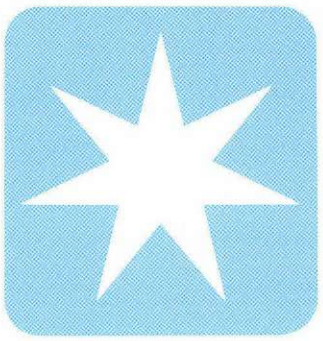
MÆRSK POST

2/1980



MÆRSK POST

Published by A. P. Møller, Copenhagen
Editor: Poul Jægerholt
Layout: Einar Siberg
Printers: Mogens Raffel

The Cover:
Two of the newest MÆRSK-fleet liners, of the Caroliner type, at Maersk Line's pier in Kobe.

Volume 19, No. 2
May 1980

In addition to the printed annual reports I put forward various remarks at the general assemblies concerning the year 1979, such as:

Our activities have brought about results that have been satisfactory on some points – acceptable on some – and unsatisfactory on others. Taken as a whole, the results must be regarded as acceptable, considering the state of the world as such and of the trade conditions with which we were faced during 1979, and when keeping in mind that shipping is our main business.

As in earlier years, the entire net income, so to speak, stems from the sailings of our ships between foreign ports. Viewed from a different angle – this corresponds to more than two and a half times the aggregate Danish cheese exports, or to almost four times our total exportation of butter.

Whereas our efforts to find and produce oil and gas have not yet contributed to the net result of the Companies, and are not likely to do so in 1980 either, we may take delight in the fact that our many efforts will gradually increase the production of Danish energy. The great projects of establishing a production of oil from the Gorm Field and of preparing a production of North Sea gas are progressing favourably, and the possibility of producing from other structures is being investigated through new drillings and through seismics. The future offers demanding tasks, not only for us and our partners in DUC, but also for Danish economic life, already widely engaged in the building up of the Gorm Field.

In the course of the year, A. P. Møller has been criticized in this country, now for this, now for that. The positive aspects – of which I have already mentioned the earning of foreign currency – are rarely given prominence. We are able to sustain this domestic criticism, which often sets foreigners wondering and causes questions; but it may be a strain on our many able and industrious staff members – and even on their many friends and relations – that the undertaking for which they are making their best efforts is so often exposed to sterile criticism, and to unconstructive and often erroneous and deceptive depreciation.

Furthermore, the unstable world through which we navigate gives us reason for concern on various points. It is becoming increasingly difficult to arrange things to the best advantage, to make plans, to make budgets. And the uncertainty regarding future income increases.

As shareholders will have remarked, we have a considerable newbuilding programme, but we have also sold from the older part of our fleet, and will continue to do so. Without modern tools of trade you cannot make any headway under Danish flag.

MÆRSK MC-KINNEY MØLLER

The "Mærsk Explorer" carrying out production drillings at the A platform of the Gorm Field. In the background part of the B platform.

More energy from the North Sea

A jigsaw puzzle of gigantic dimensions is taking shape; Danish and foreign undertakings are working at high pressure. The orders placed with each company must be completed by a certain date, to enable the Gorm Field to be ready for production by New Year 1980-81. The Gorm Field is the greatest task so far undertaken by Dansk Undergrunds Consortium (DUC), and thus by Dansk Boreselskab – a task which is now entering its final stage. The gigantic jigsaw puzzle is to be put together 214 km out in the North Sea.

Therefore, the heaviest demands are made on foresight, planning, and economic capacity. Nothing must be left to chance when a new oilfield is going into production in the middle of the North Sea. Still, the theories from the drawing-board have been speedily translated into action by DUC. From the day when the application for extraction from the Gorm Field was filed to the day when production begins, only 34 months are expected to elapse. This is something of a record in the offshore sector. But, at the same time it must be admitted that by international standards, the Gorm Field is not a large oilfield. Still, thanks to an annual production of 1.5 to 2 million tons of oil, the Gorm Field will be able to multiply the Danish oil-production by four or five, thereby covering 10 til 13 per cent of the Danish oil consumption.

Welders, pipe-fitters, electricians, and many other expert artisans are therefore working energetically now to complete their particular jobs in the Gorm project. When the Gorm Field is ready, the project will have consumed close to 3.3 million working-hours, and 40 per cent of these will have been carried out by Danish workmen. Dansk Boreselskab, responsible to DUC for carrying through the Gorm project, has spared no efforts to involve Danish firms in the work.

However, Denmark has no traditions regarding the oil industry, and it has, therefore, been necessary to buy a large amount of technically advanced equipment abroad, just as a number of working-processes, in which Danish undertakings have not any know-how today, have had to be placed abroad. Still, over 30 per cent of all Gorm project orders – counting the money value – are placed in Denmark. Then again Danish firms have been given the most labour-demanding productions.

Today the two well-head platforms of the Gorm Field – A and B – have been installed in the North Sea. Here the "Mærsk Explorer" is conducting the production drillings down into the oil-carrying layers, which are the condition for extracting the oil. In addition, four drillings are carried out to be used for re-injecting the associated gas.

But in early July 1980, even the large processing platform is expected to be positioned. This big steel structure, which is to carry the seven processing and accommodation modules, will reach its position on a giant barge from the N.A.P.M. Yard in Holland. Its eight heavy legs and robust steel construction, and the extension of an average garden form the basis of the processing facilities.

As soon as a large floating crane has positioned the platform on the sea-bed, forty metres below the surface, the platform will be secured by 50-metre long steel poles sunk deep into the soil.

Coinciding with this, months of construction work will be completed at the Aalborg Shipyard, Odense Steel Shipyard, Vølund of Varde, Sabroe, Semco, Bergsøe and Son, Sønderjyllands Maskinfabrik, Kähler & Breum, Monberg & Thorsen, Det Danske Stålvalseværk, and many other Danish undertakings. The seven modules are ready for installation.

This installation is scheduled to take place in August, by means of a gigantic crane. But all planning and all efforts put together still amount to only one pawn in the game: DUC versus the Clerk of the Weather.

During the entire autumn the Gorm Field will be one of the big Danish places of work. Coinciding with the continued production drillings by the "Mærsk Explorer" at the A and B platforms of the Gorm Field, close to 400 artisans and engineers will be busy preparing the processing equipment on the C platform, which measures 95 metres, like a house of 30 storeys, from the sea-bed to the helicopter pad at the top.

The first oil of the Gorm Field is expected to be produced after New Year 1980-81, forming the first result of the efforts. Alongside with this "Mærsk Explorer" will carry on its work, making more production drillings in the Gorm Field.

Whilst the Gorm group of Dansk Boreselskab completes the installation of the new oilfild, the gas group will be busy in the fields of natural gas. A project organization of 80 people will head the daily work.

The basis of the group's work is the application for the building of five well-head and four processing platforms, filed in September 1979 and approved by the Energy Ministry on April 1st this year. At present, 25 Danish and some 20 foreign engineering firms are taking part in a pre-qualification round regarding the projection work for platforms and production and supporting equipment. The first orders are expected in August.

In order to secure as great Danish participation as possible, even in the gas project, Dansk Boreselskab and the Association of Danish Engineers have jointly had a report worked out by a group of consultative engineers, dealing with Danish economic life and the North Sea.

As an example of what Danish economic life is able to take part in, the group is having a look at the gas project. If Danish firms are to maintain themselves in the offshore sector, they must secure the necessary know-how for themselves. That can be done, for example, through co-operation with a foreign partner.

The construction of new oil- and gas-fields in the North Sea forms but some of the activities with which Dansk Undergrunds Consortium is at present concerned. Near the border against the Norwegian sector, in the middle of the North Sea, the drilling rig Sedco J has, since New Year, been busy with the exploration drilling Lulu 1. From October, even the jack-up rig Dyvi Beta will be employed in exploration work in the Danish part of the North Sea.

In South Jutland new exploration drillings on land will be commenced in May. At Løgumkloster the drilling-site is already prepared for the land drilling-rig, and at Tønder the contractors have started the preparatory work. In both places, information stands and platforms for spectators are rigged up at certain times to enable those who are interested to get a good impression of the efforts made to find oil and gas in the Danish subsoil.

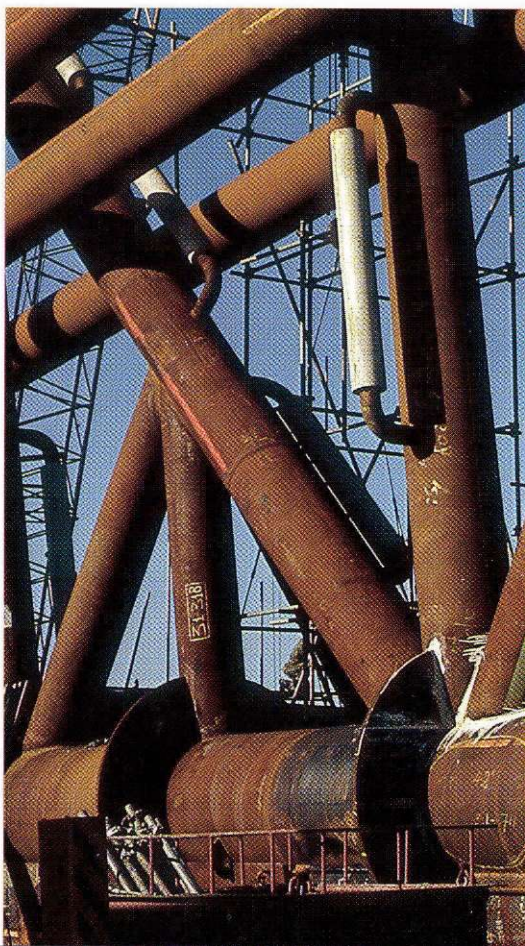
In addition, seismic investigations are conducted in the North Sea and Skagerrak, as well as on land and in the inner Danish waters. Since Jack Frost let go of the South Jutland soil at the end of February, the seismic team has been at work here. And in mid May the team moved to Lolland-Falster. Besides, investigations will be made in the Baltic and in the Belts.

The comprehensive activities both on land and in the North Sea have required and will require very great investments by the DUC partners – investments which, as regards explorations, are made without any certainty of finding oil or gas at all. Once the findings have been made, even greater investments in production equipment are needed to utilize the fields. To these should be added the working expenses.

By January 1st, 4,700 million kroner, including interest, had been invested in exploration, the Dan Field, the first part of the Gorm Field, administration, etc. The income, including interest from the sale of oil, after deduction of production costs and government tax, amounts to about 950 million kroner. Net investments, therefore, have today reached 3,750 million kroner.

To this should be added the investments, budgettet but not yet paid, in the Gorm Field of 1,250 million kroner and in the gas field of 4,000 million kroner. And there will be no income from the Gorm Field until 1981, or from the gas production until the second half of 1984.

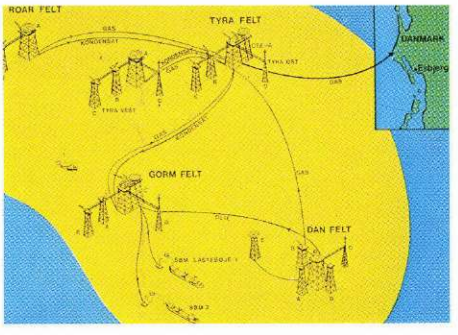
These investments of thousands of millions of kroner, therefore, will not have been earned back until 25 to 30 years after the search for oil was commenced. This is not even counting any profits or inflation.



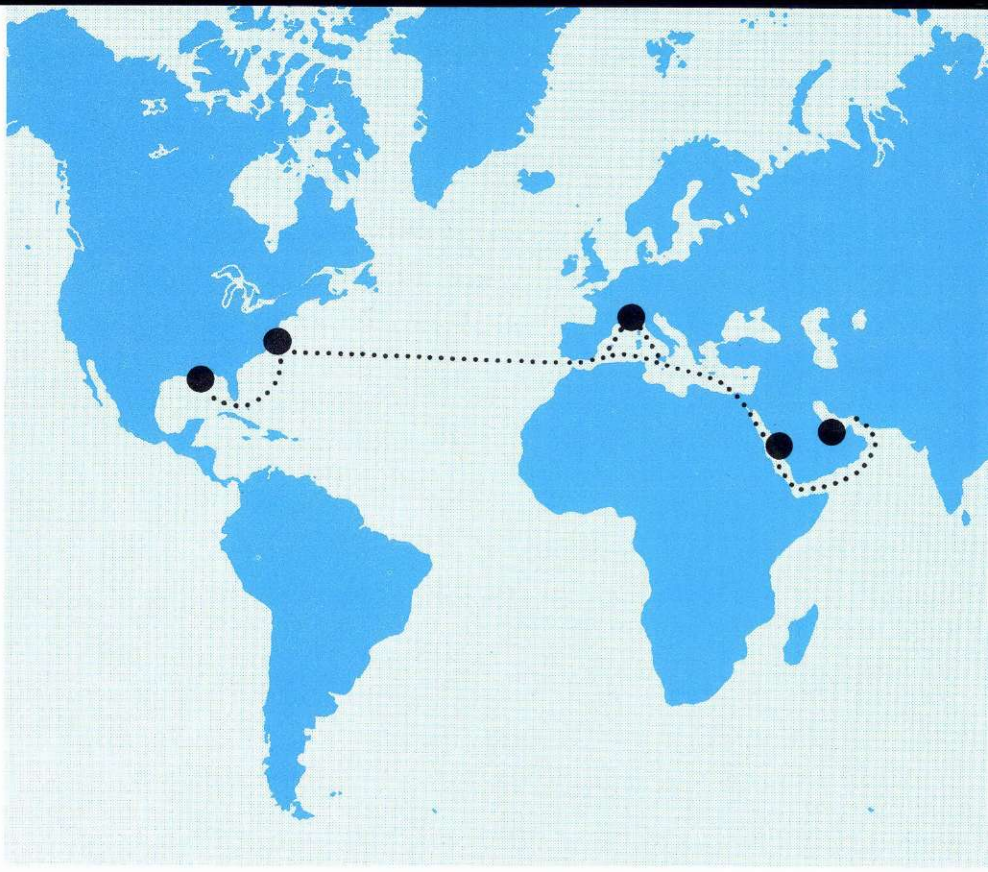
At the NAPM Yard of Vlissingen, the steel constructions for the heavy processing platform of the Gorm Field, Platform C, will soon be completed.

On December 25th last year the "Mærsk Explorer" commenced the first production drilling at the Gorm Field.

The over-all layout of Dansk Undergrunds Consortium's well-head and processing installations in the North Sea, once the Gorm and Dan oilfields as well as the Tyra and Roar gasfields have started production.



Members of the Energy Commission of the Danish Folketing paid a visit to the "Mærsk Explorer" in April together with representatives of Maersk Drilling and Dansk Boreselskab.



New container service

Container ships in no time

In December last year, A. P. Møller entered into an interesting venture with the Hitachi Shipbuilding and Engineering Co. of Japan, when a contract was signed for converting five of the well-known C-class MÆRSK vessels to full-container ships. Delivery of these container ships from the Hitachi Yards commences already in late August, and the last ship is to be completed just before Christmas this year!

USA/Middle East Line Containerized

Maersk Line's service from the USA to the Middle East was inaugurated in the summer of 1975. The trade at that time was really booming with the tremendously increasing buying-power of the oil-producing countries in the Middle East – a factor which has not diminished. What has changed, however, is the port conditions in the Middle East, where enormous efforts and investments have resulted in modern and efficient terminals in most of the countries, fully adequate to serve shipping of the future. Congestion in the area, which arose due to the sudden and steep growth in imports, today prevails in only a few ports.

Since the start, Maersk Line's USA/Middle East Service has been operated with ships with own gear, making loading and discharging operations less dependent on shore facilities. However, with the delivery of the five full-container ships later this year the days of conventional operations for Maersk Line in this trade will be over, and a modern and more rational container service, with its many advantages, will be introduced.

Project Work

With a view to establishing the future and long-term position of Maersk Line on this very important route, extensive studies began in the fall of 1978, resulting in the decision to go for a *full-container service* in view of

- the rapidly growing demand for containers by shippers and consignees
- the simultaneous (and also quickly increasing) need for higher sailing-frequency, thereby providing a kind of "pipe-line" system.

From Conventional to Full-Container Ships in 45 Days!

The conversion project developed by A. P. Møller naval architects in co-operation with Hitachi Shipbuilding and Engineering, enables Maersk Line to move fast on this project. At the same time it will provide the USA/Middle East Service with a fleet of modern container ships of a high technical standard.

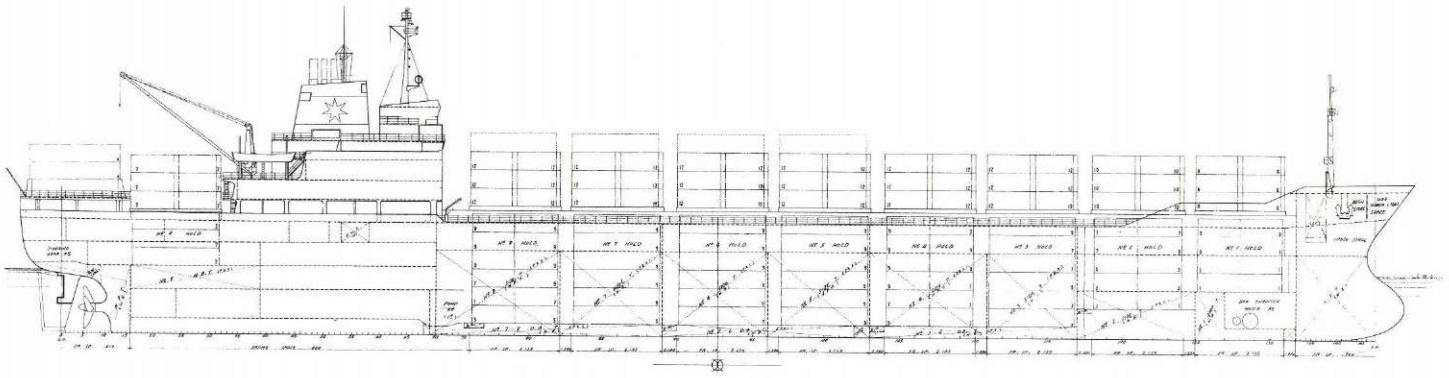
But how is the conversion taking place?

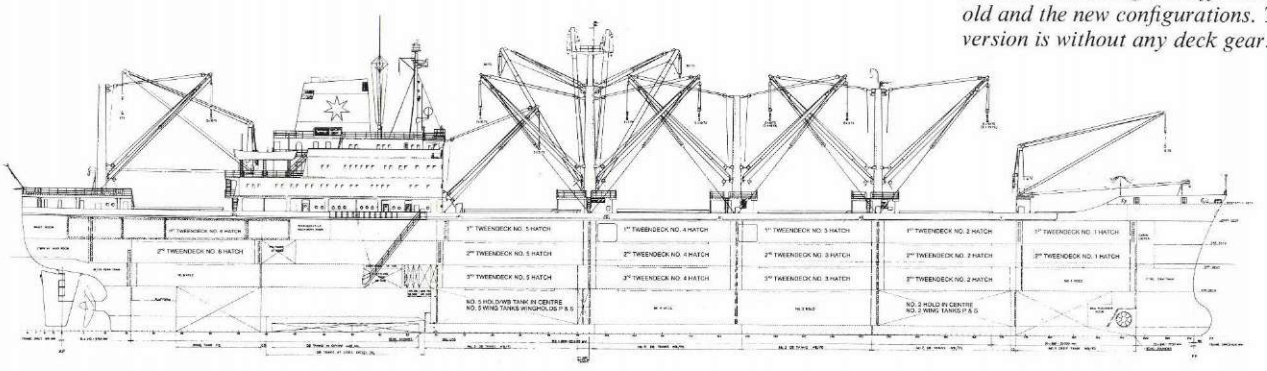
Starting around the middle of July and with approximately one month's interval, the "CHARLOTTE MÆRSK", the "CHRISTIAN MÆRSK", the "CLIFFORD MÆRSK", the "CHASTINE MÆRSK", and the "CLARA MÆRSK" will dock in at the Hitachi Yards in Japan. The ships will then be cut just in front of the superstructure, and the old fore-ship will be towed away – giving space for a new and much larger fore-ship (approximately 27 metres longer and 5.5 metres wider!), which has by then been prefabricated by the shipyards. Simultaneously, the hold aft of the ship's superstructure will be equipped with container cell-guides, and the diesel-engine and superstructure will undergo modifications and extensive overhaul.

45 days later the now converted C ship will head for the United States to take up her new duties as a full-container carrier!

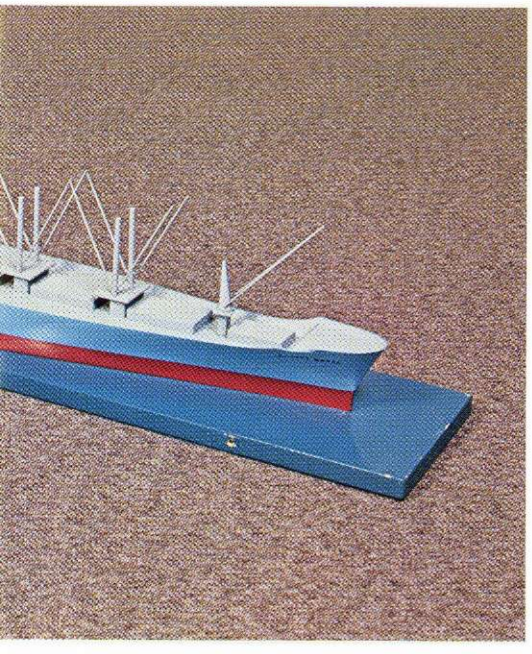
The dimensions and capacity before and after compare as follows:

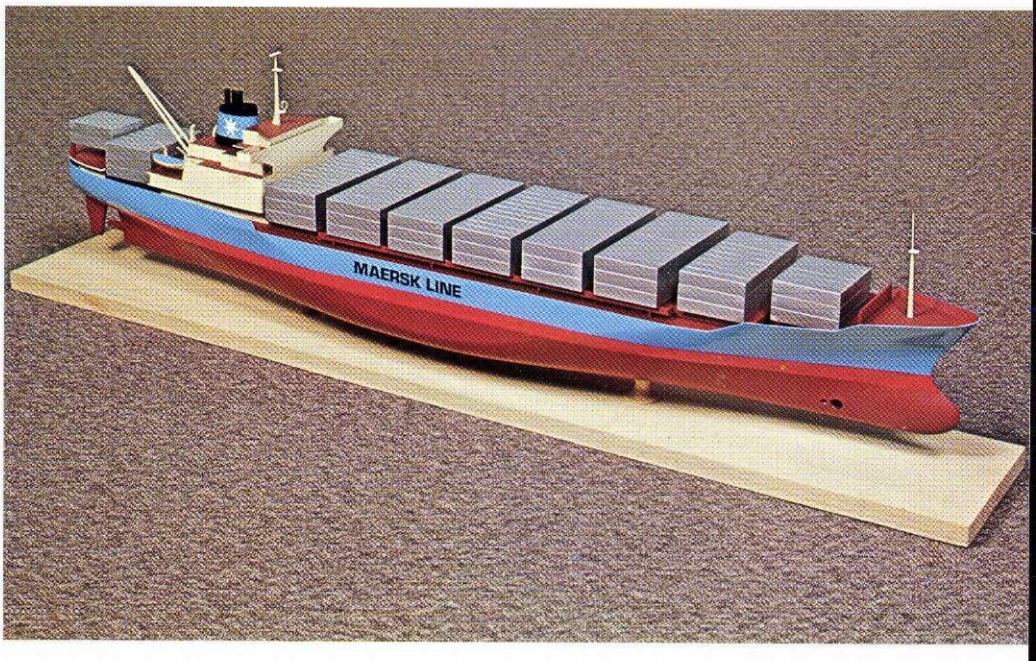
	Before	*After*
Length overall	170.6 m	197.0 m
Width	24.4 m	29.7 m





Elevations showing the difference between the old and the new configurations. The new version is without any deck gear.





"Aerial" photographs of two models, clearly illustrating the old and new versions.

Deadweight	14,000 M/T	24,100 M/T
Container capacity	415 TEU	1.222 TEU (3 tiers on deck)

The "fairing" between the new fore-ship and the old part of the ship has been based upon extensive tank tests, to enable the optimal drawing of the lines of the ships. The consequent reduction in speed has thus been limited to about half a knot.

The photos of the models show that the difference in the beams of the old and the new hulls is hardly noticeable!

The container ships will be fitted for carriage of any kind of ISO containers in 20' and 40' modules – including reefer containers, but they will also be able to accommodate over-size cargo on Maersk Line's specially designed "artificial tweendecks" which can be installed below deck.

The New Container Service

With the new fleet of five container ships Maersk Line will introduce its container service eastbound from the US Gulf and the US East Coast to the Middle East, and westbound from the Mediterranean Sea to the United States as indicated on the map. Through the more rational operation of the container concept, expansion into new markets is made possible.

In order to cope with these increased activities and to ensure a successful outcome for this new venture, a comprehensive strengthening and enlargement of the organization is now being implemented overseas as well as in Copenhagen, from where the new container service will be managed within the ambit of the Line Department. *P. W.*

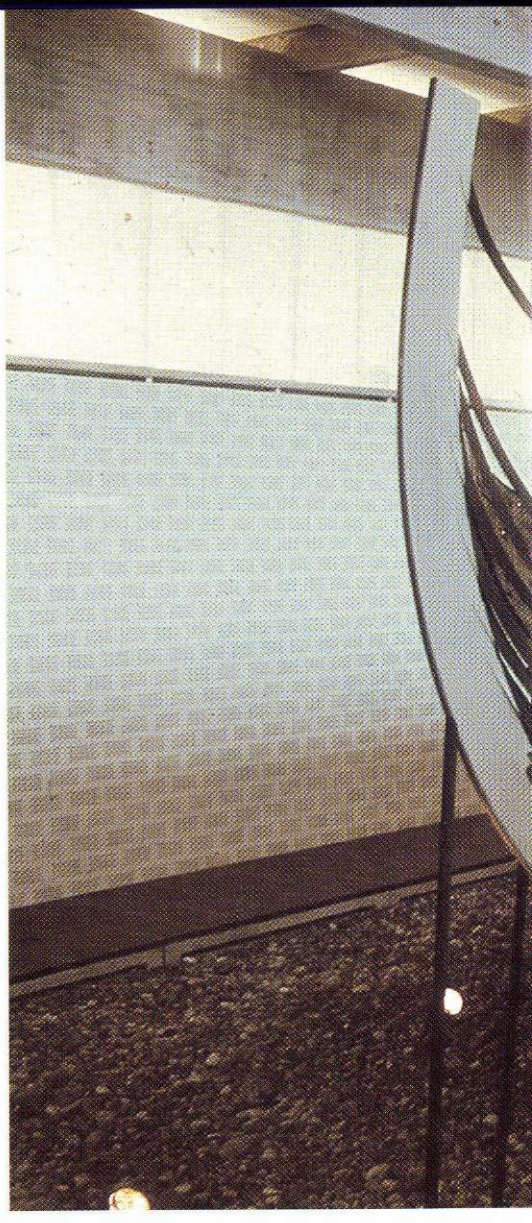
Vikings . . . a word that rings a note almost of heroism, at least in Nordic ears – not quite so promising in other ears. That depends on whether you sense a certain relationship with the rough seafarers, or whether you have your origin where the Vikings ravaged during more than two centuries of the Middle Ages, leaving various permanent marks. This was the case in the regions of northern and eastern England nearest to us, just across the North Sea.

THE VIKINGS

Conquerors, colonizers, shipowners, merchants

BY HUBERT MALLING

Photos courtesy Vikingeskibshallen and Danish National Museum



The name – and what it stands for

As with so many other things that have to do with the Vikings, there has always been disagreement also regarding the origin and meaning of their name. Does it signify that they set out from a 'vig' (Danish for firth or inlet) where they had their abode? Or is it derived from the Latin word 'vicus', meaning hamlet or camp, surviving as the final syllable -wick or -wich in many English place-names?

A Danish authority on this subject, Mr. Thorkild Ramskou, museum curator and author, is inclined to believe that the word Viking stems from 'vikja' in Old Norse, meaning to make a detour or short trip. This gives us to suppose that a Viking was a man who went to sea, but had every intention of returning to his homeland, much richer than when setting out.

But, a very particular attitude to life is required, if anyone should wish to go abroad and get rich merely through bodily strength and at any price. From our point of view clearly unsympathetic, but certainly a must in a troubled world where the rule is an eye for an eye and a tooth for a tooth. One of the Viking's most typical features, completely unreflected brutality, may be illustrated by the following quotation from the Egil Skallagrimson Saga:

> *Egil was playing ball with another boy, named Grim. And Grim was winning. This infuriated Egil so much that he hit Grim with the bat. Grim hit back and gave Egil a good hiding. Egil got hold of an axe, and when unnoticed hit Grim on the head, so hard that the axe became lodged in his skull. When Egil came home, he was not welcomed very heartily, and his worried mother said that there was a good deal of a Viking in him.*

A mother would hardly use such words if she were proud of her son's doings. So, a certain scepticism can be traced regarding heroism, even in those days.

Two details in these few lines characterize the future Viking: The blow was unexpected, and it was delivered with great force; two details that give a vivid picture of the role played by the Viking in history, viz. that of the marauder.

However, the picture is not quite so simple. There were other sides to the Vikings as well, pushed into the background by the terror and the din of battle. They were great explorers, clever colonizers who became good neighbours, keen shipowners, and schrewd businessmen.

Period and sources

The hey-day of the Vikings, in history often termed the Norman Times, covers little more than two centuries, largely speaking from ca 800 to ca 1050, corresponding roughly to the Nordic Iron Age.

One specific year, 783, is regarded by many as the beginning of the epoque, because in this year of fate Vikings assaulted and ravaged the monastery on Lindisfarne Island, south of the Scottish sea-border. This event has resounded in history, not least because the blow was dealt as with Egil's hand, unexpected and with annihilating force.

The bloody deed has been described by a clerical man, Alkuin, who had paid a visit to Lindisfarne shortly before and was now domiciled in Normandy, working as a historiographer. Despair and anger tinge his account, in which he clearly sees the identity of the perpetrators through the clouds of stifling smoke from the burning monastery.

We also have several accounts from the same period, telling directly and indirectly about the conduct of the Vikings. They come about in the shape of chronicles and annals, printed in the south of a Europe which reveals an ever-growing sense of retaining history through writing. The writing of annals flourished in the Frankish Empire during the early 9th century, when Charlemagne was emperor; and about the same time in England the great work 'The Anglo-Saxon Chronicle' was commenced, forming the most important source in England regarding the Viking period. Whereas the Continental annals are worked out in Latin, the Chronicle is written in the mother tongue, Old English.

Where accounts from abroad about the deeds of the Vikings are copious, our own are few in number and brief. Not so much for want of purpose as for lacking ability to write. The scanty news we may gather from the inscriptions on runic stones can do little more than supplement that of more detailed sources.

A certain amount of knowledge regarding the seafarers' voyages and achievements may, however, be gained from Adam of Bremen, a magister scholarum who, by the middle of the 11th century, got his information direct from nobody less than King Svend Estridsen himself. The latter had witnessed quite a number of the most recent happenings so to speak within his own family circle.

The Danish chronicler, Saxo, on the other hand, spends but little time and energy on this part of our history; and he puts little heart into what his does

Reconstruction of a sea-going ship in the Viking Ship Museum at Roskilde.

mention. All known sources, everywhere, deal mainly with the violence. The peaceful aspects set their stamp on history in a different way.

The routes that were followed

In the wake of their peregrinations the seafarers left different marks, depending on the purpose of their voyage, and according to which of the Nordic countries they hailed from. Destinations and routes were, so to speak, allotted beforehand in keeping with geographic conditions.

Thus, Swedish Vikings showed a predilection for going east. Via the East Baltic states they were able to use the Russian waterways to reach the Black Sea, continuing into the Mediterranean.

For the Norwegians it seemed natural to go to Scotland, Shetland, or Ireland – or across the North Atlantic to the Faroes, Iceland, and from there to Greenland – and perhaps to the North American Continent.

The Danes went south, to Normandy, or west, to England – or chose even other routes if it suited them. If they preferred England, it was probably because so many things made them feel more at home there than elsewhere.

About 400 years before this very active wave of raids or emigration by Vikings hit North and East England between 800 and 1050, an earlier wave of immigrants had begun flooding these very regions, consisting of Angles, Saxons, Frisians, and Jutes (Jutlanders). How would Anglia have got its name if not through the Angles, inhabitants of the southernmost parts of Jutland? Similarly, place-names ending in -sex pertain to localities formerly occupied/colonized by Saxons. These different tribes had taken a liking to England long before such happenings were recorded in history. By the time of the Vikings they had become natives.

If others wanted to contact them, in peace or war, they had to go by sea. And on this point the Vikings were experts. Various craft had been developed for mercantile or warlike purposes, and hybrid types suited for both. This is illustrated by the many finds of ships made in the Nordic countries.

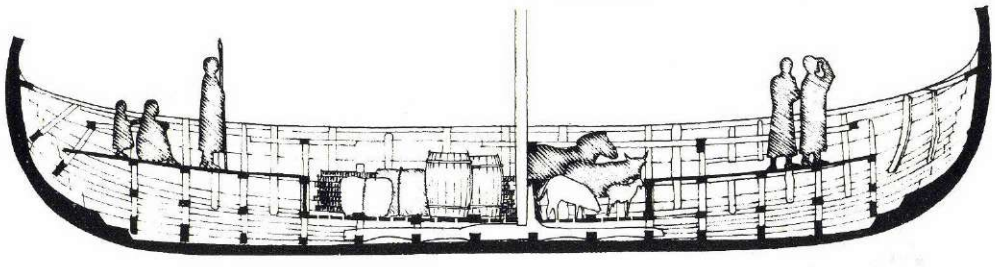
We see warships of almost any size, from tiny vessels for six or eight oarsmen to the impressive longboats, rowed by sixty or more men. They were all lightly built, very seaworthy, and ideal for surprise attacks the Egil way. Most of these large, terrifying ships were built exclusively for warfare. Given ample funds and sufficient manpower, a man might call himself king and seek his fortune where it seemed available. If one of the places he haunted appeared ideal for the development of trade, or perhaps for settlement, such possibilities would certainly by utilized.

They had a very well developed sense of picking the right trading points, appreciating the advantage of points on international trade routes. Thus, Jumne at the mouth of the Oder was an important Slav stronghold. Hedeby on the Slien was in a key position on the transit route for goods between the Baltic and the North Sea. Dorestad on the Netherlands coast was ideally situated if you were going farther south. He who controlled such a centre really had an opportunity to have a finger in every pie.

But, no matter whether the trade routes went across the open sea or along the inland waterways, other, special types of ships were required in addition to dragon-stemmed warships. Crew members may squeeze themselves together in akward positions, whereas cargoes are not always so pliable. Crew members can lend a helping hand when required, cargoes are just lying there, taking up so

Trelleborg, the fortified camp near Slagelse is pedantically exact in its layout; a feature that reveals the order and meticulousness of the Vikings, important when carrying through a war with success.

If a sheer plan from a Viking shipyard had existed, it might have looked like this. All jobs were carried out with axes and other cutting irons, as the saw was not known. But this knarr was able to sail. Even as far as Greenland.



and so much cubic space. From finds of wrecks in the narrow approaches to Roskilde, we know a couple of typical cargo boats, which were sunk there around the year 1000 together with a longboat and a couple of smaller craft to block the entrance, against – – – Vikings from Norway!

The largest type of seagoing 'freighter' was the knarr, 16.5 metres long, 4.5 m wide, and 1.9 m deep amidships. This type of ship was built of oak, lime, or pine, and was intended for voyages to England, Iceland, or even Greenland.

Another wreck is of a lighter and smaller merchant ship. It has a length of well over 13 m, a width of 3 m, and a depth of 1.6 m amidships. This ship may very well have crossed the North Sea several times. It may even have called at London.

Both vessels mentioned had square sails, half-decks fore and aft, and an open hatch amidships. The smaller of them has some holes in the top gunwale plank, which indicate that the crew have had to resort to the oars now and then.

On board

Whereas the war vessels meant plundering and the taking of prisoners, until the warlord judged that the voyage had been paid for, the merchant-ship crews were more peaceable. It might occur that a single native came aboard unwillingly at the departure, but once the trade relations had been established, it was usually in everybody's interest to promote the relationship in a more normal way.

Whilst the masters of the longboats played the role of self-supporting warlords, the owners of freighters usually behaved like ordinary shipowners, seeking a favourable turnover of their commodities. There is, however, no reason for cherishing any illusions about a high commercial morale on their part, or about any humane attitude. If they outnumbered their counterpart when bargaining, or were able to muster armed support from an accompanying boat, the price level could easily be influenced to their advantage. In other cases mutual, profitable arrangements might be made.

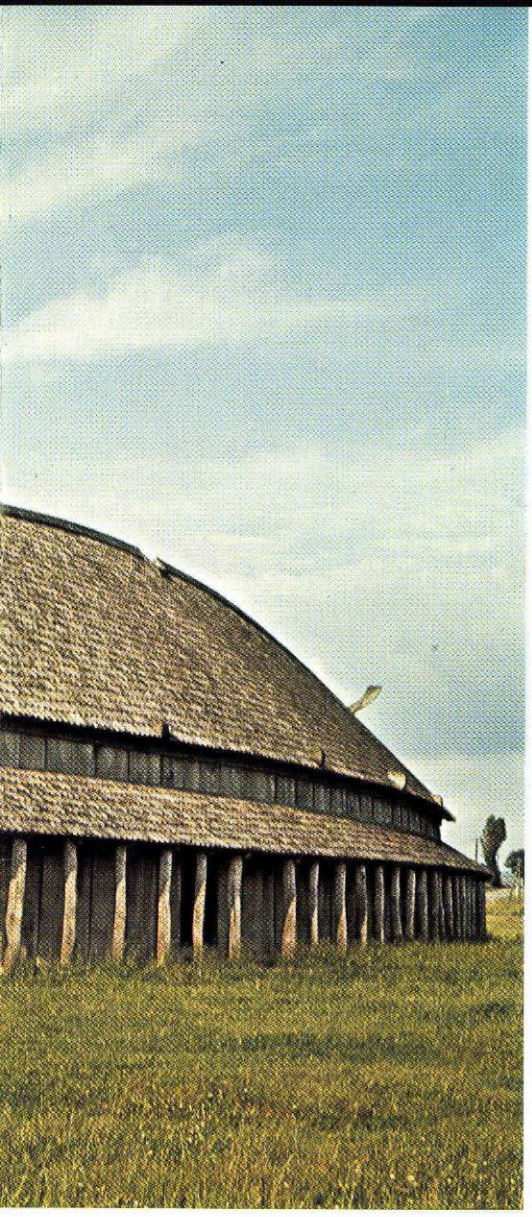
As mentioned above, both the knarr and the smaller freight vessel appear to have had half-decks fore and aft. Under them commodities that would not stand sea-water or heavy showers were stowed; very likely in the company of the savage, two-edged swords, which might speedily be produced in case really convincing arguments were needed.

Amidships, in the open hold, the less fragile commodities were kept under protecting hides and skins. The crew and possible emigrants were confined to the two half-decks, where they might enjoy unlimited amounts of fresh air and good visibility during the days, weeks, or even months that the voyage lasted.

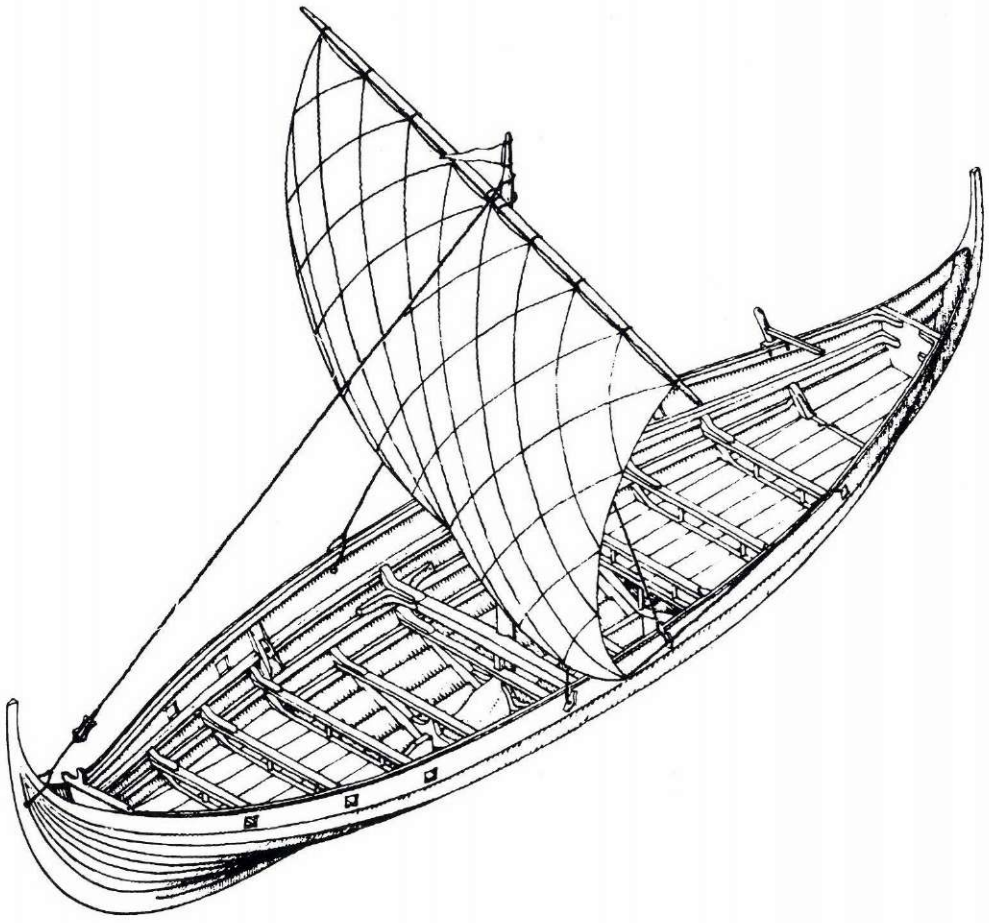
It must have been a real challenge to fill the combined post as skipper, merchant, and, if needed, warlord. The only insurance against risk of loss or shipwreck lay in good seamanship – and a bit of luck. If, on the other hand, fortune seemed to smile upon such a shipmaster, it would undoubtedly be credited to his personal ability. And in its wake, of course, followed riches, admiration, and power.

Commodities

The goods that were stowed under half-decks or hides were highly different. There might be wine, glassware, and earthenware from the Franks; and sword-blades, in very great demand, from the same source. From England and Ireland came beautiful articles of bronze, from Arabic countries there was silver – or even gold. Salt, too, was an important



Photograph of the Viking camp of Trelleborg, with a reconstruction of one of the houses.



This light merchant vessel did not shield its crew or passengers very much. The space under the half-decks fore and aft – not shown here – was reserved for the cargo. Ships of this type may very well have visited England several times.

article; the only means of preservation known by then. From Byzantium there might be silk, from the Netherlands fine cloth, from the extreme North furs of bear, marten, and winter squirrel. Expensive musk came from Swedish trade partners who had fetched it in remote parts of Russia.

Slaves were a great article. They were prisoners taken in the West or the South; or they might have been purchased in far away regions to satisfy special tastes on the home market.

Amber, which was of Nordic origin, was in very great demand for jewels everywhere. Honey and bees' wax were easy to trade in most places. Hides and skins in all stages of preparation would always fetch a good price. In the same category were the well-reputed ropes of whalrus hides. They were made in the way that when skinning the animal the hide was cut in a long coherent spiral, which was then cleaned of blubber and salted in barrels without having first been tanned. These ropes were used on ships and in harbours, and were much valued.

Localities

Let us not forget the dragon-stemmed ships. They contributed greatly to expanding the markets. After the successful conquest of new land, and subsequent swearing of allegiance to the victor, the latter would often reward his trusted shipmates, who were free men, by donating some foreign land to them. This was done in accordance with rank and desert. Those who were great at home got most.

In England the Danelaw, the area where Danish law applied, was created in that way around 880 – only 30 years after Danish Vikings had spent their first winter in England.

The domination of England was changing at that time, Danish Vikings, however, having the greatest influence, on an increasing scale. In 985 Svein Forkbeard started ravaging England. In 1013 he conquered the country, marking the beginning of a Danish domination which lasted until 1042.

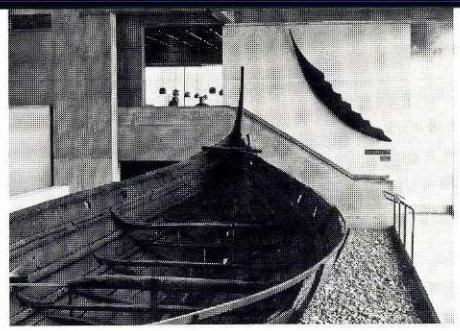
Even today innumerable place-names stem from Danish influence on the Anglo-Saxon Danelaw. Can the origin of names like Grimsby, Baldersby, Danby, Maltby, or Rugby be doubted? There are more than 700 names ending in -by in this part of England. Add to this a large number of endings like -toft, torp, -beck, etc. etc.

And then – almost as with a blow, the straining activities of the Vikings come to an end. This happens in 1020, and a promise in writing is given to England to this effect. Written by King Canute the Great, who had succeeded Svein Forkbeard on the throne in 1018, and taken over the Danish throne the same year upon the death of his brother Harold.

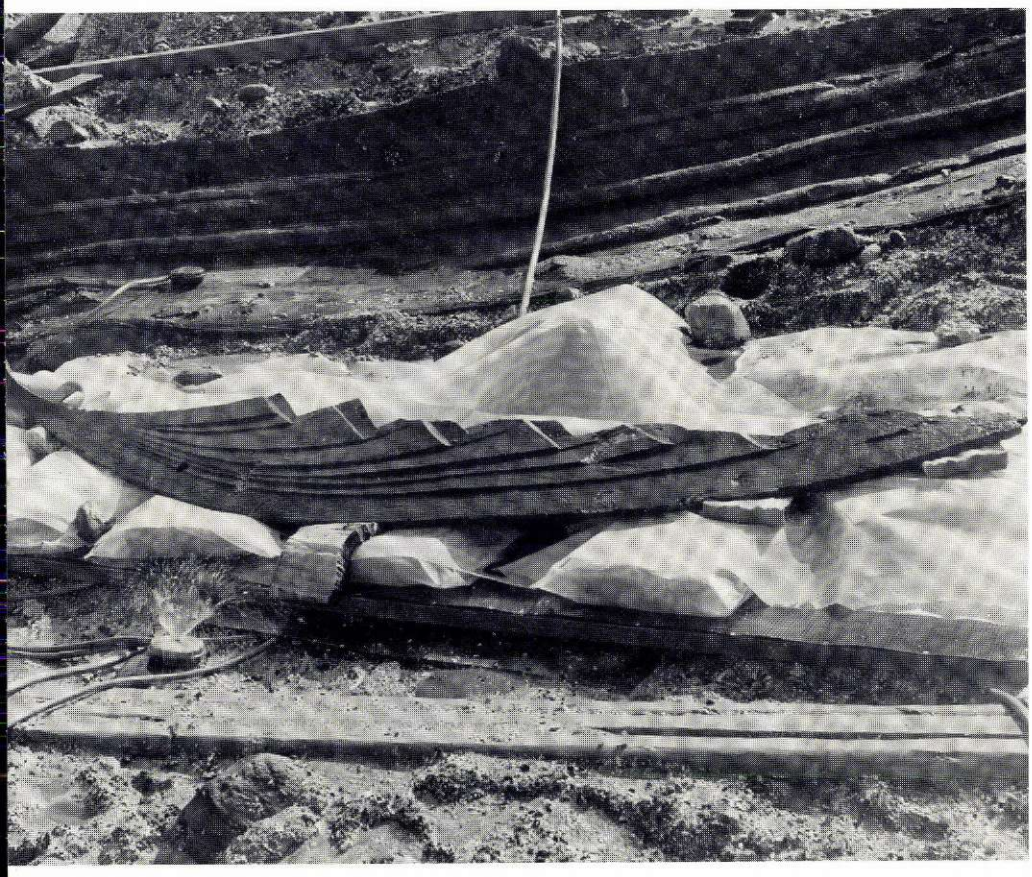
The sentence which must have relieved many hearts in England ran:

> *– then I went to Denmark, from where most of your former misfortunes have come, taking with me the men that I had kept. Such misfortunes I have prevented in the future. Hereafter no actions of war shall come to you from there, as long as the people is ruled in the proper manner, and my life goes on ...*

The promise was kept. Also by Canute's successor, Hardecanute. With his death the names in the Danelaw and many small words in the English language became but lasting memories ...



The stem of the light merchant vessel, disinterred from the bottom of the Skuldelev inlet, seen partly during the excavation, partly on the wall of the large ship exhibition hall at Roskilde.



...last in London

The Viking Exhibition at the British Museum in London throws light on the culture of the Viking era through the presentation of 543 objects, borrowed from museums and collections in the Scandinavian countries, England, Ireland, and West Germany. As sponsors of the arrangement The Times and The Sunday Times have offered their services in cooperation with SAS. In addition, the Exhibition has been supported by the cultural foundation of the Nordic Council.

– I wonder when this one was last in London, said the late registrar of the Viking Ship Museum of Roskilde, Mr. Viggo Kjær Larsen, when once again he saw 'his' stem at the British Museum in London early this spring.

These spontaneous words were understandable, because Kjær Larsen helped with his own hands when this unique fragment of a ship was disinterred from the bottom of the Skuldelev inlet, forming the so far most interesting piece of wreckage from a light merchant ship of the Viking period.

After being salvaged and reconditioned this stem has been used to adorn the gable wall of the large ship exhibition hall, which is so brilliantly lit from the open water outside the museum windows. Throughout this summer, however, it will be the first impression received by visitors to this year's great London success, the Viking Exhibition ...

The well-reputed expert's presumption that this stem has formerly cloven the waters of the Thames after a voyage across the North Sea may very well prove correct. For such a stem was typical of the light merchant vessels which, during the latter part of the Viking period, most certainly sailed to England in great numbers. It was a period of comparatively peaceful relations between Anglo-Saxons and Nordic peoples.

The stem

A Dane, paying a visit to the exhibition in question, called 'The Vikings', must invariably feel pleased at the prominence given to the stem of wreck No 3.

It towers almost like a landmark, and so well placed that you are apt to forgive the planners that they have equipped it with a side-rudder – and hereby reduced it to the stern end, although the stem-builder has clearly intended it for the foremost part of the ship. It also helps if you know that these craft could be manoeuvred just as efficiently with the stern end first.

In itself this marvellous stem is unique. Hewn in one piece, from a naturally shaped oak, and given such a craftsman's expert treatment that every single scaling in the bold curvature clearly indicates the bevel of the boards in the entire length of the vessel.

... And there you are, armed with the very fine catalogue, enjoying the way in which the colossal exhibition case, together with a series of supplementary elements of transparent plastic around

The furnace stone from Snaptun with the face of Loki.

Richly ornamented part of a horsecollar.

the stem, yields imperceptibly to the noble wooden material and the artisan dexterity of our forefathers.

The visitors

The Curator of the British Museum, Mr. David M. Wilson, begins his preface in the exhibition catalogue with the remark that the Vikings have always been given a bad press. He also remarks that they were hardly any worse than so many of their contemporaries, adding, almost apologetically, that the good English word 'law' has a Scandinavian root. Hereafter it is up to every single visitor to equate the pros and cons of piracy, merchant expeditions, pillage, and administration.

It is obvious, however, that the Exhibition shows the Vikings first of all in their capacity as, mildly speaking, erratic visitors – even though jewellery, peaceable kitchen utensils, and scales with weights offset other features.

A good impression of the Exhibition as instrumental in bringing about an understanding of a tainted historic period may be had if one listens to other visitors' comments – noticing what captures the attention – of whom.

An example: Among the objects touching upon Nordic mythology is a semi-circular stone, found at Snaptun. It has been used as a furnace-stone to protect a bellows-nozzle. It is incised with the face of the god Loki. The lips are disfigured with lines across them which may represent stitches. We are told that this god of destructive jealousy and spite once cheated in a wager with some dwarfs, who, enraged, sewed his lips together as punishment. A typical British gentleman, wearing a moustache not unlike that of Loki and dressed in a pin-striped suit with a red carnation in his buttonhole, remarked, after having acquainted himself with the details of mythology: "Well, that is what may happen if you break the rules of fair play!"

Another example of British affinity concerns riding-gear and wagon traces used by mounted or driving Vikings. Thus, a pair of beautifully inlaid spurs and stirrups from Langeland make an impression. This also applies to a magnificent horse-collar, found at Mammen in Jutland and ornamented in the tenth-century Jellinge style. Part of this showpiece has even been used for the front cover photograph of the exhibition catalogue.

The large amount of gold and silver jewellery, shaped as rings for neck, arms, wrists, and fingers, together with brooches and needles, thrill the female spectators to the same degree as when the best Georg Jensen design is presented in today's Paris or New York, two cities that will later be able to enjoy the Exhibition.

A model of a Viking house is bound to create most interest among Scandinavian visitors, which is quite understandable. How often have we had a chance to look inside a single-family house from about the year 1000 – in the middle of the London of 1980.

And outside the British Museum people queue up nicely, every morning, about an hour before the Exhibition opens.

At long last the Viking are having a good press!

We have forgotten...

Little Denmark

– It applies to our automotive as well as to our industrial products that the market for them in this country is far too small. A profitable production cannot be based on such a limited market at all, says Mr. Bertelsen. Therefore, we are obliged to find a sale for our products in a very competitive market. The automobile industry, especially, makes exceedingly great demands regarding quality, price, and service.

In other words, our conditions are to buy our raw materials at world market prices and to sell our finished products in a market with stiff competition, besides having to finish our products in a country where production costs are much higher that in the countries with which we compete.

Staff

– The only means, therefore, by which we are able to compete, is our staff of workers and employees. If they are better trained and more industrious than those of our competitors, we still have a chance of pulling through.

But, on this point I think too much has been lost in the past not only at Roulund's, but in industry as such. I think that years back we had some solid material to build on. The Danes were really hard-working and capable, and quite aware that their own condition depended on that of their firm. But, a change of attitude has taken place – you do not encounter the same commitment as before.

Expectations

– It is not so difficult to understand why it has developed like this, adds Bjørn Bertelsen. A series of bad governments that we have had during a great number of years have systematically undermined the behaviour and attitude of the population. People have become accustomed to a happy-go-easy life, with the welfare state taking care of everything without delay.

A number of years ago, a well-known politician said that now good days should be made even better. Through this he gave the people hopes that could never be realized. Creating false expectations is about one of the worst things you can do; it brings about frustrations which will contribute to doing away with an otherwise sound attitude.

If, instead, he had declared that now we had to make an effort to preserve the good days, he would have made it clear that we have not been guaranteed good days, but that it is something you preserve through solid work. You simply have to pay for everything you get, and if you deviate from that train of thought, something is bound to go wrong.

Our politicians may not deliberately have followed this policy of changing the structure of the society, but they have closed their eyes and not evaluated the consequences which must constantly be taken into consideration in economic life. One might also characterize them as rather unimaginative, a shortcoming not normally to be expected from the top leaders of a country.

Schools

– As part of the development our school system lays the main stress on cultivating the average, no special consideration being shown to those with an urge or gift to develop beyond their level. At the same time, group work has been given the pride of place, Mr. Bertelsen goes on. This may be of a certain importance in a few situations; but it diffuses the responsibility of the individual, and after all, it is individuals with a clear sense of responsibility that are needed in economic life.

A great number of those who have left school during the latter years in order to join industry or commerce have no realization at all of the requirements or the economic risks that are connected with life. Unfortunately, they have been taught that the various systems of the welfare state step in automatically, if something should go wrong.

Organizations

– Thank God, there are still individuals with a push in them; but it is very difficult to cultivate them, partly because of our taxation system, partly because the different organizations watch meticulously for any differentiation among their members. In other words, we are hastening the destruction of the sole means left to us, by which we should be able to compete, viz. a diligent and competent staff.

If this tendency is continued, I foresee a very sombre situation for the Danish export industry; and how on earth are we going to make away with our enormous balance of payments deficit?

Role as adviser

Bjørn Bertelsen is 66, and he retires now, according to his own wish, to leave space for new talent. His retirement was marked by a reception; but, in reality Mr. Bertelsen only moves out of the managing director's office and into a smaller office. He joins the board of directors and stays on as adviser to the management.

– This means that I shall retain my strong connections with the company and its development, and I shall both hope for and work for its continued, positive development.

The Danish, daily newspaper, "Børsen" has interviewed Mr. Bjørn Bertelsen, civil engineer, who retired from his post as managing director of A/S Roulunds Fabriker on March 31st. Mr. Bertelsen has been employed by Roulund's since 1945, as managing director since 1966. MÆRSK POST has been permitted to reprint this article, which appeared in the Børsen on 28th March.

Mr. Bjørn Bertelsen, Managing Director: Our industrial life needs more people with a clear sense of personal responsibility.

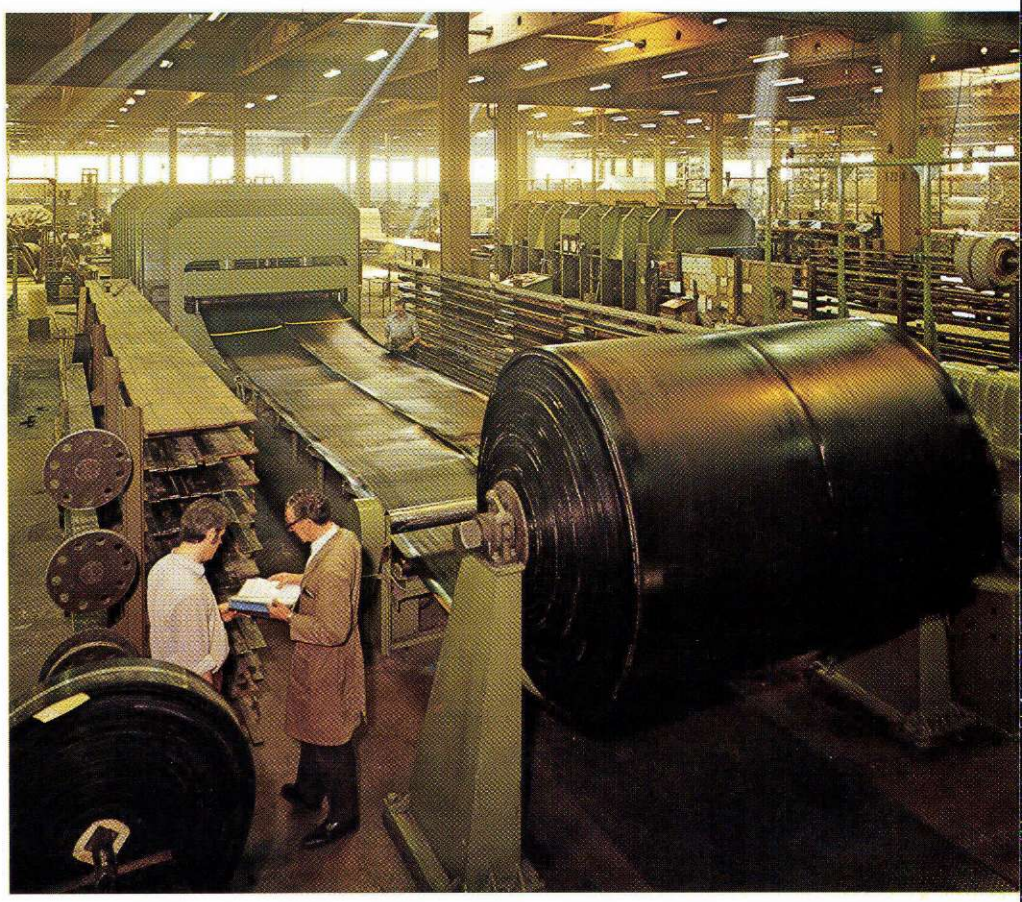
– But we shall hardly be able to succeed unless there is a political switch-over in the Danish attitude, which will again make it pay to make an extra effort.

Roulunds Fabriker employs almost 1,000 people, and produces conveyor belts, V-belts, brake-linings, etc. Through its exports the firm earns between 150 and 200 million kroner in foreign currency for Denmark every year. As managing director Mr. Bertelsen was succeeded by Mr. Ole Toppenberg, civil engineer, manager of Roulund's automotive division.

Working climate

– I am quite aware that our Government has been talking about a policy favourable to economic life. But what we have really seen is rather the opposite.

It is not support schemes that are needed in Danish economic life, rather an inspiring atmosphere where the individual finds it worth while to make an extra effort. *G. S.*



Roulunds Fabriker manufactures fan belts and brake linings for the automobile industry, as well as conveyor belts. The firm exports to 90 countries.

"CHARLOTTE MÆRSK" receives adoption class and sports prizes

From the Master of m.s. "CHARLOTTE MÆRSK", Capt. J. O. Hansen, MÆRSK POST has received a letter with some snapshots, dealing with the exceedingly good performance of the crew in the 1979 sports events arranged on an international basis, for example in Yokohama and (particularly) in Rotterdam.

The Captain reports that the sports atmosphere gave rise to even other activities, which stimulated the daily routine on board and benefited relations as a whole.

It all began when in June 1979 the ship was adopted by form 10A of the Tørring School (South Jutland). The class went in wholeheartedly for keeping contact with "their" ship, resulting in a constant stream of letters, cine films, and tape-recordings that were posted to the ship.

When "CHARLOTTE MÆRSK", serving the Europe/Far East Line, arrived at Hamburg direct from the East on February 18th this year, the entire class, headed by their form master, Mr. Jens Velling, formed a welcoming party on the quay. Their trip to Hamburg had been arranged by the ship's club in co-operation with the form master and the Ship Personnel Dept. of Esplanaden. The club had financed the bus ride from Tørring to Hamburg.

Captain J. O. Hansen goes on: "The pupils were now divided into groups, and a guided tour of the ship was made. The children showed great interest, and there were many questions to answer. For dinner our young guests were treated to veal and rice with curry sauce, to be washed down by lots of lemon squash and coca cola. As usual our restaurant was up to its best, and there was not one grain of rice left when the meal was over.

After dinner there were speeches by, among others, the director of the South Jutland School Board, Mr. C. E. Olesen, who brought the best wishes from the Mayor of the Tørring/Uldum Municipality, Mr. C. Bundgaard. From the school the ship received some beautiful gifts, now to be seen in the ship's saloon."

Mr. Erik Sjøstrand of the Ship Personnel Dept. now told about the various possibilities for young people of making a career at sea, and finally a film was shown, lent by the Danish Merchant Navy Welfare Board. The children spent the night on board in sleeping-bags they had brought with them, and next morning, after a solid breakfast, they started the return journey by bus.

The Captain goes on to say that when, two days later, the ship was alongside the quay in Rotterdam, the prizes won by the ship in various sports arrangements throughout 1979, with the participation of several crews, accompanying wives, and representatives of Esplanaden on the crew's list, were handed over by the Danish Vice Consul, Mrs. D. A. van Maren. In concert with Esplanaden a cold buffet was arranged for the guests, who besides the Vice Consul, counted representatives of Maersk Line Agent Hudig & Veder, the recreation centre "NORGE", and the Danish Merchant Navy Welfare Officer, Mr. Bent Zimmermann.

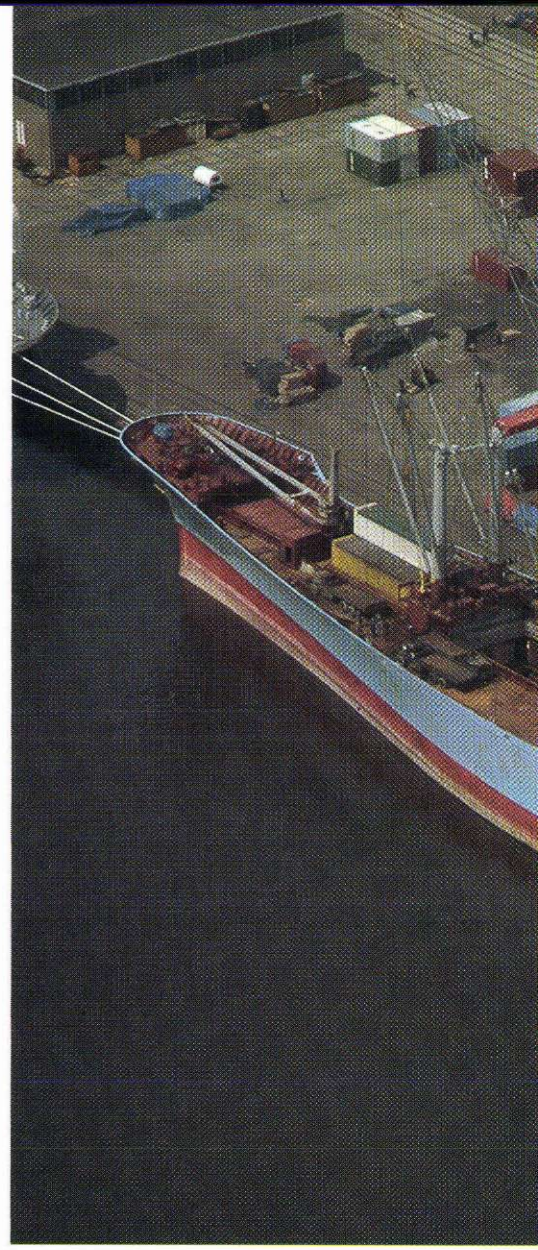
In the course of the year there have been several other activities on board. As an example we bring a photograph of a club standard, symbol of the ship's club. It was designed by the former radio officer, Jack Blue, who was given keen competition before he won the first prize for his idea.

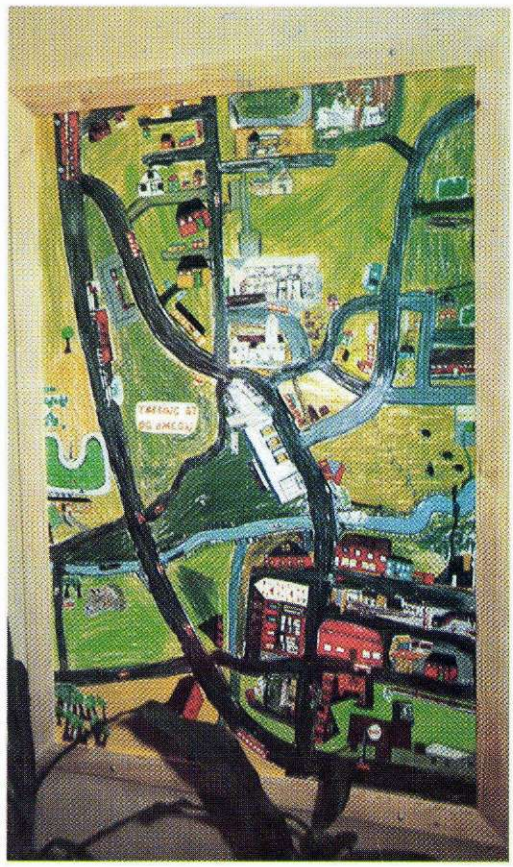
Cups for the ship received in Rotterdam

The world's no 7 ship in the 3-event.
The world's no 9 ship in the 4 × 100 metres relay.
No 2 in Denmark in athletics.
No 3 in Denmark in swimming.
No 3 in Denmark in football.
No 2 in Denmark in 4 × 100 metres relay.
No 2 in Rotterdam in shooting, Nordic Sports Week.

Individual prizes

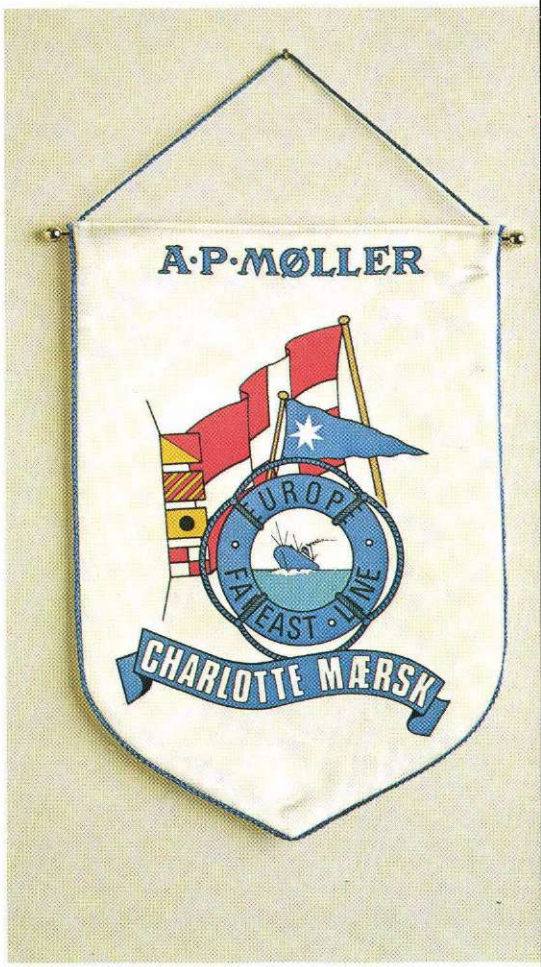
Annie Poulsen, 60 metres, bronze.
Henny Højhus, long jump, bronze.
Irene Nielsen, 60 metres, silver.
Kiss Juel Andersen, shot-putting, silver.
Peter Franck, high jump, bronze.
Jørgen O. Hansen, shot-putting, gold.
Jørgen O. Hansen, 4-event, bronze.
Jona Nielsen, 25 m swimming, bronze.
Jona Nielsen, 50 m swimming, gold.
Henny Højhus, 50 m swimming, bronze.





Painting of Tørring and surroundings, carried out by the Tørring School pupils and donated to 'their' ship. Now to be seen on the wall of the ship's saloon.

"CHARLOTTE MÆRSK" during one of her many calls at Rotterdam. The ship has been plying the waters between Europe and the Far East for 12 years now, being the first ship of the MÆRSK fleet to join this service. Departure with the very first cargo from Antwerp on March 11th, 1968.

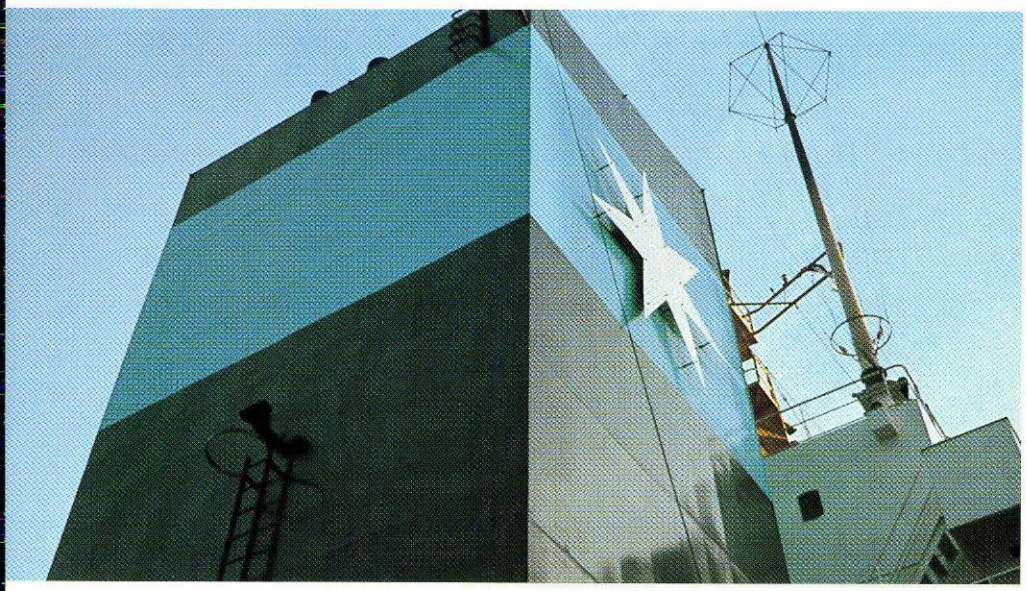


Radio Officer Jack Blue won the ship's local 1st prize for this club standard.

Vice-Consul Mrs. D. A. van Maren handing the silver second prize for athletics to the ship, represented by Captain J. O. Hansen. A total of 16 prizes were handed over to the ship and/or her single crew members. On the wall a photograph of the ship's godmother, Mrs. Olive Watson. The gentleman in the background is Bent Zimmermann, Danish Welfare representative at Rotterdam.

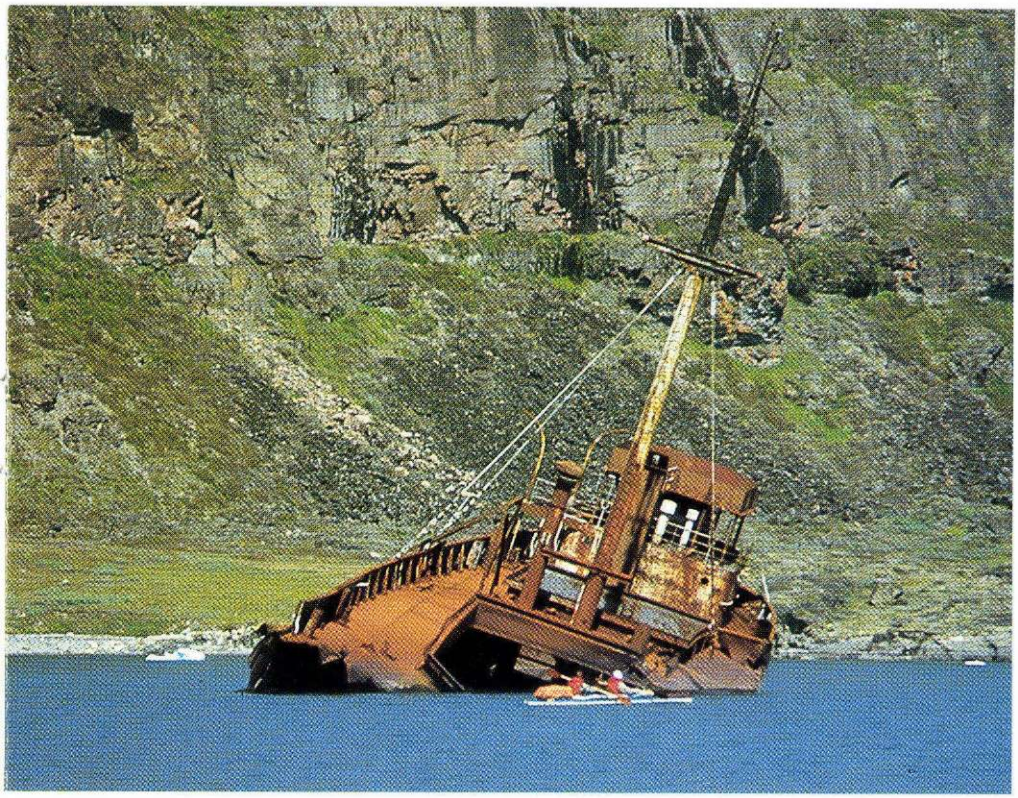
Pictorial News

The take-over of the bulkcarrier "MAERSK NEPTUN" in November 1979 was marked by the painting of a MÆRSK-blue band on the funnel, and by the mounting of a seven-pointed, white star on either side. In one photo a crane is lifting one of the stars, a steel plate of about 100 kg. The other photo shows the star, mounted on the very particular, square funnel by means of special fixtures. The diameter of the star is three metres.



When the radio officer of "CHARLOTTE MÆRSK", Mike Matthews, was on home-leave in England in 1979 and became a father for the first time, he felt that the entire home town of Chesterfield ought to be told (in bold letters on the window of his sun lounge). Mrs. Judy Matthews had accompanied her husband – under the special MÆRSK-fleet scheme for wives – on the "CHARLOTTE MÆRSK" in the Europe/Far East service. They chose the middle name, Charlotte, for their new-born baby girl, Helen, to make sure she would never forget her nautical origin. Photo by kind permission of the Derbyshire Times, Chesterfield.

Maersk Line opened a regional sales office in St. Louis in January, 1979, staffed by Kurt McElroy, Regional Sales Manager, and Barbara Abney, Secretary. St. Louis is located on the Mississippi River, and the impressive Gateway Arch symbolizes this historic area as the 'Gateway to the West'. The inspiring 630 ft stainless steel Gateway Arch is the focal point of the St. Louis skyline. The structure is a tourist attraction, and there is a fine view from the top.



From a trip to Greenland, Maersk Air mechanic Alex Lind sent us this photo of the wrecked steamship, "HERTA MÆRSK", built in November 1939 at Frederikshavn. In 1940 it joined the Allies in the Second World War, taking part in the transportation of cryolite from Ivigtut (Greenland) to Boston for use in the production of aluminium for aircraft. In one such voyage in June 1942 the ship was being hunted by a German submarine, and taking evasive action she hit shallow waters in the Skovfjorden in South-East Greenland. She ran aground, but the crew was saved – and the cryolite was later salvaged. The cold air and the fresh water have preserved the wreck very well during 38 years.

DISA's Experimental Foundry

In 1961, when Dansk Industri Syndikat A/S changed its name to DISA, it also changed its production from weaponry to civil production, and the main product became the DISAMATIC – the now world-famous automatic sand moulding machine.

The machine, which is the result of a Danish invention, is based on a revolutionary concept in that it makes sand moulds for pouring of cast iron and other metals in a smoothly moving string of large, vertically parted blocks of sand. As the pistons squeezing the sand moulds are provided with patterns corresponding to the castings to be made, a cavity will result between each two sand blocks, and the molten metal may now be poured into the moulds thus created. When the metal has solidified, the casting may be removed from the sand mould. The DISAMATIC can make up to six sand moulds a minute, and the castings may for instance be a sort of cluster, consisting of a branch with 110 small keys, or a casting weighing 110 kg – such as an engine-block for a car.

Iron foundries have existed for thousands of years, and the making of castings has to a high extent been wrapped in traditional mystery. However, a common feature of all pouring was that a cope and a drag were used to form a mould with a horizontal parting line.

As the DISAMATIC principle is based on the production of moulds with a vertical parting line, the foundries doubted that the concept was feasible. But the first venturous DISAMATIC owners soon found that it was not only possible, but they also got castings with a hitherto unknown accuracy, and low-cost castings at that. It whetted the appetite of more foundry owners, and a demand for increasingly complicated castings arose. As the foundries were not always able to make such patterns of a sufficiently high quality and execution, DISA was requested to make the patterns.

In order to test the patterns it gradually became necessary for DISA itself to have complete testing facilities. It was then possible to make experiments and carry out changes to patterns in order to get a perfect set of patterns, which the customer could mount on his DISAMATIC in order to produce high-class castings without encountering any problems.

The experimental foundry was erected in 1975, and in January 1976 the first trial pouring was made. It consisted in the pouring of an ash-tray that was specially designed for the purpose, and provided with a picture and text in the bottom. The casting was so fine that only a thin rust-preventing lacquer finish was needed.

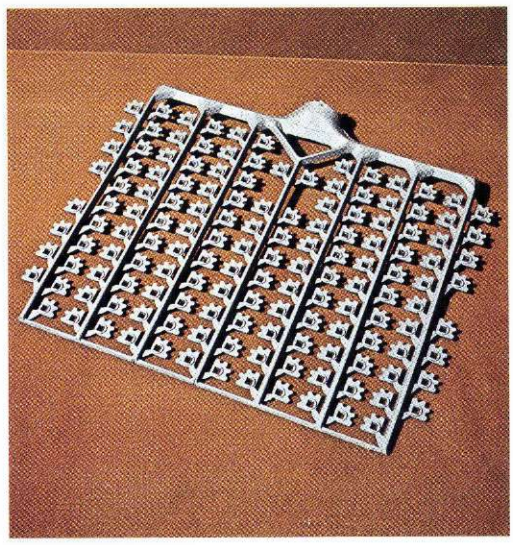
The experimental foundry was set up in the new high hall at Herlev and became part of the experimental department. The equipment consists of a DISAMATIC Moulding Machine, which may easily be exchanged with a machine of a different size, or with the newest type to be tested before being commercially produced. The sand moulds are pushed from the machine onto a 6 m pouring zone, where molten iron (or another type of metal) is poured into them, and they are then left to cool. After cooling the mould string passes into the vibratory shake-out where the castings are separated from the moulds, and the sand is returned to a hopper in the cellar. From here the sand is conveyed to a sand plant, where it is regenerated into moulding sand.

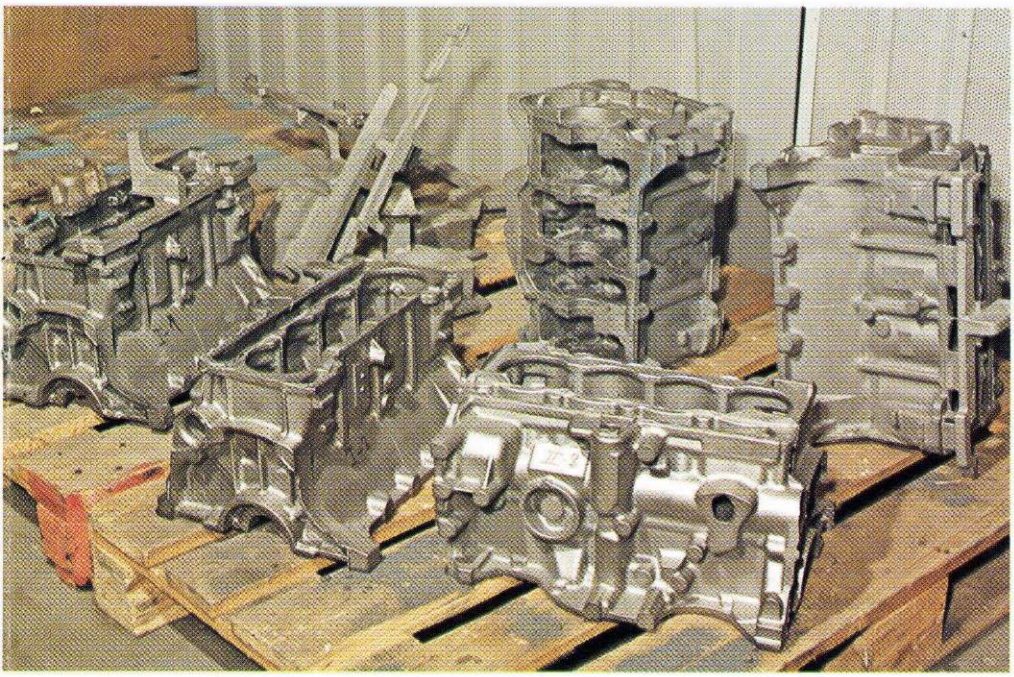
The sand plant takes up an area of 25 × 12 m of floor space, and is about 12 m high. When the used sand is returned from the foundry, the hard-baked sand lumps are broken by a rotating lump-breaker. The sand now passes a powerful electromagnet, which lifts any iron pearls out of the sand, and via a vibratory screen the sand is conveyed up to the storage hoppers. One of these contains normal sand, the other special sand, for instance particularly fine-grained sand. As the composition of the sand is essential to the strength of the final mould and the quality of the casting, it is necessary to regenerate the sand in order to obtain the best possible properties for the purpose. The regeneration is effected by taking a batch of sand from the storage hopper and empty it into a sand mixer, which mixes and kneads the sand, and by adding the materials which were burned out of the sand during the preceding pouring process. A fine-grained clay, bentonite, is added to the sand together with water to get a kind of "glue" that binds the sand grains together. In the case of pouring of cast iron, which already contains 3.5% carbon, it is necessary to add coal dust to the sand to prevent the sand from burning into the casting. Coal dust is not added for pouring of steel, copper alloys, and aluminium. When the sand is ready for use, it is emptied down onto a conveyor belt, and via a bucket elevator it is transported to the next belt, which delivers the sand into a sand supply unit over the molding machine. This unit supplies the correct volume of sand to the machine for the production of the sand moulds. The entire sand plant with its associated network of conveyor belts, elevators, and production units is automatically controlled from an electric control cabinet, which also monitors all units of the plant to ensure correct

Molten metal is poured into the moulds.

Engine-blocks for 4-cylinder engines.

Mass-production of small units.





operation. In case of malfunctions, the entire plant will stop.

When the mould has been made, follows the pouring stage. Two melting furnaces are provided in the experimental foundry – a large tiltable, electrically heated furnace, which may hold up to 500 kg of iron, and a smaller gas-fired crucible built into the floor, which can melt up to 200 kg of bronze or brass, or 70 kg of aluminium. For pouring iron a casting ladle in the shape of an oversize milk-jug, provided with a refractory lining, is conveyed to the furnace by means of a travelling crane. The furnace is tilted, and the approx. 1450°C hot material is poured down into the pouring ladle, which is rapidly run down to the pouring place, and the liquid material is poured into the moulds. If aluminium is used for pouring, the furnace (the crucible) is lifted from the floor and by means of the crane transported to the pouring zone, where pouring is carried out direct from the ladle.

Of course the experimental foundry has all the necessary control equipment for controlling sand quality, temperatures, the hardness of the moulds, etc., and DISA's laboratory also assists in procuring information about the metallurgical properties of the castings.

The largest customer of the experimental foundry is the Application Division, which is the department that collects and develops the know-how from which DISA and its customers will enjoy the benefit. The Division orders the experimental castings on behalf of the sales department with a view to sale, and after successful experiments such castings will contribute to the sale of DISAMATIC's.

It was a proud moment when we completed the first entirely faultless series of engine-blocks made on a DISAMATIC for Renault and thus secured a contract for the sale of two large machines to this well-known French car manufacturer. The Application Division is also in charge of the production of all the particularly difficult patterns which customers order for their DISAMATIC sand moulding machines.

The second-largest customer of the foundry is the Design Division, which thus gets an opportunity to test new designs under realistic working conditions.

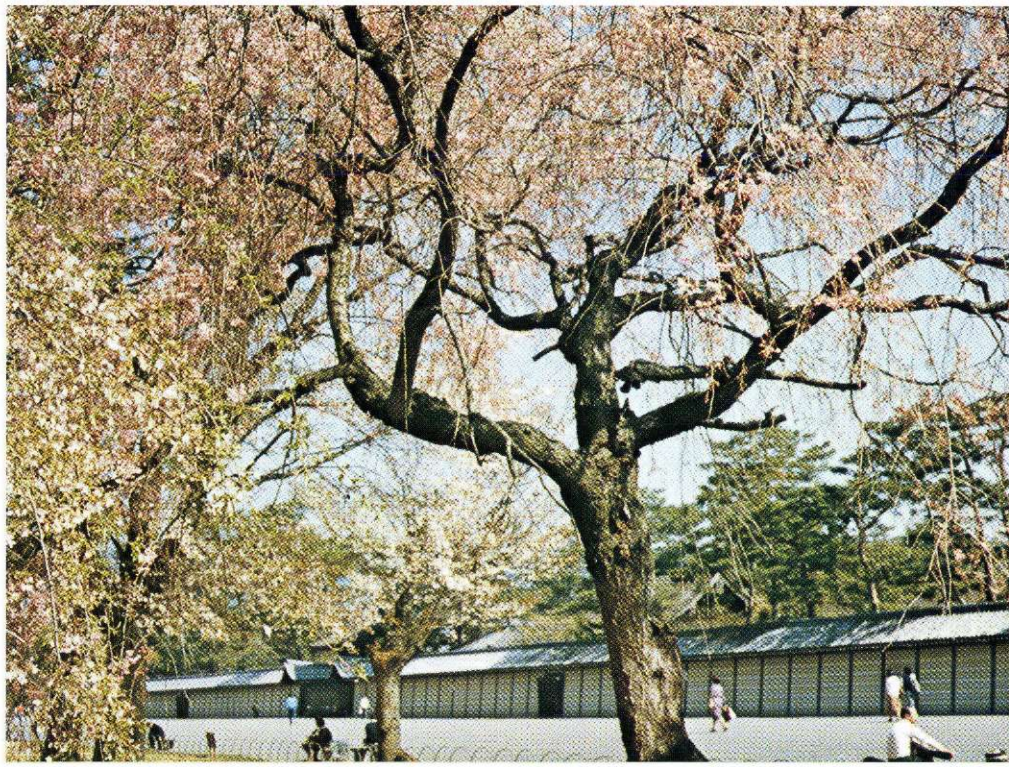
Thanks to our experimental foundry DISA has been able to develop and pass on so much know-how that it can truly be said that the best and most precise castings are today made on DISAMATIC's. And this is also what the customers of the foundry (that is, the customers of our customers) have discovered. And for that reason an increasing number of manufacturers using castings – including the car manufacturers – simply demand that their castings be made on DISAMATIC's.

Viggo Børup

SPRING

The best part of the year in Japan

The Japanese word 'sakura' means cherry or cherry blossom, and there is such an abundance of cherry trees in Japan that Mr. S. Fujii of Maersk Line Tokyo, who has written this article for MÆRSK POST, is justified in beginning his letter by asking: "Is it spring that causes sakura, or is it sakura that brings forth the spring?".



In Japan the four seasons are quite different, both regarding temperature, other climatic characteristics, and changes of nature. The cherry flower symbolizes spring, and we all feel that it brings us a message that winter is now over. People will greet each other with a smile, saying: "Now it's spring."

From late March to the end of April the season makes itself felt all over the country. As spring moves ahead, the blossoming of cherry trees will spread northwards, beginning on the Okinawa Islands in March, moving at a speed of 100 km per day, to reach the northernmost part of Hokkaido just after 1 May.

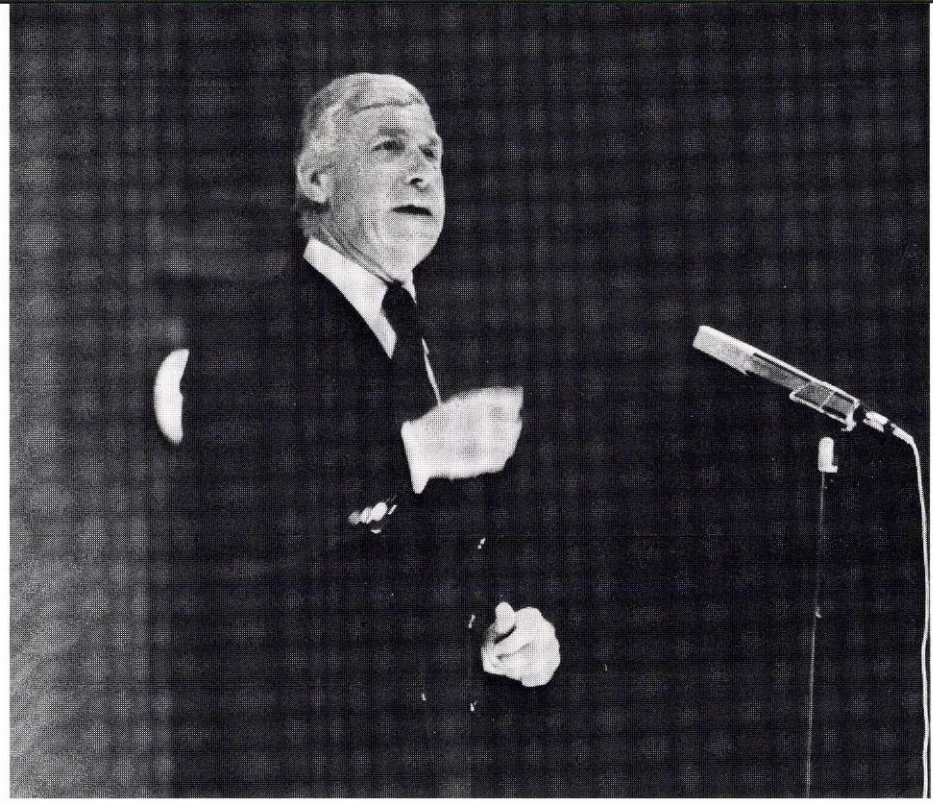
Every year the Japanese weather bureau sees it as its task to predict the moves of the so-called 'cherry front', drawing lines on the map of Japan.

It is estimated that there are as many as 200 different species of cherry trees, and people have for centuries been planting and caring for their trees. In line with the weather bureau's predictions a certain species of cherry tree has been selected as the most popular throughout Japan, and trees have been planted in 100 places selected for the purpose from south to north.

As the cherry flower is very short-lived, lasting only about a week, it may be a good idea to plan in advance any visits that you want to pay to famous cherry centres, and also to get the information on the movements of the cherry front currently. The fine view of 'Japan's national flower' in full bloom is beyond a description in words; I therefore hope that the accompanying photographs will do it proper justice.

S. Fujii,
Maersk Line
Tokyo

Season finished off with Italian drama



Preben Neergaard in his one-man-show.

The Munkebo Cultural Society has finished its fifth season, which has been characterized by Italian music and drama.

The season was started in November by the famous actor, Preben Neergaard, who gave his one-man-show, "På slap line" ("on a slack rope"); and in January followed the traditional New Year Dance.

In March we had the first musical event on a large scale in the Munkebo Hall, in that the Jutland Opera Company performed the two short operas by Leoncavallo, 'Pagliacci' and 'Cavalleria Rusticana' with no less than 100 persons taking part.

At the fourth and last arrangement of the season we had another programme of Italian origin. The Danish Theatre performed Luigi Pirandello's play, 'Six characters in search of an author', featuring Poul Reichhardt and Stina Ekblad in the leading parts.

The Cultural Society has now had a total of 20 arrangements in the Munkebo Hall since the start, five years ago. During the season now at an end there have been audiences of altogether 1800 people.

Jørgen Petersen

From the performance by the Jutland Opera in March.

Poul Reichhardt and Stina Ekblad had the leading parts in Pirandello's play "Six characters in search of an author", which was shown on April 12th.

NEW SHIPS

The Godmother, Mrs. Dee Stoot, flanked by her husband and her son.

Caroliner No 6

On Wednesday, April 30th, the Lindø Yard delivered its newbuilding No 78, the sixth Caroliner, to the MÆRSK fleet. The newbuilding is the last in this series of special vessels of about 29,000 tdw each. The particulars of the ship correspond to those of her five sister ships, and like these she will sail in Maersk Line's service between Japan and the Arabian/Persian Gulf.

The naming ceremony was staged at the Lindø Yard on April 25th. Godmother was Mrs. Dee Stoot, wife of Mr. W. F. Stoot, Senior Chief Surveyor, Lloyd's Register of Shipping in Scandinavia. The name of the ship was "ELISABETH MÆRSK".

The newbuilding during the testing of its fire-fighting equipment.

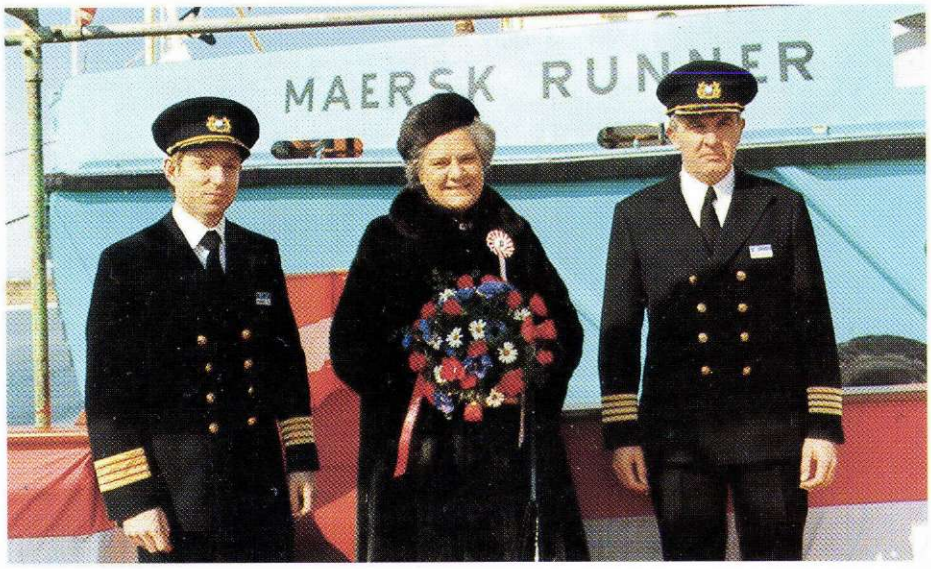
New fire-fighting tug

At the Lindø Yard the second of four advanced special ships for the offshore sector was named on March 21st.

Godmother of the newbuilding was the British Ambassador to Denmark, Dame Anne Warburton, and the ship was named "MAERSK RUNNER". Like the first of the series, the "MAERSK RETRIEVER", the new ship was built for the Maersk Company Limited, London; its home port will be Aberdeen.

The newbuilding was delivered by the Yard on the same day. From one of the trial runs north of Fyn we bring this photograph, showing how the very powerful fire-fighting equipment of the ship functions. The four large water-guns yield a total of 7,200 cubic metres of water per hour. reaching at least 150 metres ahead or 70 metres upwards. Further technical details were given in the February issue of MÆRSK POST, to which interested readers are referred.

The godmother of the ship, the British Ambassador to Denmark, Dame Anne Warburton, together with the two senior officers, left Chief Engineer David Humphreys, right Captain James Kirkham.



MÆRSK POST's local correspondent in the San Francisco office, John J. Harkin, has sent us the following account, in which he partly reminds readers, through his personal experience, that this part of California is permanently faced with the problem, partly explains the background of this natural phenomenon which, in 1906, destroyed the greater part of the city.

EARTHQUAKE

Where do you begin? How do you write objectively and informatively about earthquakes, when all that keeps coming to mind is the last time – Monday, August 6, 1979, 10:06 am – when the floor started bouncing as if it were made of rubber instead of concrete, when the building started to sway like a reed in the wind, while you were standing at the window on the 25th floor watching the neighboring office tower sway the other way, considering if this was "It"?

But this time it isn't "It", the big one this city has been awaiting for so many years. This one is all over in about 30 seconds. Everyone laughs it off nervously and goes back to work. Radio reports initially peg it at between 5.4 and 5.9 on the Richter Scale, with the epicenter about 30 miles south of the city. We won't know until the next day that it was the strongest jolt to the Bay Area in 68 years; we won't know until the next day that it had been 5.9 just $^1/_{10}$ of af Richter Scale point short of a real disaster.

But it is over and life goes on. Fear ebbs away quickly but anxiety lingers on a while longer. Then the anxiety is gone and curiosity pops up.

Why does it happen? Where and when is it likely to happen again? What is the Richter Scale, how does it work?

Why it happens is interesting and fairly simple to explain.

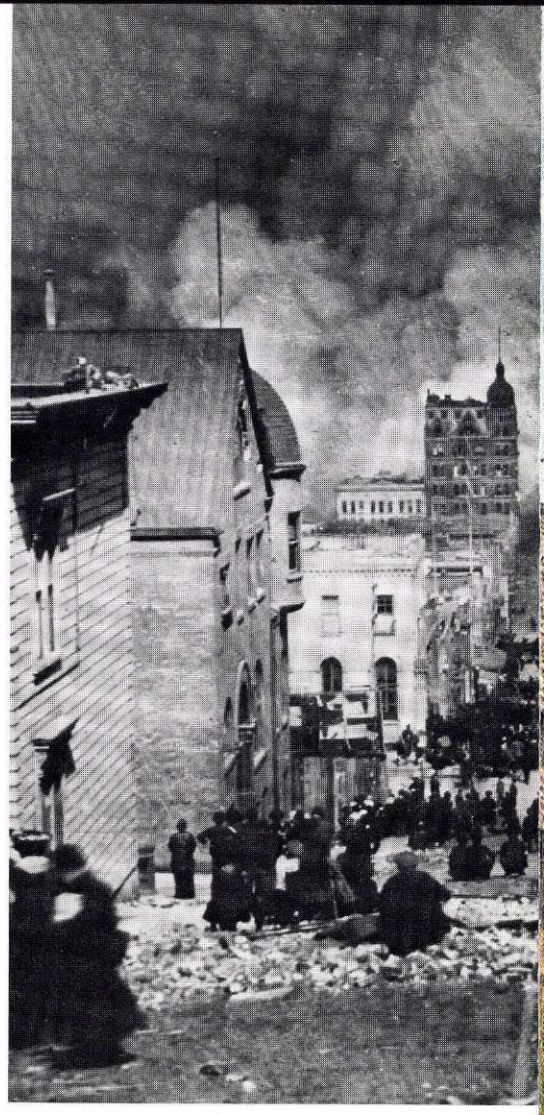
Continental drift

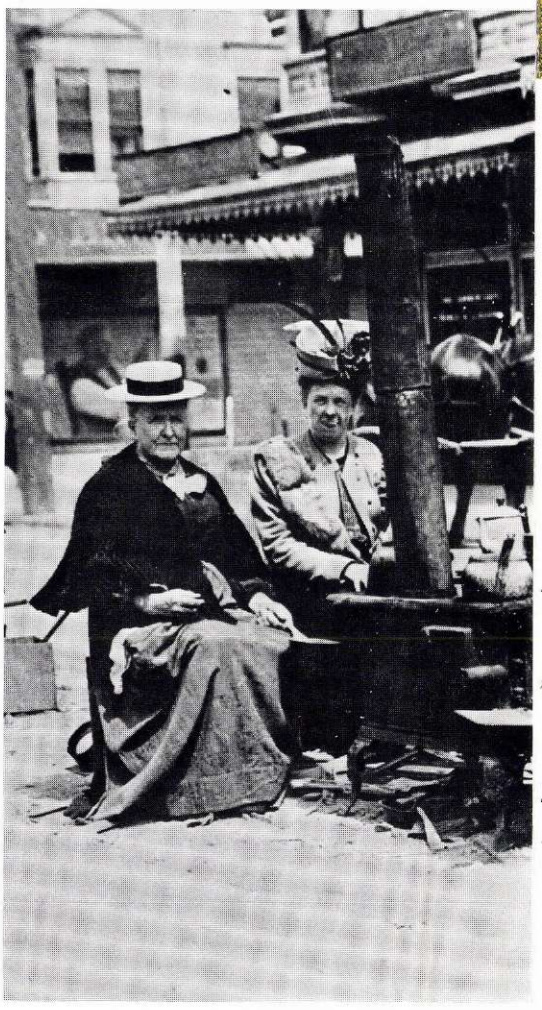
According to the theory of plate tectonics, or continental drift, the earth's land area was once a solid mass which has broken up into hugh blocks or plates. These plates, separated by great fractures called fault lines, are in constant opposing motion around the globe. The movement is caused by the constant creation and destruction of hugh masses of new plate material. These rigid masses float along a molten substance deep within the earth, and the continents, which are lighter than the plates, ride along on top of them, moving as the plates move.

New plates are formed at weak spots in the earth's crust known as "spreading centers", which we think to be high ridges in the ocean floors. Hot material from the earth's center oozes up along these ridges, solidifies, and moves laterally away from the ridges approximately 2 inches a year. The existing crust is thus pushed outward, and the old edges of the plates are forced into ocean trenches where they melt down and start the process over again.

Wherever plates meet or an old plate plunges into a trench, there is high seismicity. Off the west coast of South America a huge plate is being shoved into a deep trench, and as it moves, it pushes up the Andes Mountains and causes tremendous earthquakes. Along the west coast of North America, one plate is thought to comprise the whole northern Pacific Ocean and a slice of western California. Another plate includes the rest of North America and the western part of the Atlantic Ocean. They are divided by the San Andreas Fault. As the Pacific Plate moves northwesterly towards the Aleutian trench and the North American Plate heads southeasterly, they grind past each other along the fault, building up tremendous opposing forces. As these forces build up, they gradually strain the natural elasticity of the fault line rock formations until something must give. Suddenly the rock formations snap past each other, and seismic waves flash from the epicenter in a radius that can extend for many miles.

California, as part of the circum-Pacific seismic belt, which accounts for 80% of the world's earthquakes, suffers thousands of earthquakes every year. Approximately 500 of these are strong enough to be felt by many people, and earthquakes of destructive magnitude have had an average occurrence of once a year for the past 50 years. Few earthquakes in the world have received as much publicity as the great Quake and Fire of 1906 in San Francisco.





View of the destruction and fire during the Great Quake in 1906, seen from hill overlooking San Francisco's downtown area.

The old City Hall was badly damaged by the quake.

Near the downtown area survivors take mid-day meal provided by rescue and charity groups.

Women and child forced by the destruction to prepare their meals at a makeshift stove in the street.

PHOTOS CREDIT CALIFORNIA HISTORICAL SOCIETY

The circum-Pacific seismic belt follows the edge of the Pacific Ocean basin. It is along this belt that 80 percent of the world's earthquakes take place. The Alpide belt extends from Java to Sumatra, through the Himalayas, the Mediterranean, and out into the Atlantic. Seventeen percent of the world's earthquakes strike along this belt. The remaining 3 percent of the world's earthquakes strike along the mid-Atlantic Ridge and elsewhere throughout the world.

It must be realized, though, that while destructive magnitude earthquakes occur frequently, this does not mean that once a year some city is flattened and thousands killed. On the contrary, most major earthquakes fortunately occur far from major population centers and do little more damage than shaking up some sand dunes or frightening a few rabbits.

The larger cities usually feel nothing more than the last dying shudders. However, for the residents of San Fernando in Southern California in 1971, or more recently in China, Indonesia, Iran, and, with little destruction, San Francisco, "earthquake" has a very frightening reality.

As mentioned earlier, earthquakes are caused by the shock waves released when the plates slip past each other.

There are these general types:

- The "P" wave or sound wave, travelling at about $3\frac{1}{2}$ miles per second, is the first to reach the surface. It is longitudinal and creates a "push-pull" effect on the rock particles as it passes;
- The "S" wave or shear wave, travels about 2 miles per second near the surface and causes the earth to move in right angles to the direction of the wave;
- The "L" wave or long wave, is a slow surface wave that is usually distinguishable only at a great distance. These waves cause swaying of tall buildings and slight wave motion on bodies of water at great distances from the epicenter.

Because these shock waves travel at varying speeds, the period of motion felt on the surface may be a good deal longer than the duration of the actual fault movement. Many reports of two or more shocks felt seconds apart are actually observations of the different arrival times of the P, S, and L waves. 20 miles from the earthquake center the time lag between waves will be about 4 seconds; at a distance of 50 miles the lag will be 10 seconds.

Foreshocks and Aftershocks

Earthquakes are seldom caused by single fault movements. Frequently there are minor movements in the same or related faults that cause foreshocks and aftershocks. Foreshocks are difficult to identify as such. They are caused by minor movements that may precede or be part of the triggering device of the main shock. They can occur weeks or even months in advance and have their centers somewhat removed from that of the main movement. There may be no foreshock at all.

Aftershocks are much more common and much more predictable. The stronger the main earthquake is, the more numerous will be the aftershocks. The reason for this is that the main shock not only releases the pressure along its section of the fault, but also changes the stress patterns for miles around. These changes create a chain reaction of adjustments or aftershocks which may continue for weeks, months, or years. The main concentration, though, usually follows closely behind the main quake.

Related Phenomena and Popular Misconceptions

There are several phenomena that have been related to earthquakes either as cause or effect. Some have absolutely no basis in fact, and some are misinterpretations of what actually happens.

The most popular myth seems to be about "earthquake weather". Many residents of earthquake country firmly believe that hot, windless weather presages an earthquake. In fact, earthquakes are not at all related to the weather and may occur at any time of year. The origin of this myth can probably be ascribed to Aristotle who taught that earthquakes were caused by winds that became imprisoned in underground caverns and shook the earth trying to escape.

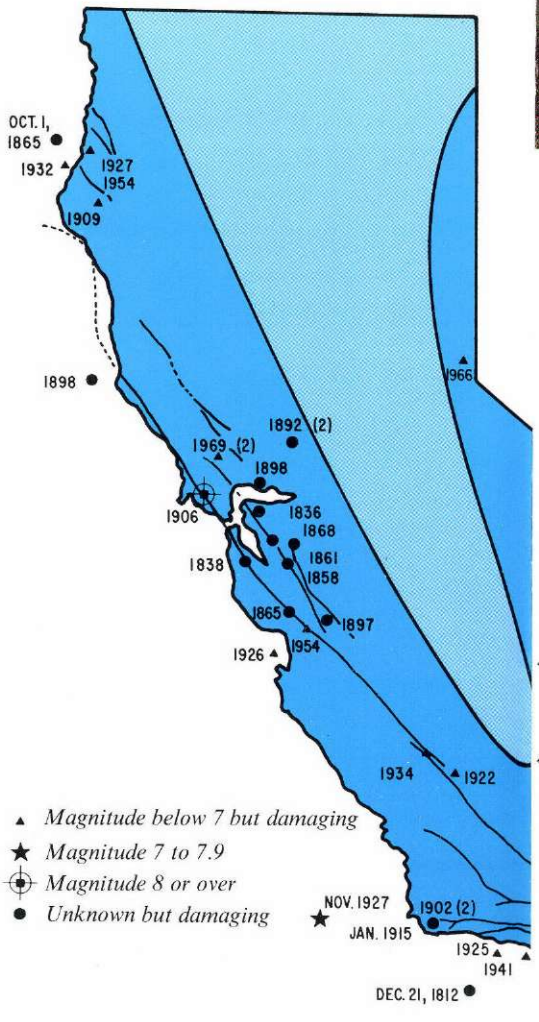
Some people also seem to believe that earthquakes can cause great yawning rents in the earth which may consume whole houses or even cities. In truth, while great quakes may cause shallow cracks and fissures, the scale is very minor.

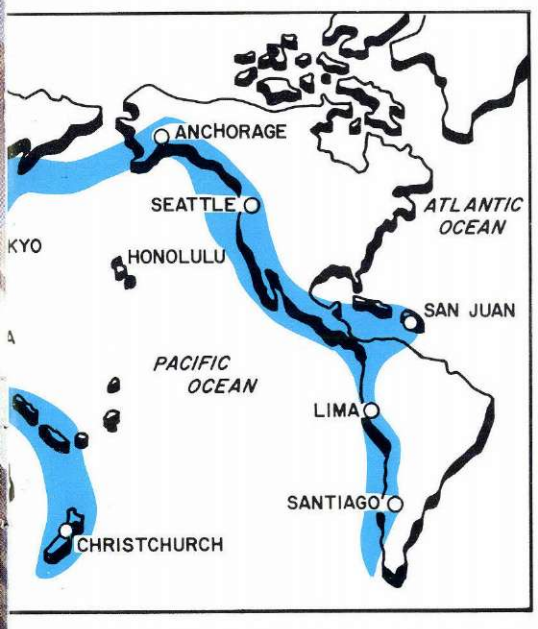
Earth waves similar to ocean swells are one of the more frightening visual experiences of an earthquake, in areas of loose soil or fill. Waves of 6 inches to 1 foot may be common after a large earthquake, however, they do little or no damage, except perhaps to crops.

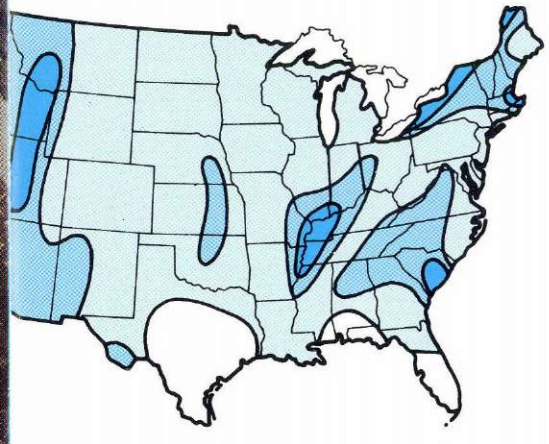
Tsunamis (the Japanese term used internationally to describe tidal waves) are another real and frightening aspect of earthquakes in coastal areas. Although in California tsunamis have never been too important, the largest quakes in other sections of the circum-Pacific belt, such as Japan, Chile or the Aleutians, have caused great tsunamis.

The strange disquieted activity of birds and animals just prior to a quake has

Seismic risk map for conterminous United States. The inset of California shows seismic risk zones, epicenters of the prominent earthquakes since 1769 as listed in the table, their magnitude when known, and the major faults of California. From Earthquake Information Bulletin, March-April and May-June 1971.





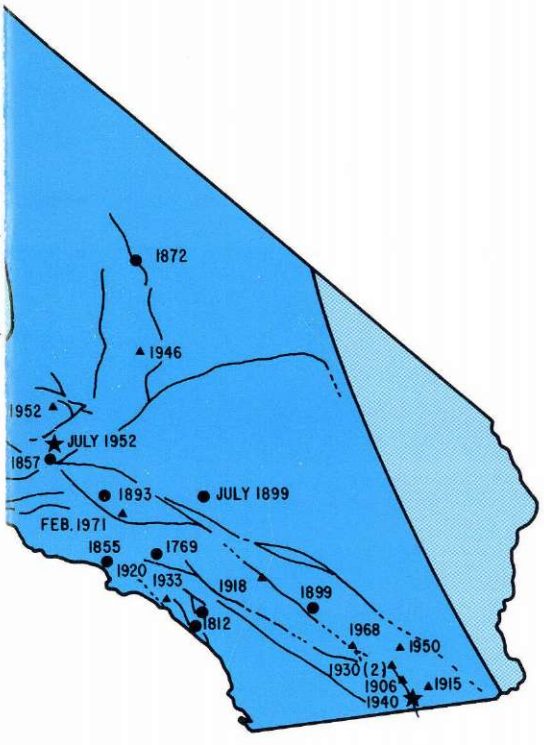


ZONE 0 *No reasonable expectance of earthquake damage*

ZONE 1 *Minor earthquake damage can be expected*

ZONE 2 *Moderate earthquake damage can be expected*

ZONE 3 *Major destructive earthquakes may occur*



created another earthquake myth about their "sixth sense" or omniscience of doom. Actually, the acutely developed senses of animals make them immediately aware of small tremblings and minor foreshocks that escape human notice. This disturbance of their environment coupled with their fear of the unknown quite naturally causes erratic, nontypical behavior. Great flocks of birds will suddenly take off from trees at the slightest trembling; zoo animals will suddenly break and run in fright from part of their enclosure and avoid it for days for no apparent reason. These activities may seem senseless or mystical, but they are simply the most immediate reaction to a suddenly disturbed sensitivity.

Earthquake Measurement

Earthquakes can be measured in terms of either energy (magnitude) or actual effects (intensity). The energy measurement is based on instrument records and is called the Richter Magnitude Scale. The intensity or actual effects measurement is based on personal observation and is called the Modified Mercalli Intensity Scale.

One of the most popular uses made of the Richter magnitude is in the comparison of earthquake size. Every newspaper report invariably includes some statement to the effect that "... the magnitude of yesterday's earthquake was 4.3. The magnitude of the 1906 quake was 8.3." While interesting, these figures can be misleading unless you have an understanding of the mathematical basis for the Richter Scale. There are two important points to remember. First, the maximum amplitude of earthquake waves recorded on a seismograph is transformed to an arithmetic number by means of a logarithmic scale. This means that an increase of a whole number on the scale reprents a tenfold increase in the size of the earthquake record. Thus the record written by an earthquake of 8.3 magnitude is not twice that of a shock of 4.3 magnitude, but 10,000 times as great. Second, the energy released at the source of earthquakes of different magnitudes is even more variable than their seismographic records. Again, owing to the structure of the scale, an increase of one whole number indicates an energy release about 60 times greater. Therefore, a magnitude of 8.3 generates about 10,000,000 times as much energy as a magnitude 4.3 shock.

The Richter Scale has no fixed maximum; however observations have placed the largest known earthquakes in the world at the 8.8 or 8.9 level. It should be kept in mind, though, that magnitudes provide only an index of potential energy. The instrument computation does not take into account location or depth of the quake center, or ground and structural conditions in the affected area. Richter numbers therefore, cannot be used to estimate damage.

The Modified Mercalli Intensity Scale has a range of I (not felt by people) to XII (general panic and great destruction). It is based on personal observation only and describes the physical effects of an earthquake in non-mathematical terms. Also, while an earthquake can have only one magnitude, it can have several intensities. The intensity is greatest at the source of the earthquake and gradually decreases as distance from the source increases.

It has been found difficult to equate magnitude with estimated intensity. However, the following brief summary may provide a general estimate of the relationship:

Magnitude	*Effects*
1	Only observed instrumentally.
2	Can be barely felt (intensity II) near center.
4.5	Felt to distances of 20 miles from center; may cause slight damage (intensity VII) in small area.
6+	Moderately destructive.

Where and When Again

When and where the next earthquake will happen is simply impossible to predict at the present time. Scientists are hopeful that the analyses and record keeping, begun in earnest some 20 years ago, will eventually provide reliable data and reveal meaningful patterns that will make prediction possible. Until that eventuality we seem left to rely on the vagaries of Aristotle's winds, the recent quasi-scientific Seismic Window Theory, which assigns the cause of earthquakes to the gravitational pull exerted by conjunctional positionings of earth, moon, and sun; or, more charmingly, the Great Turtle Theory of the Indians. Certain tribes of North American Indians believed that the earth rested on the back of a great turtle, and when the turtle took a step, the earth would tremble.

Moving out. A situation that may still recall memories of toil and sweat for the staff of Esplanaden.

Black Swan House is the building with the two white flagstaffs.

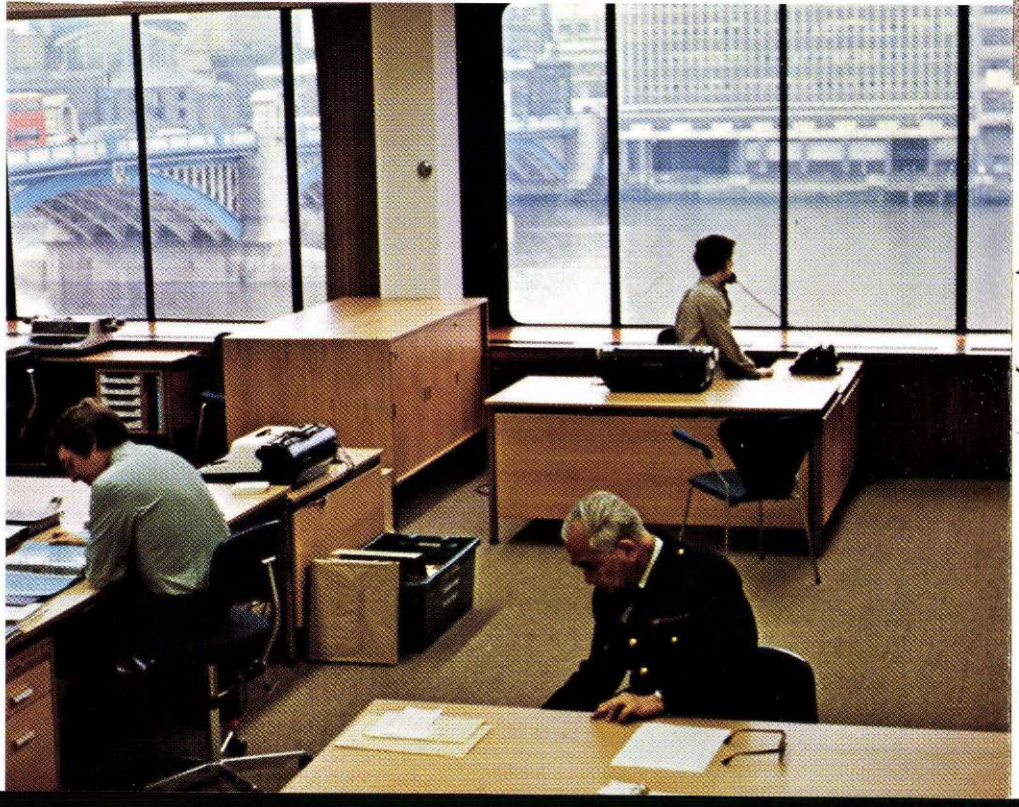
Move in LONDON

Also The Maersk Company Limited, London, has now moved to new premises. During the weekend 22-23 March the Company's address was changed from Camomile Street, domicile since 1971, to Black Swan House, an office building completed a few years ago, directly facing the Thames.

On a narrow ledge between the building and the river is a small street, Kennet Wharf Lane, which is the new address of the office. The blue bridge seen in the photographs is Southwark Bridge, and in the background the giant dome of St. Paul's Cathedral is towering majestically.

The Maersk Company today occupies the third storey of the house; even the fourth will be taken over later this year.

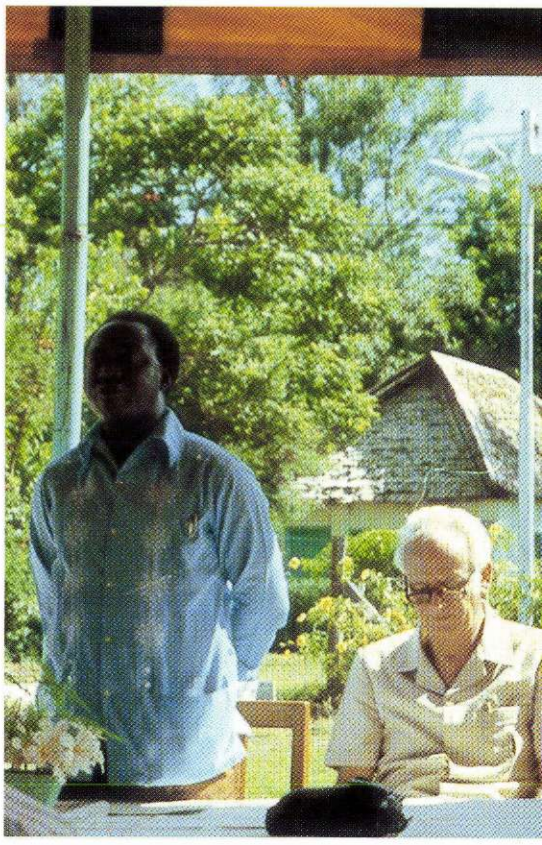
MÆRSK POST's London correspondent, Mr. Steen Withen Nielsen, who took these photos during the move, has promised to revert with an account of the interesting past of the site and the entire area.



Moving in. The last box awaits emptying after two days of hectic activity. Like the staff of Esplanaden our colleagues in Black Swan House are on the front bench to watch life on one of the world's bustling waterways.

Mr. Bjarne Fogh signs the agreement. On the right, wearing sun-glasses, is Ambassador Bjørn Olsen, and, standing, Mr. H. H. Munck.

Tanzania's Minister for Agriculture, Dr. J. Malecela, making his speech at the takeover ceremony. Seated beside him is Mr. H. H. Munck.



T.P.C. LIMITED transferred to the Government of Tanzania

During the latter half of 1979 a series of negotiations were conducted between A/S The Tanganyika Planting Company and the Government of Tanzania, regarding the transfer of the Company's sugar estate to Tanzania.

On November 8th an agreement was signed, to the effect that the Tanzanian Government, through The Sugar Development Corporation in Dar es Salaam, would take over the Estate on the 1st of January, 1980. At the Government's request, A/S The Tanganyika Planting Company will be responsible for the management of the Estate for five years. The establishment today of a similar company would cost over 400 million kroner.

A takeover sum of 25 million kroner has been agreed upon, to be paid over a number of years, and the particularly favourable conditions have been facilitated by the fact that the greater part of the Company's share capital is held by the A. P. Møller Foundation (A. P. Møller og Hustru Chastine Mc-Kinney Møllers Fond til almene Formaal), and by Mr. A. P. Møller's descendants.

The agreement stipulates that during the five years in which the agreement is in force the Danish firm, as managers, plans for all posts, at present filled by expatriates, to be taken over by citizens of Tanzania according to a staff development plan.

The Sugar Estate, established by Mr. A. P. Møller in the early 1930's, produces about 50,000 tons of sugar per year, corresponding to nearly half Tanzania's sugar consumption. The Estate covers an area the size of Amager and employs a staff of well over 4,000.

On January 4th this year, the first board meeting with exclusively Tanzanian board members was held, and on January 5th the formal takeover ceremony was staged at the Estate. Participants were the Tanzanian Minister for Agriculture, Dr. J. Malecela, representatives of the Ministries of Agriculture and Finance and of local administration, the Danish Ambassador Mr. Bjørn Olsen, Messrs. Bjarne Fogh and Henrik Stenbjerre representing the former Danish board, and T. P. C. LIMITED's new board members, management, and staff.

At the takeover ceremony, speeches were made by Tanzania's Minister for Agriculture, by Mr. Bjarne Fogh, and Mr. H. H. Munck. The takeover was staged with great festivity, and the Minister for Agriculture mentioned in his speech that Tanzania was very happy about the result of the negotiations, and about the very favourable conditions of transfer for Tanzania, which really amounted more or less to a gift. In addition, the Minister declared that he was very happy that the former owners had agreed to manage the Estate during the next five years.

After the takeover ceremony lunch was served, during which the new management agreement was signed.

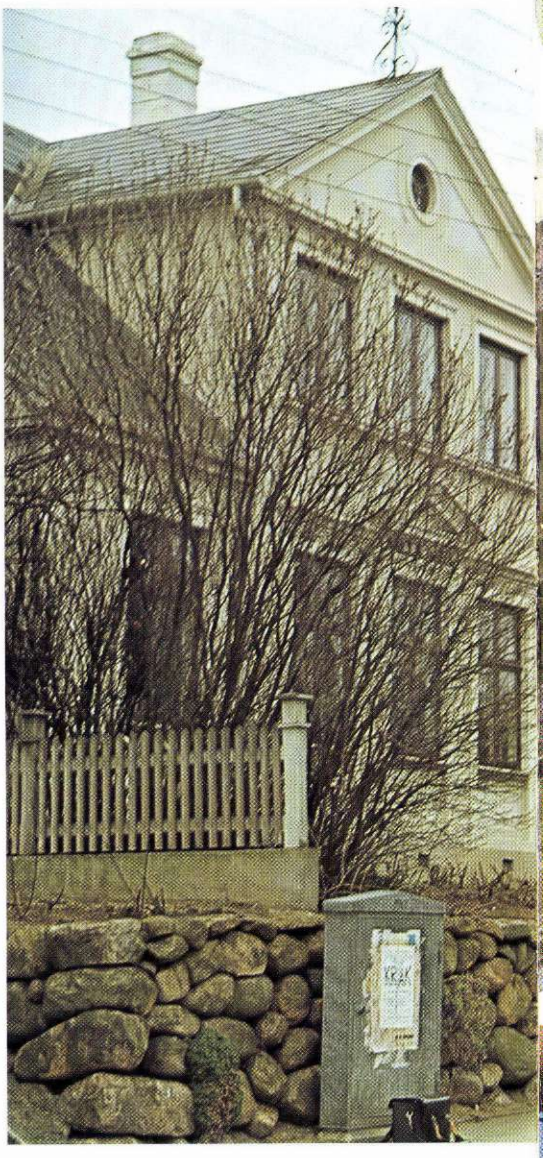
News from Bangkok

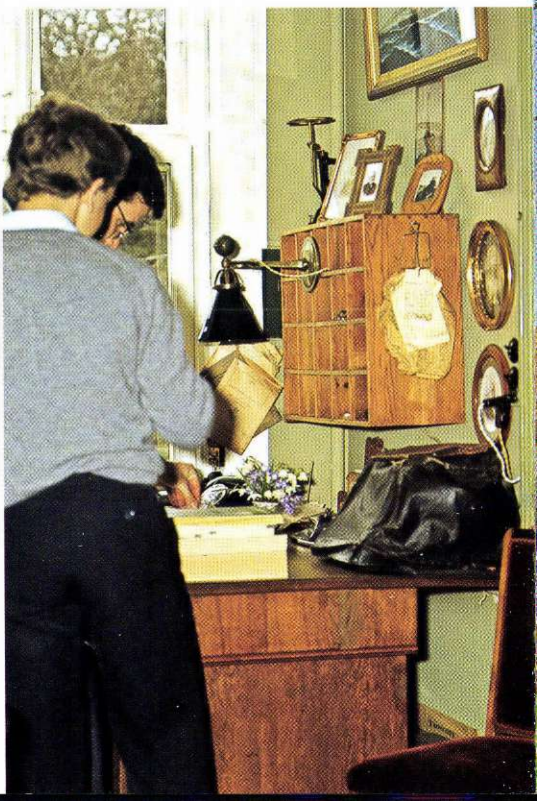
In a recent issue of MÆRSK POST Maersk Line was seen as lecturers on subjects related to international shipping, such as shipping documentation and responsibilities of shipping lines for cargo. Towards the end of 1979, Maersk Line Bangkok Branch was again called upon to supply a guest speaker when Port Authority of Thailand (PAT) held a seminar on containerization for a score of PAT personnel under training.

The subject to be lectured upon by Maersk Line was "container stuffing", and the seminar was held partly in the PAT Personnel Development Center, where a contribution with slides was made by Mr. Vichai Boonyathistarn from our Port Office, partly in Maersk Line's container yard with stuffing/unstuffing of a container under direction of our terminal manager, Mr. Phayung Hussain.

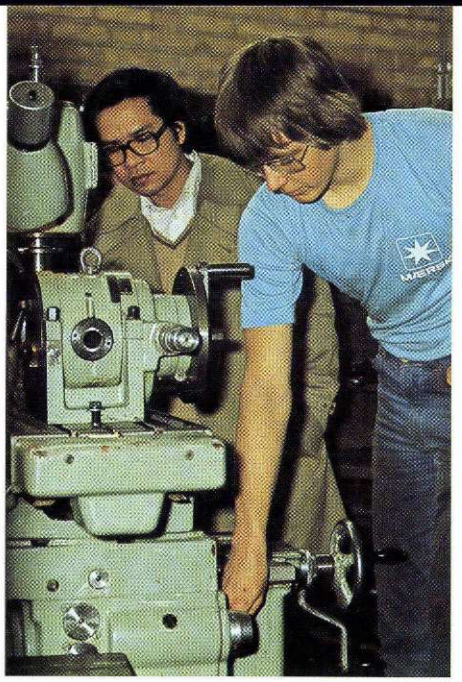
The accompanying photos show some of the PAT personnel in Maersk Line's container yard as well as a close-up of a Maersk Line container during stuffing, with Mr. Vichai and Mr. Phayung by the container door (in civilian clothes).

H. Mogensen



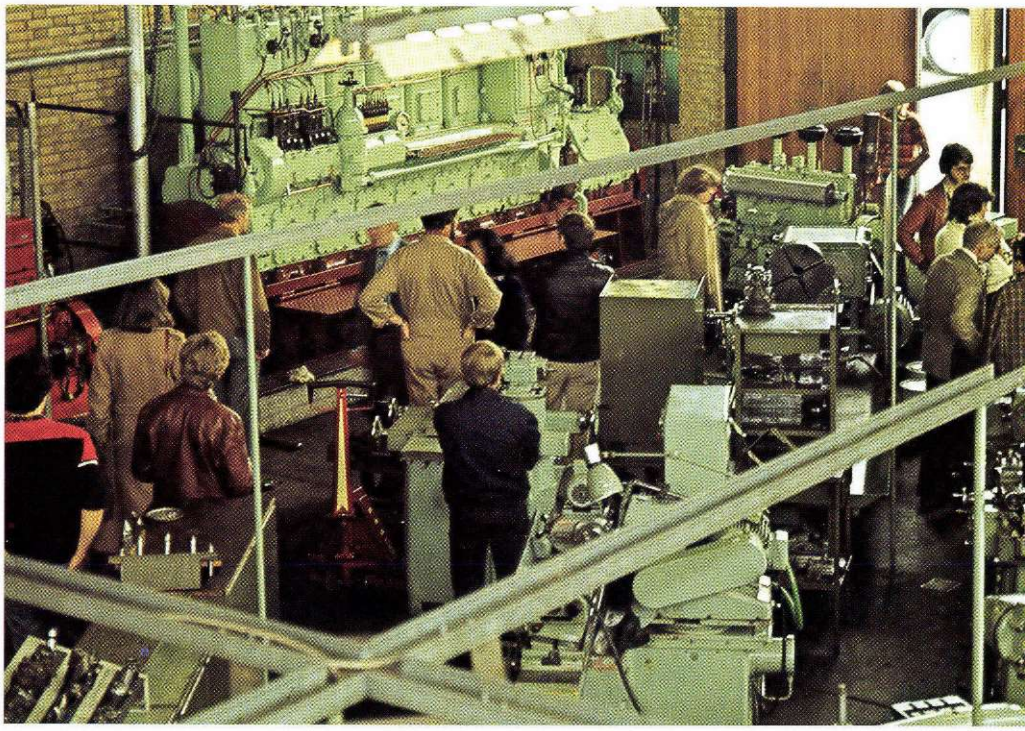


One of the buses went direct to Høje Bøgevej, where Mr. A. P. Møller's childhood home was visited.



One of the A. P. Møller engine apprentices at his lathe in the Workshop School.

In the engine hall of the Workshop School there are a number of lathes, at which the apprentices are taught the different handicrafts. In the background a large diesel engine from a fishing vessel. It is started, stripped, and put together quite a few times every term.



STAFF OUTING

On Saturday April 12th, well over 100 members of Esplanaden staff set out by bus for a day-tour to Svendborg and Tåsinge. Starting from Copenhagen at 7 a.m. the two buses reached Svendborg already by 10.30.

Here the party split up, one bus proceeding to No 27, Høje Bøgevej, where Mr. A. P. Møller's childhood home, Villa Anna, was seen. The other bus went to the Svendborg School of Engineering, where the A. P. Møller Workshop School was inspected. A great number of future engineers for the MÆRSK fleet are trained here.

After switching the two bus parties, both buses proceeded to Tåsinge for a visit to the Mærskgården, home of several retired staff members from the MÆRSK fleet, the head office in Copenhagen, and the Odense Steel Shipyard. The weather was at its best, and even though spring had only just begun, the visitors agreed that this would be a very nice place to spend one's old age, in peaceful surroundings amid a beautiful nature. The outing finished off with an excellent lunch at the Troense Hotel, whereafter the return journey was commenced. Arrival at Esplanaden at 7.15 p.m.

This is where it all started. The old desk in Villa Anna where Mr. A. P. Møller's father, Capt. Peter Mærsk Møller, began as a shipowner during the years after buying the house in 1884. From 1904 the house was also the headquarters of the A/S Dampskibsselskabet Svendborg.

At the Svendborg Engineering School you may inspect this "travelling block", which had a hole blown through its 7 cm side in a blow-out.

Personalia

ESPLANADEN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4

25 Years Anniversary

1. Bjarne Bortfeldt
   July 15th
2. Leif Jensen
   July 15th
3. A. V. Kloster
   August 1st
4. Erik Nielsen
   Tehran, p.t. Copenhagen
   September 1st

THE FLEET


1


2


3

25 Years Anniversary

1. 2nd Engineer
   Willy Hallengren Larsen
   May 30th
2. Captain Leivur Nielsen
   June 1st
3. Captain Klaus Günther Clasen
   (p.t. Esplanaden)
   August 2nd


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Retiring

1. Captain Finn Funder Carlsen
   April 30th
2. Captain H. P. Maribo Jensen
   June 30th
3. Captain Hjalmar Olsson
   June 30th
4. Chief Engineer Aage V.
   Sinclair Andersen
   July 31st
5. Chief Steward Henning
   Makon Laursen
   July 31st

Obituary

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

Vøgg Veje
Roulund
February 4th

Henning Mortensen
BUKH
February 18th

Ejner A. Nielsen
The Yard
March 29th

Steward Law Bing Ki
ex m.s. "TORBEN MÆRSK"
April 4th

Able Seaman Arne Olsen
ex m.s. "TREIN MÆRSK"
April 28th

Chief Officer
Jørn Munch Christensen
ex t.s. "ANDERS MÆRSK"
May 6th

THE YARD


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6


7

25 Years Anniversary

1. Ole Max Hansen
   June 1st
2. Eigil J. Madsen
   June 6th
3. Poul Richard Nielsen
   June 13th
4. Erik Grøn
   July 29th
5. Arne Willy Jensen
   August 8th
6. Bent K. H. Nielsen
   August 8th
7. Ole Børge Thrane
   August 8th

ROULUND


1

25 Years Anniversary

1. Hartvig Andersen
   June 27th

BUKH


1

25 Years Anniversary

1. Vilfred Henriksen
   August 31st

ORGANIZATIONS ABROAD


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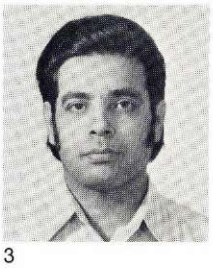
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25 Years Anniversary

1. Niels Jørgen Iversen
   New York
   July 15th
2. S. Hayashi
   Yokohama
   September 1st
3. Phayung Hussain
   Bangkok
   September 1st


1

Retiring

1. Alvin Hipshman
   San Francisco
   May 1st


MAERSK LINE