succeed for the third year running.

When going back to 1975, the year when this bowling idea was formed by Mr. Kaj Petersen, we had only eight teams competing, and the duration of the round was short. When the idea was first brought up, not too many staff members were interested in participating, but the game soon spread through the offices in the second year, when the Accounting Department won the championship and had the beautiful prizes displayed in their office. At the beginning there were only 30 to 40 persons playing, whereas now we have about 80 to 90 active members.

Bowling, nevertheless, is considered an expensive game in Hong Kong, but our management supports the venue, bringing the sport within the reach of everyone. The game is becoming more and more popular now, and we hope the league may expand further next year to follow up the successes of previous years.

The Bowling Commitee,
Stephen Chu

New local correspondents



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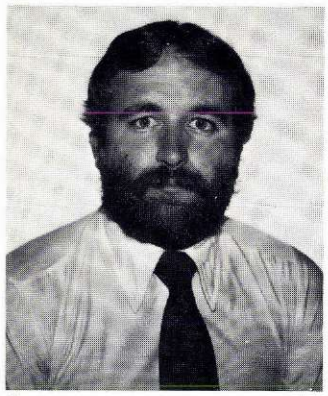


4

Three of MÆRSK POST's local representatives have handed over their tasks to colleagues recently. The editor takes this opportunity to thank them for their good efforts, at the same time extending a hearty welcome to the following new correspondents:

1. Erik Stokholm, who takes over the Hong Kong post after Ole Sidelmann Jørgensen.
2. Prasit Rungnapha will succeed Hagbarth Mogensen in Bangkok, after the latter's return to Europe.
3. Niels H. Ryge will succeed Karlo Lindskog (retired on pension) as Roulund representative.
4. In addition, a new post as local correspondent for the U.S. Gulf area has been given to Timothy M. Panek, Houston.

After the transfer to Tanzania of T.P.C. Limited, and the return to Denmark of the managing director, Mr. H. H. Munck, it has been decided to close down the function as local correspondent at the Plantation. MÆRSK POST is much indebted to Mr. Munck for many interesting articles during more than six years.

News from Maersk Air

Increased turbo-prop activities on domestic routes

In the August issue MÆRSK POST told about Maersk Air's introduction of an aircraft of the type Hawker Siddeley HS 748 on Danish domestic routes.

Already by September 1st, 1980, it became necessary to replace certain flights, hitherto operated by means of jet aircraft, through further turbo-prop operations.

Maersk Air has, therefore, obtained a second aircraft of this type, which was entered into the Danish flight register under the letters OY-MBY. By means of this new unit and the 'sister aircraft' OY-APT the services from Copenhagen to Thisted, Stauning, Odense, Skrydstrup, Billund, and Esbjerg will be operated.

New units for the Maersk Air fleet of aircraft

Three Boeing 737-200 Advanced aircraft, fresh from the factory, were delivered in Seattle to Maersk Air in September, October, and November 1980, respectively.

The new aircraft, which were entered in the Danish flight register under the letters OY-APP, OY-APR, and OY-APS, are fitted with the most modern cockpit equipment, and with 127 passenger seats, two galleys, two toilets, and 'wide-body interior'.

Whereas APP and APS were flown by Maersk Air pilots from Seattle to Copenhagen, APR was flown to Miami where it entered into the contract with Guyana Airways Corporation mentioned in the following paragraph.

All jet units of the Maersk Air fleet of aircraft are listed in the Danish flight register in the letter group OY-AP. With the delivery of OY-APS all combinations of the AP series have been used. OY-APS was the eleventh Boeing 737-200 Advanced taken over by Maersk Air at the Boeing Factories of Seattle.

Interesting job for Maersk Air in Guyana

Guyana Airways Corporation, the national airlines of Guyana, carries out regular air traffic between Georgetown and for example Trinidad and Barbados. In addition, domestic flights are carried out in Guyana. All operations have so far been made by propeller aircraft of the types Hawker Siddeley HS 748 and Twin Otter.

In connection with the Company's wish to be responsible for a larger proportion of the international airline traffic, for instance through the opening of a service between Georgetown and Miami, Florida, a perennial agreement has been made by Guyana Airways Corporation with Maersk Air about a wet-lease of one of Maersk Air's Boeing 737-200 Advanced aircraft.

Besides the aircraft, with cockpit crews and technical staff, the agreement implies that Maersk Air renders assistance in the training of pilots, technicians, and stewardesses, to enable Guyana Airways to continue operations on their own later on.

The aircraft was delivered to Guyana Airways in Copenhagen on September 3rd, and the first flight took place on September 8th from Georgetown to Barbados. Besides, scheduled flights are made to Port of Spain, Trinidad, and Paramaribo, Surinam. On October 26th, regular flights to Miami were commenced.

OY-APK started the new job in Maersk Air colours, but on October 10th it was replaced by OY-APR, which was delivered to Maersk Air from the Boeing Factories a couple of days before, painted in Guyana Airways' own colours.

The aircraft will remain registered in Denmark, and Maersk Air will be technically and operationally responsible for the flights.

At the end of October 6 pilots and 20 stewardesses from Guyana Airways had

One of Maersk Air's new Boeing 737-200 Advanced aircraft, in Guyana Airways Corporation's colours.

Maersk Air's stewardesses, responsible for training their Guyana colleagues, wear the uniform of Guyana Airways Corporation during the training period.

completed their theoretical courses and had begun their supplementary training during flights. As part of the agreement a Maersk Air captain will be 'in command' on every flight.

The route between Miami and Georgetown has a flying-time of four and half hours, and it is the only direct. air connection between the USA and Guyana.

A Danish-American industrial fairytale

It is now 16 years since the first DISAMATIC was installed in a foundry. Since then close on 700 other DISAMATIC's have been installed in foundries in 41 countries. The majority of these DISAMATIC's have been purchased by existing foundries, where the DISAMATIC's have displaced traditional molding machines and taken over their production.

But behind some sales lies a quite special story, which shows how the DISAMATIC's have not only meant the introduction of a new generation in molding machines, but, in a number of cases, have made it possible to go entirely new ways and open up new opportunities that were closed to traditional equipment.

Thus, behind the sale of the fourth of the largest DISAMATIC's, the so-called model 2070, there is the story of an American industrial achievement. An updated fairytale in which old-time American traditions were combined with the latest and most advanced foundry technology from Denmark in a time of energy crises.

The American part of the story goes back to 1973 when Duncan Syme, an American architect, decided to install a woodstove in his home in Vermont in recognition of the effects of the oil crisis. Syme asked his brother-inlaw, Murray Howell, a 28-year-old real estate trust manager, to help him explore what was available in the market of woodstoves.

When Howell reported the limited choice, Syme decided he would design and build a better stove himself, and Howell offered to help. Today Syme and Howell are building stoves with the help of more than 300 employees. With sales approaching $20 million in 1980, corresponding to 50,000 woodstoves, the company has become one of the nation's leading woodstove producers!

What happened in the meantime was that the woodstove made by Syme and Howell had become popular and in great demand among friends and acquaintances, who, on account of the skyrocketing oil prices and the uncertainty regarding oil supplies, would also like to have a woodstove in their home.

Therefore they started to produce their own woodstoves on a modest scale in the typical American way – out in the garage – and at the same time they inserted some small ads for their woodstoves, which could be had on mail order. The result was overwhelming. It turned out that not only their friends and acquaintances wanted woodstoves, but thousands of American homes were dying to have an alternative heating source.

In 1974 Syme therefore developed a woodstove with (1) thermostatic controls that allow slow burn and even heat, (2) secondary combustion chambers for gases often lost up the chimney, (3) separate primary and secondary air systems, and (4) convertibility from open, fireplace-type viewing of the fire to closed, airtight operation to ensure combustion efficiency. Last, but not least: the exerior of the woodstoves was designed so as to recall architectural forms popular in America in the early 1800's.

Nothing succeeds like success! Orders poured in, and the company started by the two partners, Vermont Castings, grew by leaps and bounds. Each stove was, and continues to be, handcrafted and assembled by one individual who signs a certificate shipped with each unit. The components were bought from various European and American foundries. However, the American foundries had diffuculty meeting Vermont Castings' quality requirements; while European foundries could more easily meet the quality standards, they could not always offer reliable deliveries.

In 1977, as the demand for Syme's unique stove kept growing, Vermont Castings started talking seriously about its own foundry. With the backing of a regional development project they could start going through the market to find the best foundry equipment.

DISA always participates in the exhibition of foundry machines held biannually by the American Foundrymen's Society. The people from Vermont Castings came to the exhibition to find the best equipment for their foundry, and interest soon centered around DISAMATIC as the best choice.

But first DISA had to prove that their machine could manufacture Vermont's castings in the required first-class quality. A number of production experiments were carried through by DISA's experimental foundry at Herlev in the spring of 1978. The results were perfect, the quality was better than anything so far available, and the contract for a 2070 was signed in September 1978.

The contract not only comprised a 2070 DISAMATIC at a price of about Dkr. 10 million, but also the construction of the entire foundry, complete with sand plant and melting furnaces, etc.

Vermont Castings broke ground for the foundry only a few days after the contract had been signed, and in half the normal time for construction of a foundry – and one month sooner than what was promised in the contract, the foundry was finished, ready for operation. In June 1979 the first castings were poured, and a month later the foundry ran at full capacity 11 hours a day. Today Vermont needs even more capacity, and the extensions will shortly be completed so that production will run 16 hours a day.

In this American industrial fairy-tale, oldtime American woodstove tradition combines with the most advanced foundry technology from DISA in Denmark. The 2070 DISAMATIC is the most modern sand molding machine in the world; it produces op to 275 molds an hour, measuring 950 × 700 mm and with a variable mold thickness up to 560 mm. The machine is controlled by microcomputers and is automatic, so only one operator is required to operate the machine. In the case of production stoppages the machine shows the cause of stoppage on a display, and in this way the operator can immediately put the defect right and continue production.

Vermont Castings is also remarkable in other ways. Thus, it is the first totally new foundry to open in New England since World War II, and it is also the first new woodstove foundry to open in the U.S. since the turn of the century.

And the success of the American/Danish achievement goes on, helped along by the soaring oil prices: the contract for the next DISAMATIC has already been signed, and next year two Danish molding machines will stand side by side and produce woodstoves for the American people.

Niels Bøving

A modern American industrial fairytale, a small production of woodstoves 'in the back garden' develops into mass production by means of a DISAMATIC model 2070. This is the final product, a woodstove designed in traditional style, recalling the architectural tastes of the early 1800's.

The first factory in Vermont.

This type of DISAMATIC, model 2070, is now producing parts for the woodstoves. In this photograph, taken in Denmark, it is a question of engine-blocks for motor-cars.

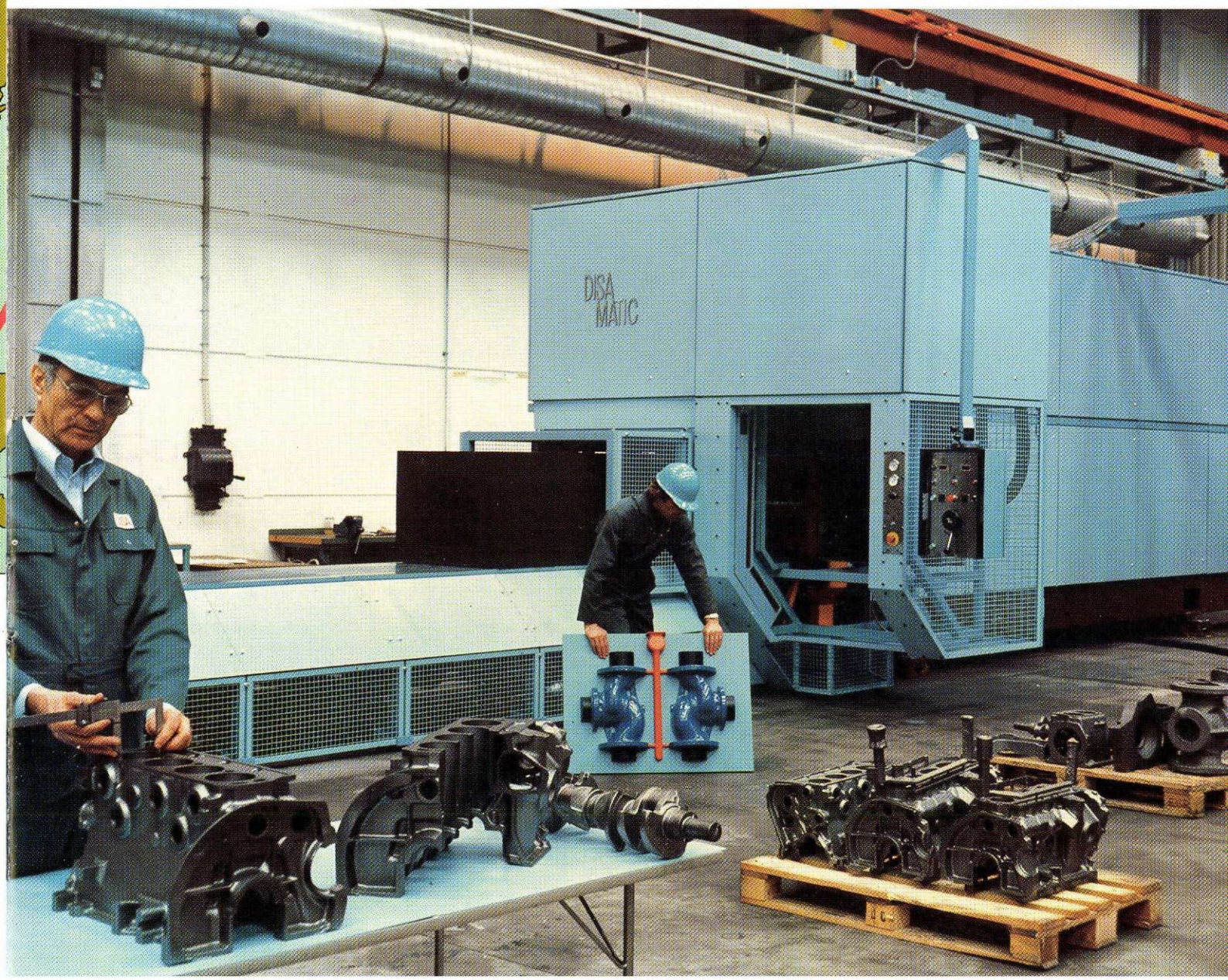
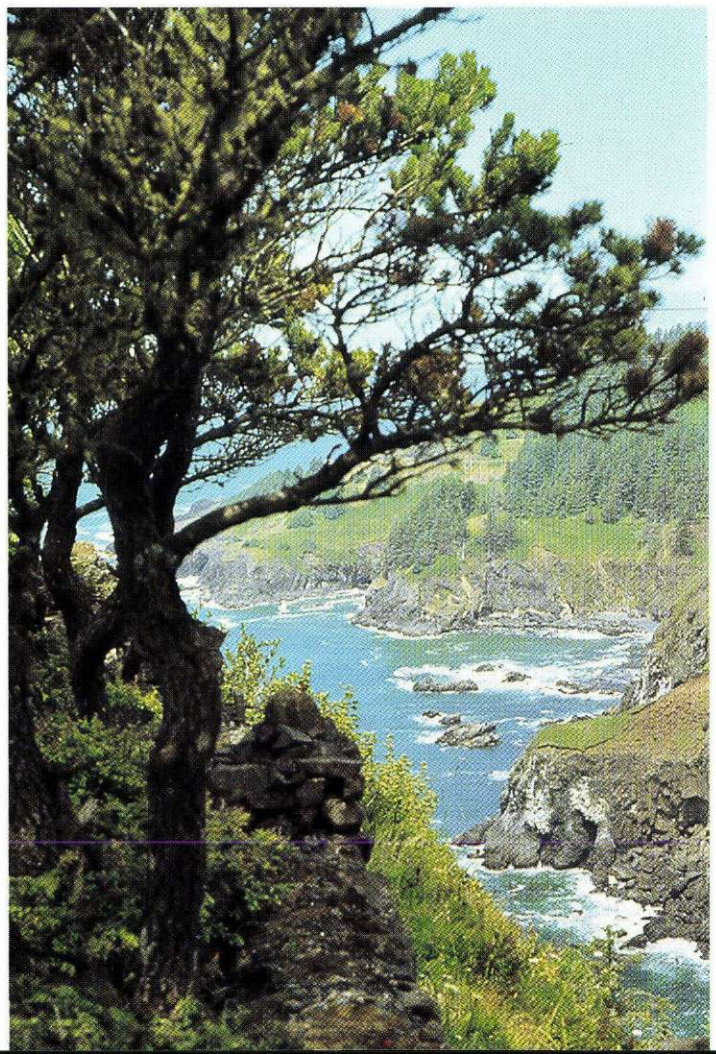
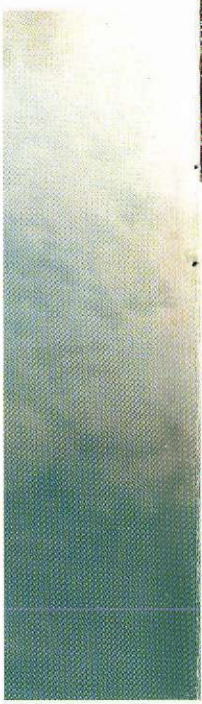


Photo Competition

Second prize, *a Braun Electronic flash with sensor 320 BVC, was won by First Engineer Benny Olsen, "THOMAS MÆRSK". The photo was taken on board this ship in rough weather in the Atlantic.*

Fourth prize, *a film packet containing a colour diapositive film, a colour negative film, and a black/white film, was won by Michael Stensgaard, Maersk Drilling.*





The MÆRSK POST annual photo contest has been settled, and the prizes for the winning photographs on these pages have been awarded, based on submissions from the period up to 15 October, 1980.

For the information of new readers it should be mentioned that the next contest will take place in connection with the appearance of the No 4 issue 1981, probably in November. The No 3 issue 1981 will state the conditions for participation in this photo contest.

First prize, *a Minolta Himatic S camera, was awarded to Chan Wai-Kwong, Brigantine, Hong Kong.*

Third prize, *Time/Life's book 'The Techniques of Photography', went to Steen Høier, the Line Department, who had an opportunity, while in England, to see an air show with the 'Red Arrows' squadron of the Royal Air Force.*

Personalia

ESPLANADEN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2


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4

25 Years Anniversary

1. Bjarne Fogh
   Executive Vice President
   1st January, 1981
2. Jakup Nolsøe
   3rd February, 1981

Retiring

3. H. Jespersen
   31st December, 1980
4. Aage R. Palsbak
   31st December, 1980

THE FLEET


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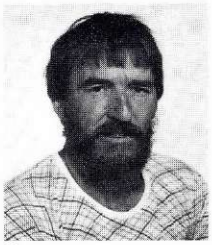
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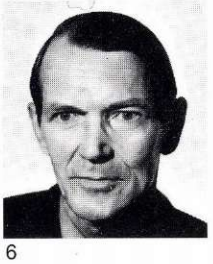
6

25 Years Anniversary

1. Chief Engineer Hans J. Olsen
   9th January, 1981
2. Chief Steward Karl J. O. Schlei
   1st February, 1981
3. Able Seaman Bent Greve
   17th February, 1981

Retiring

4. Chief Steward Otto Chr. W. Hansen
   31st December, 1980
5. Captain Karl J. Th. Jacobsen
   28th February, 1981
6. Chief Engineer Karl P. Rasmussen
   28th February, 1981

THE YARD


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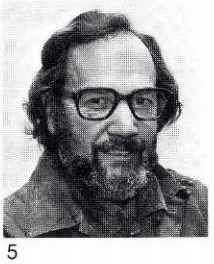
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25 Years Anniversary

1. John A. Knudsen
   27th December, 1980
2. Carl Gustav Jensen
   16th January, 1981
3. Ib Poul Sonnenborg
   16th January, 1981
4. Gerner Sørensen
   1st February, 1981
5. Eigil Ivan Andersen
   13th March, 1981
6. Ole K. Knudsen
   15th March, 1981

Retiring

Arne Pedersen
28th February, 1981

DISA


1


2


3

40 Years Anniversary

1. Otto Nielsen (Herlev)
   29th December, 1980
2. Hugo Frederiksen (Herlev)
   15th January, 1981
3. Ole Oksby Hansen (Herlev)
   1st March, 1981

Obituary

The A. P. Møller Companies regret to announce the following deaths during the past three months:

Captain
Svend Aage P. Kristensen
ex. m.s. "CORNELIA MÆRSK"
25th August, 1980

Deck Cadet
Kim Kongshavn
Copenhagen Nautical School
17th September, 1980

Tetsuji Sato
Maersk Line Tokyo
20th September, 1980

Erling J. Trømborg
drilling platform "MÆRSK ENDURER"
11th October, 1980

Finn Holmskov
Esplanaden
15th October, 1980

ROULUND


1


2

25 Years Anniversary

1. Palle Krohn Henriksen
   1st December, 1980
2. Agnete Rønager
   2nd January, 1981

ORGANIZATIONS ABROAD


1


2

25 Years Anniversary

1. Pimpis Amatayakul, Bangkok
   1st February, 1981
2. Gunner Nielsen, Mexico
   20th February, 1981


IHI
MAERSK LINE
XTRA