

MÆRSK POST

1/1985



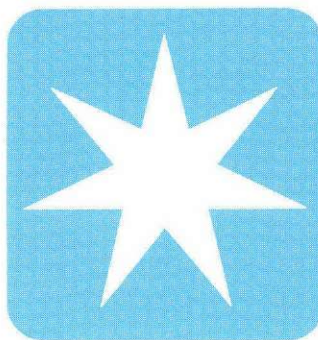
MAERSK POST

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There are many new initiatives taking place in the Mærsk Group's spheres of activity. Let me mention at random some few examples.

On May 19 the Company begins a new weekly container service between the Far East and the Pacific Northwest and Canada, where Tacoma, USA, and Vancouver, Canada, are the ports of call. MAERSK LINE's new service is combined with a weekly train, exclusively transporting Maersk Line containers to and from Chicago and New York - a transport pattern which is becoming increasingly popular with customers in central USA and on the East Coast. With this new service Maersk Line will therefore further strengthen its position in the markets of these important areas. The Moller Steamship Company offices in Vancouver, Tacoma and Seattle will be responsible as representatives in the Pacific Northwest area.

The Company has decided to consolidate our position in Algeciras, the so-called "Connecting Point Spain", where several of our lines meet and integrate. With this increase of activity in mind, a modern, independent Maersk Line Container Terminal is to be built in Algeciras, so that from the beginning of 1986 Maersk Lines will be independent both of other users, and of the existing terminal. This will ensure in the best possible way that the tight sailing schedules will be strictly kept, and the customers will be given the right kind of service. It is an exciting project with very interesting perspectives. The investments ahead for Maersk España S.A. will be quite considerable.

The Maersk Company Limited, London, have taken over Norfolk Line as of January 1, 1985. Norfolk Line maintain a trailer service between Scheveningen in Holland and Great Yarmouth in England, and also between Zeebrugge in Belgium, and Chatham in England. On the two routes there are respectively four and two daily departures in each direction.

On May 1, 1985, Maersk Line (Sverige) AB has been established, with its head office in Gothenburg, and offices in Stockholm and Malmö. The organization in Sweden will be led by Mr Jørgen Steving.

The costs of managing, servicing and repairing the approximately 60,000 TEU containers in our line system are far from small. With the aim of reducing these costs appreciably, a special function has been set up in Technical Organization, and a number of specially trained and qualified equipment inspectors will, worldwide, give advice and guidance to the organization abroad.

We have therefore every reason to be pleased with the initiative and the enterprise which have been shown. And I suggest to all of you who have constructive thoughts and ideas, to come forward with them. Not only is it useful and inspiring to be engaged in something new, it is also a necessity for survival, to strive forever onwards and upwards.



The harbour in Scheveningen, showing Norfolk Line's terminal.

New member of the A.P. Møller Group

On March 1, Norfolk Line became a member of the A.P. Møller Group.

Norfolk Line is one of the largest European door-to-door operators with 1600 trailers in operation at present, of which 1250 are owned by the company. Their market is transport between the U.K. and primarily Holland, Germany and Belgium. Norfolk Line owns three ro-ro ferries and in addition operates two chartered vessels on its two U.K.-Continent services, together giving five daily sailings in each direction.

The northern service connects Scheveningen in Holland and Great Yarmouth in the U.K. The southern service, which was started in 1984, connects Chatham in the U.K. with Zeebrugge in Belgium.

Altogether almost 500 staff are employed: in the head office in Scheveningen, in the U.K.

company in Great Yarmouth, Chatham and the sales offices in London, Birmingham, Manchester and Glasgow, as well as in Germany and Belgium, and on the ships.

The Norfolk Group is managed by Mr William Dow, who after a long career with Unilever took over the management of Norfolk Line when it was bought by Unilever in 1973. Mr Dow is the chief executive of both the Dutch and the British organization.

He is assisted by Mr Ton Bronwasser, who joined the company as a trainee at the age of 17 in 1954. Mr Bronwasser, who is a director of Norfolk Line BV, is the general manager, Continent. In the British organization the director and general manager, U.K. is Mr Peter Bedford, who joined Unilever in 1961 and was transferred to Norfolk Line in 1979. Mr Henk Van der Wardt is the financial

manager and also a director of Norfolk Line BV. He joined Norfolk Line three years ago. His career with Unilever spans 15 years and his latest position was as finance director, Unilever Indonesia.

Mr Vagn Lehd Møller of A.P. Møller has left Maersk Line, Germany to join Norfolk Line as a director and deputy to Mr W. Dow. He will be joined by Mr A. Lykke Pedersen from Maersk do Brasil, who will become treasurer of Norfolk Line. In the U.K. Mr S. Withen Nielsen from Maersk Line, Jakarta will become sales coordinator in Great Yarmouth.

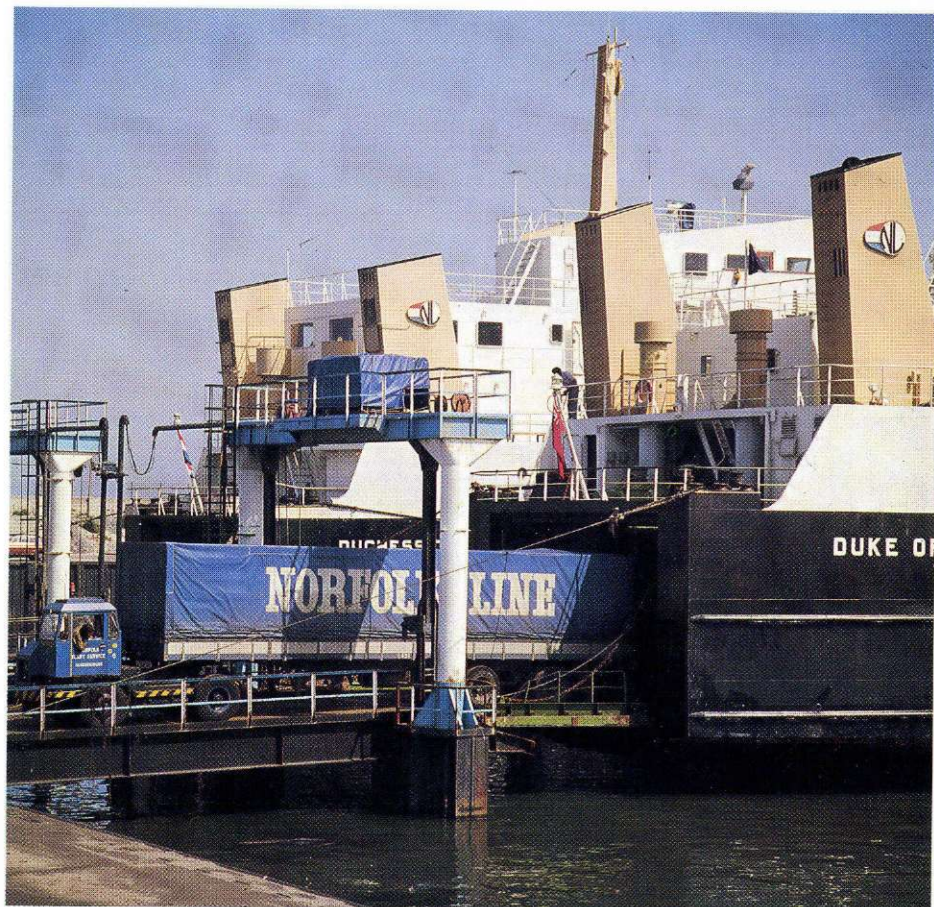
The history of Norfolk Line is that of one man building up a company from nothing. Mr L. Remeeus was a clerk in a Dutch company which exported agricultural products when he decided in 1946 to start his own

The Norfolk Line's latest vessel: the "DUKE OF HOLLAND II".



Norfolk Line's trailers are often seen on the North European highways.

Loading and unloading is quickly done.



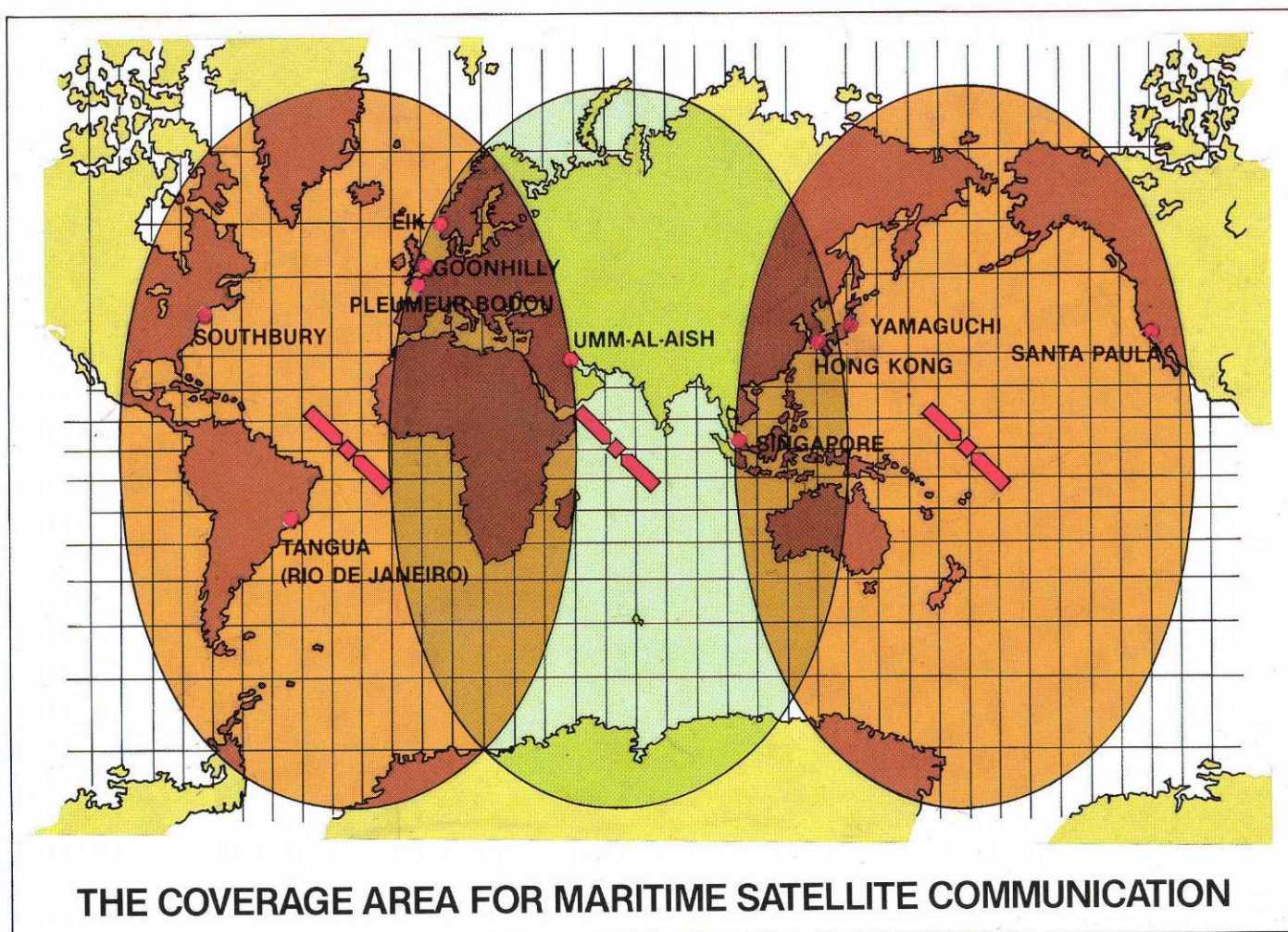
business. By 1960 it had grown so much that he decided to form his own shipping company to ship his cargo. It was a coaster service to the U.K. initially taking fruit and vegetables to England and ballasting back. But soon Mr Remeus realized the potential for importing ponies and slaughter cattle from the U.K. and so balanced his trade. In 1963 when he owned four coasters he started a general cargo service from Rotterdam to the U.K. and in 1965 he rented the old fish auction hall in Scheveningen, which was then converted for the use of the service to the U.K. Since then the company has been based in Scheveningen. In the late sixties, Mr Remeus realized that his pattern of operations had to be changed. He ordered his first ro-ro ferry newbuilding from the Dutch yard, Vuyck and Zonen in Capelle - the same yard that in 1906 had delivered A.P. Møller's first newbuilding, the "PETER MÆRSK".

In 1969 Mr Remeus took delivery of the vessel, which was named the "DUKE OF HOLLAND". Its schedule of one sailing a day in each direction from Scheveningen to Great Yarmouth, seven days a week, totally changed the business. With 23 trailers capacity it took three hours to discharge and load the vessel, compared with two gangs working 12 hours on a coaster. In 1972 and 1973 two more newbuildings were delivered, the "DUKE OF NORFOLK" and the "DUCHESS OF HOLLAND". In 1972, when Mr Remeus had considerable cargo pressure, before the new ships were delivered, he bought an old German landing craft and quickly converted it for six months' service. Capacity on open deck: 11 trailers. In 1973 Unilever bought the company from Mr Remeus. Since 1960 they had been agents in Great Yarmouth for Norfolk Line through their MacFisheries subsidiary.

Shortly after Unilever's take-over the new purpose-built terminal in Scheveningen was opened by H.H. Princess Margriet of The Netherlands. The slump in shipping in the late seventies also affected Norfolk Line, but from the early eighties the market improved and in 1981 the newbuilding the "DUKE OF HOLLAND II", with a capacity of 53 trailers, was delivered. At the same time, a large fleet of trailers was built up, and an efficient marketing effort built Norfolk Line into its impressive position in the door-to-door market today. And - strangely enough - in Norfolk Line they still consider their vessels the less important part of their business. They call Norfolk Line a transportation company - not a shipping business!

Ship/Shore Communication of the future

BY TIM KRARUP SØRENSEN



Technological development is moving faster and faster in almost every field. Survival in today's highly competitive markets demands recognition and utilization of these massive technological developments, and careful consideration of their economic implications.

This also applies to shipping, where tremendous development will be seen over the next decade in the field of ship/shore communication: brought about by the emergence of SATCOM (*Satellite communication*).

Ship/shore communication falls historically into three distinct epochs:

The first was the very long one spanning thousands of years when the means of communication consisted of direct hailing, or signalling by flags and by light, fire and smoke.

To be far from shore at that time meant being totally without contact with the rest of the world.

This long period was to last until about 100 years ago when Marconi discovered wireless communication. This second epoch formed the basis for the conventional telephone and telex systems of today.

The maritime use of conventional telex communication started 15 years ago and has

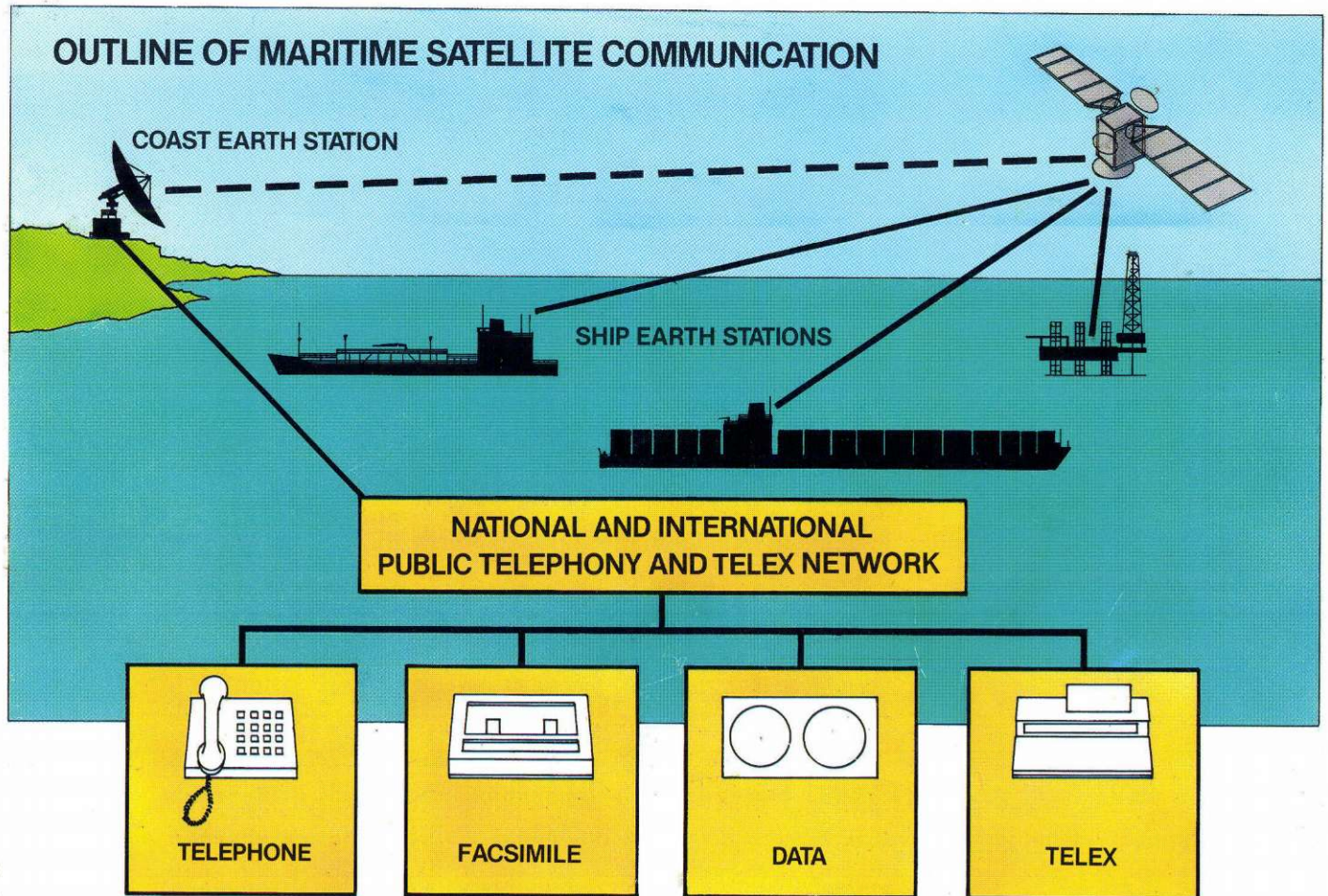
undergone many improvements through the years, resulting in today's reliable and cost-effective marine telex and telephony systems.

The third epoch has now been started by the emergence of SATCOM. The structure of the SATCOM system is shown in figure 1 and consists of a number of coast earth stations, and a number of satellites placed geostationarily over the Atlantic Ocean, the Indian Ocean, and the Pacific Ocean, respectively.

The coverage area for each satellite is also shown.

Figure 2 shows the connection ship-satellite -

OUTLINE OF MARITIME SATELLITE COMMUNICATION



2

coast earth station and subscriber ashore. At present, the following communication services are available with SATCOM for immediate establishment:

1. Telephony from ship to any subscriber ashore (in both directions) and from ship to ship.
2. Telex from ship to any telex installation ashore (in both directions) and from ship to ship.
3. Facsimile
Facsimile transmission brings whole new opportunities for assistance with problems on board, as it will make it possible to transfer complete, notarized drawings in both directions (for example, drawings relating to the ship).
4. Low-to-medium speed transfer of data via telephony in both directions.
5. Immediate connection for emergency information.
6. Automatic connection to radio medicals, weather forecasts and navigation information.

Safety

SATCOM will come to occupy a key position in global maritime distress and safety systems of the future; these will be introduced in the late eighties and replace the present system including telegraphy.

The system as shown in figure 3 will integrate and coordinate the use of ship-based satellite/conventional communication techniques and shore-based communication

techniques. The new system will be largely automatic and thus bring dramatic improvement to the alarm procedure and subsequent search and rescue activities.

Alarm calls from a ship will be made automatically, either by pushing a switch or by activating an automatic position-fixing radio buoy.

Economics

As we have not yet begun to use this type of communication equipment on board our ships, it is logical, in the light of all this information, to ask ourselves if we are late in introducing these new techniques. The answer, however, must be no.

The services provided by SATCOM should be viewed together with their costs. These are made up of interest payments and depreciation of the establishing costs, amounting to approximately US \$50,000 per ship; plus extra annual costs for communication via SATCOM, approximately 100 per cent greater than with conventional communication.

Additionally, the SATCOM equipment does not replace conventional equipment on existing ships and newbuildings, because this is subject to stipulations by the authorities (SOLAS).

However, enormous development work is being carried out by the manufacturers. Keen competition is resulting in falling prices. Development of new equipment is

also under way, including equipment exclusively for telex communication.

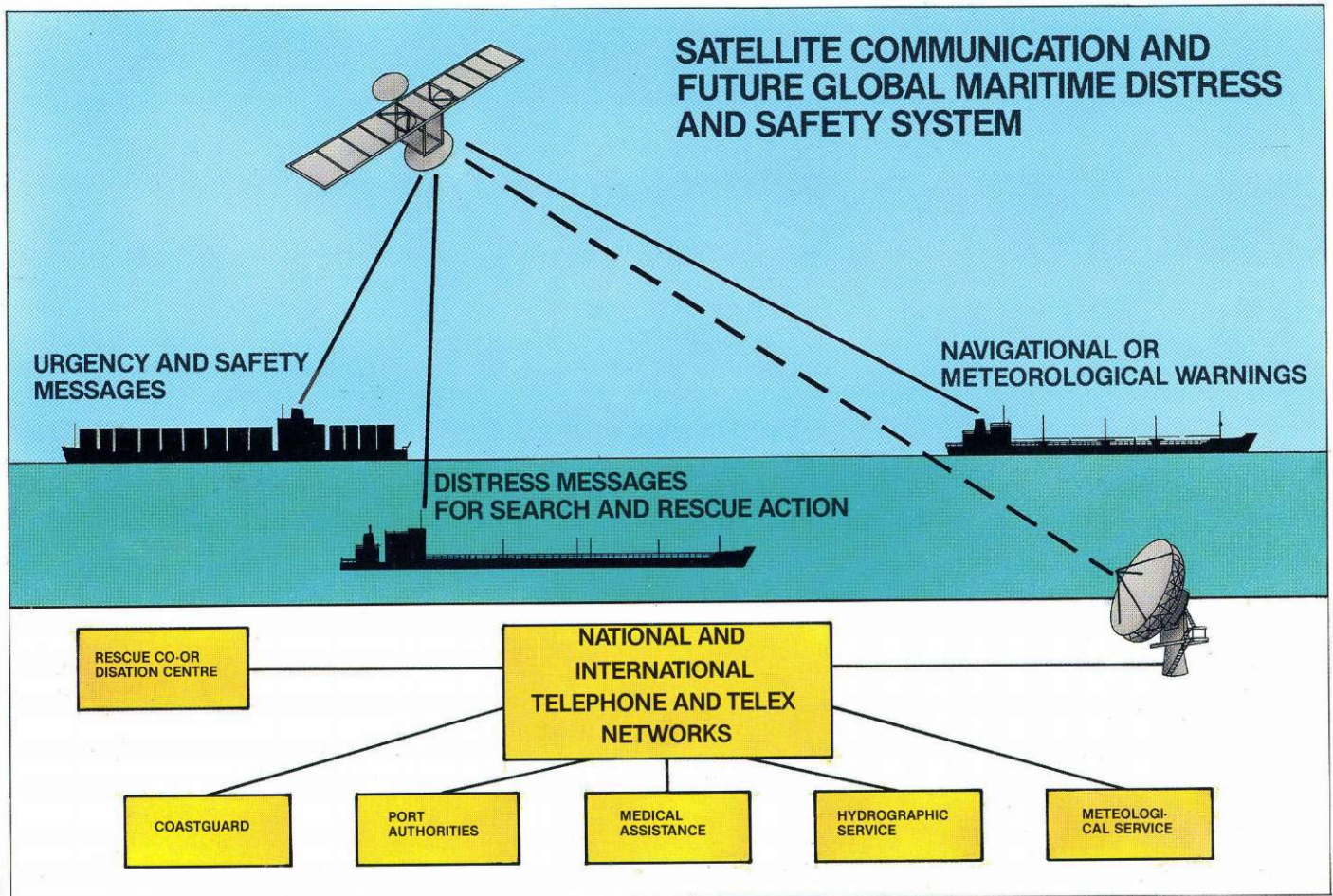
This will mean smaller antennas with lower demands for stabilising. The price for telex-only SATCOM equipment is expected to be about US \$15,000, inclusive of installation. It is anticipated to be on the market in 1988, but the speed of development could well make it available as early as 1986/87.

Obviously, a decision on the installation of SATCOM in our ships has to be made sooner or later - but in many respects time is on our side. The costs of SATCOM installation will fall in the coming years and there are sound arguments for continuing to use conventional techniques, with their improvements, and putting off the installation of SATCOM until the continuous development can guarantee us the optimum solution from the technical/economic point of view. Coast stations and manufacturers of conventional communication equipment are naturally worried about the development of SATCOM since it threatens their livelihood. As a consequence of this, conventional communication is experiencing rapid development, bringing about the emergence of automatic conventional marine telex systems.

These systems are characterized by their ability to receive messages from shore via coast station automatically and without attendance.

However, the new SATCOM-based global maritime distress and safety system is ex-

SATELLITE COMMUNICATION AND FUTURE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM



pected to start about 1990 and thus replace the existing system based on radio telegraphy. This will make SATCOM equipment a requirement for the communication systems for ships.

Ship/Shore Data Communication

Apart from the use of SATCOM in the distress and safety system, the most important innovation brought by SATCOM to shipping will be the possibility for transfer of data between ship and shore.

For many years, the telephone network has been used for transfer of data on shore, whereas the lack of a suitable means of communication has so far prohibited a similar development at sea.

SATCOM has now made possible direct communication between ship and land-based computers, and the first areas to be covered will be:

- Operational working conditions for machinery installations
- Propulsion performance
- Stress and stability
- Crew matters
- Maintenance
- Speed and optimizing of routes
- Spare parts

In principle the transfer of data is not limited to certain items.

This will undoubtedly result in development of a totally new philosophy in ship operation. The ultimate consequence would be a

ship controlled like a remote-controlled robot.

Those ships already equipped with SATCOM made the decision on the basis of operational advantages given by immediate communication connection; this was governed by the trade the ships are in or the organizational situation of their owners.

Suppliers of electronic control systems for ships have realized the possibilities of the use of computer techniques on the ships and also the use of data transfer via SATCOM between ship and land. Considering the speed of development in this field, it is therefore expected that decisions to install SATCOM in future will be based far more on the advantage of data transfer between ship and land-based computers.

It is now logical to ask ourselves:

Who is to maintain all the electronics?

The answer is that electronic equipment generally is becoming more and more reliable, and development is continuing. At the same time, electronic installations are constructed in modules with internal, automatic fault-detecting and test equipment which can automatically diagnose faults right down to module level.

The modular construction has meant that correction of faults on board is reduced to a change of modules based on the indications on the automatic fault and test equipment, after which the supplier executes the correction of defective modules using special computer equipment.

Like many others, we see ship/shore data communication as the only way ahead and have therefore established a project group to study and work out specifications.

As a result, the first SATCOM installation with direct data transmission between ship and shore-based computer is expected to be in operation during the autumn of this year. From the project groups monitoring the world-wide activities in this area, it is clear that while shipping companies recognise the need for ship/shore data communication, many of them are uncertain of their actual system requirements. Some indeed have already made expensive mistakes by purchasing costly systems which, for various reasons, have not lived up to expectations. Perhaps the most common reason is »trying to run before you can walk«. It is a waste of time and money to introduce complex, sophisticated computer systems on board and expect them to link to shore-based systems via SATCOM unless complete compatibility is ensured between ship and shore computer systems. This also means that all personnel involved need to have a commitment to the new systems; this is only possible with complete familiarity and understanding of them.

It is, therefore, imperative for our implementation of this new technology to be carried out one step at a time to secure the optimum solution for present and future requirements.

Tim Krarup Sørensen

The "ARTHUR MÆRSK" appears on TV

Few viewers realize that even a short TV report may take several days to make. Detailed manuscripts and careful planning never solve all problems.

"Rotterdam Harbour never sleeps!"

This is one of the opening phrases in a TV report made in December by Video Vest in Esbjerg on behalf of TV-Syd, the provisional regional TV company in Southern Jutland, and of the Germand NDF, Norddeutscher Fernsehen.

The TV crew included the cameraman Mogens Carrebye and Knud Levring of the A.P. Møller PR-Department. They, too, had precious little sleep while following the container vessel "ARTHUR MÆRSK" from her arrival in Rotterdam on Monday morning till she left Hamburg on Thursday evening.

Work started at three o'clock in the morning. The crew tried to provide enough light for filming the ship's arrival on a pitch dark December morning. Two assistants sailed with the pilot to the "ARTHUR MÆRSK". They wanted to set up lamps at the front of the ship to lighten her bow and side. They failed, because the nearest two-pin 220-volt point was 170 metres from the bow. Eventually, they used the lights on Mogens Carrebye's car and a 16 mm camera running at greatly reduced speed. Some of the shots were scrapped, though, because they showed the "ARTHUR MÆRSK" rushing to the quayside as in an old-fashioned silent movie. The report vividly describes the hectic, but well-organized activities triggered off by a big container vessel calling at a large harbour. The Captain and his crew were busy dealing with the mountains of paperwork produced by all port calls. Landlubbers may think that sailors sail ships and have nothing to do while the ship is in harbour. But the report shows that officers only relax at meal times; the rest of the time they're busy with papers to be signed, or with an apparently endless stream of callers to be looked after. Moreover, the cargo needs constant checking. Loading and unloading containers puts great strain on the hull. Liquid cargoes, such as chemical for the plastic industry and about 4,000 tons of bunker oil, also affect the strength of the hull and stability at sea. There were other types of cargo, too. A big yacht from Hong Kong was unloaded in Rotterdam and another one, which had ar-

rived by feeder vessel from England, was to go to Singapore. A large ship's engine from Japan was lifted by a floating crane on to a feeder vessel bound for Copenhagen. Laymen may be surprised to know that large quantities of, for us, very ordinary goods, such as potatoes and onions, are transported across half the world. It's less of a surprise to learn that large shipments of flower bulbs are sent from Holland to the Far East.

The TV crew had a long and busy Monday. They filmed on board, at the terminal, at the terminal office, at the stripping and stuffing terminal (where containers are emptied and filled), and at the Maersk Line office in central Rotterdam. Pressure of work didn't stop Mærsk employees on board and ashore from offering much kind assistance during filming. Even the Chief Steward was very forthcoming - though the TV crew nearly drove him crazy! They wanted to eat when there was no food, and they stayed away at meal times, because they were out filming. Some very hungry people finally sat down for their first meal of the day in the terminal cafeteria at eight o'clock in the evening.

Late Monday night, the ship was due to sail for Bremerhaven. For security reasons, strong lights were banned from the bridge during departure. The pilot and officers agreed to stage a mock departure and proved to be excellent actors under marvellous direction from Captain Niels Juhl Westergaard.

The film crew wanted to show a pilot leaving the ship. There were two pilots on board - a pilot and a river pilot. They were both needed! The lights started to play up. The electricity supply was fine, this time, but as soon as the pilot disembarked, the bulb went.

The cameramen had a second chance, but it meant keeping on their feet until the river pilot left the ship off Hoek van Holland very early in the morning. Perseverance paid off. The filming was a success and, besides, the Captain had seen to it that the cameramen had a few much-needed sandwiches before they tried to catch up on their night's sleep. One of the visual highlights of the report was supposed to show the "ARTHUR MÆRSK" sailing into Bremerhaven in the early after-

noon. The approach on the River Weser passes close by a stretch of typical marshland from where, very nearly, one may walk to the ship at ebbtide. One of the cameramen had placed himself here four hours before the ship's arrival. For three hours the weather was fine. Then dense fog settled over the area, and it only lifted when the ship was at the quay and the engines had been stopped.

The crew went to Hamburg hoping that the "ARTHUR MÆRSK" would be a little late. Arrival was scheduled for 7 a.m. and shortly after there would be enough light to film her arrival. But Maersk Line is always punctual and fast, and even though the "ARTHUR MÆRSK" had left Bremerhaven rather later than planned, she arrived at Hamburg before seven, in the dark, ahead of the TV crew.

Hamburg was just as exciting as Rotterdam. The fog had bothered the cameramen at Bremerhaven, but now they had sunshine and a few degrees above zero. December days are short, but all sequences were shot as planned.

Only one scene had to be abandoned: the fully loaded container vessel leaving Hamburg for Singapore: the service takes 17 days - "outstandingly swift" in the words of Lloyd's Export Shipping. As all arrivals and departures, it took place before daylight.

A member of the Maersk Line office staff in Hamburg told the TV crew that the "ARTHUR MÆRSK" wouldn't resemble an ordinary container ship, loaded as she was in Hamburg with construction materials, large engine units for power stations and dairies, and machines for railway construction. Apart from the containers there were 22 heavy lifts, 12 by a floating crane. Even so the crew would have liked to film the departure.

Everyone was happy with the result and with the treatment they had received everywhere - despite numerous hardships, little sleep, and several misses because of timing and faulty equipment. The trip demonstrated that you have to be ready when things happen. They can rarely be repeated.



Early morning in Rotterdam Harbour.

Shooting in the engine room.



The "ARTHUR MÆRSK" emerges from the fog on her way into Bremerhaven.



Heavy lift in Hamburg.

Containerhandling in Rotterdam.

The "MAERSK HANDLER" in China



The "MAERSK HANDLER" arriving at Chiwan Supply Base.

At 11.45 a.m. on November 15 the "MAERSK HANDLER", a 7,040 BHP anchorhandling tug and supply vessel, called at the newly completed Chiwan Supply Base, which is just across the border from the western part of Hong Kong's New Territories. That was the first major result of a recent mutual agreement signed by A.P. Møller, Mærsk Supply Service, and China Nanhai West Oil Corp.

After the on-hire survey the "MAERSK HANDLER" went on charter to Philips Petroleum International Corp. Asia, who holds a concession for exploration of oil approximately 80 nautical miles south-west of the Chiwan Supply Base.

The "MAERSK HANDLER" operates together with a vessel provided by China Nanhai West Oil Corp. which has three senior Danish key officers on board serving as advisors to the local Chinese crew.

The petroleum industry in the People's Republic of China is the oldest in the world with records of petroleum usage dating back

to 3,000 BC. Planned drilling for oil and gas started in 200 BC and at the same time the first bamboo wells were established. Today, the People's Republic of China is among the world's major on-land producers of oil having turned out approximately 110 million tons of crude oil in 1984.

Offshore exploration first began in the early 70s, and most of it was done in cooperation with Japanese companies in Bohai Bay to the North. This is also the place where the first small offshore production began.

In the late 70s the People's Republic of China started negotiations with foreign oil companies for offshore exploration rights. As a result, 14 operators are now drilling in the South China Sea from the Pearl River estuary to the Beibu Gulf, and in the Yellow Sea.

The second round of bidding for exploration rights and allocation of concession blocks is scheduled to commence early this year when the total exploration area given to foreign companies on a joint venture basis with local

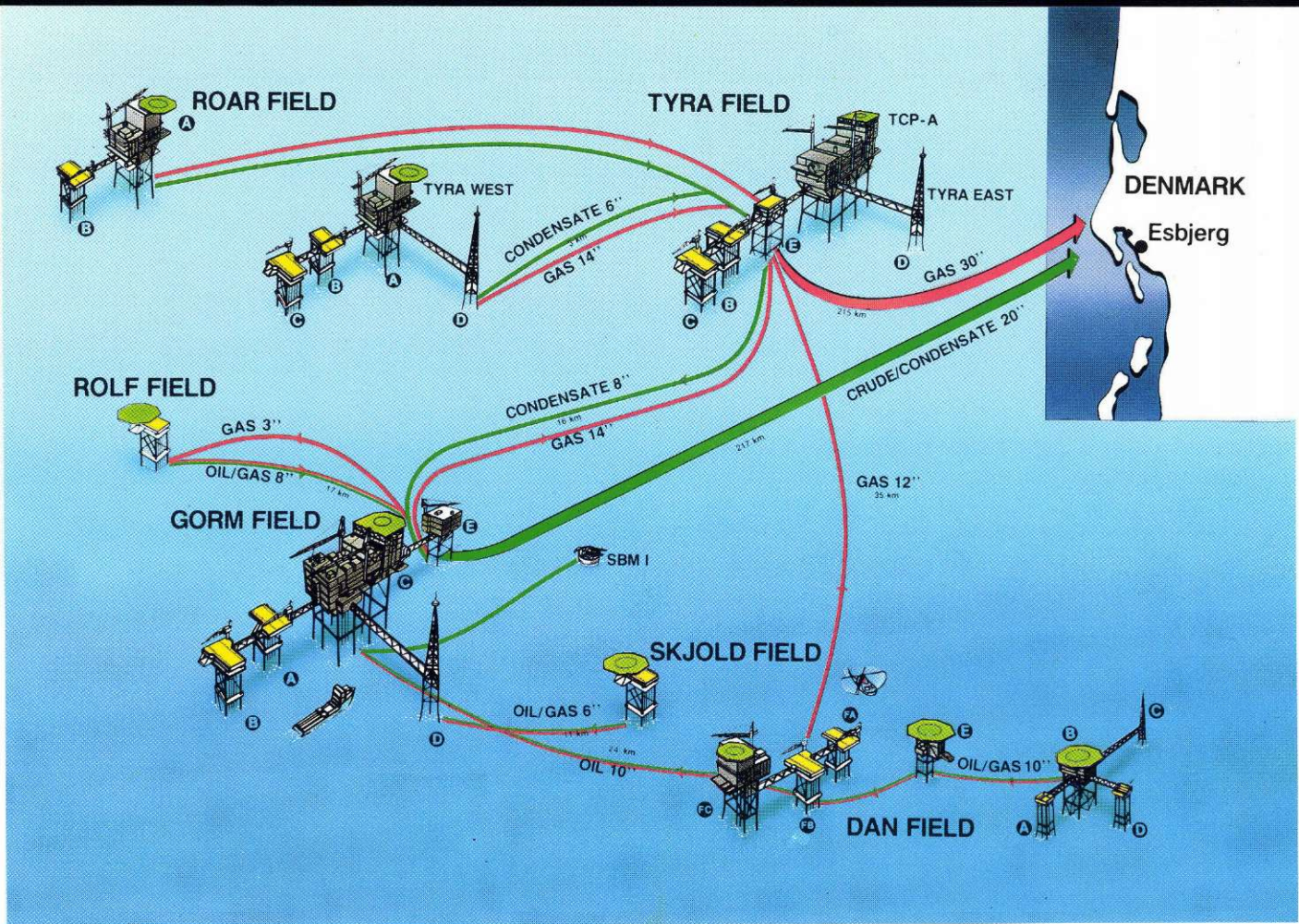
authorities, is expected to double.

It is too early to make any predictions on the future potential and oil reserves of the South China Sea, but the Chinese are very optimistic and have already started huge projects to improve the infrastructure in preparation for the large increase in oil activities.

One operator has already decided to commence oil production in the Beibu Gulf this year. Another has found a major gas field south of Hainan Island, and others have reported oil finds.

It appears certain that the next few years will see a substantial increase in activities as all operators have committed themselves to drilling a given minimum number of exploration wells within the next two-three years. The A.P. Møller Group hopes to be able to participate in the offshore exploration and production activities in the future.

Thomas Thune Andersen



Oil exploration in the North Sea 1985

In 1985 DUC will have three rigs active in the Danish North Sea Sector. They are the "MÆRSK EXPLORER", the "DAN EARL", and the "MÆRSK ENDEAVOUR". In February the "MÆRSK ENDEAVOUR" returned to the Danish North Sea after completion of a single well for Ranger Oil in the southern basin of the British North Sea. "MÆRSK EXPLORER" will primarily drill production wells on the Dan F project, while "MÆRSK ENDEAVOUR" and "DAN EARL" will mainly be doing exploration drilling. This very high level of exploration activity compares with 1984 when seven exploration and appraisal wells were drilled by the consortium.

On 31 December 1985, A.P. Møller has to relinquish the remaining 25 per cent of the initial acreage except for the so-called contiguous area surrounding the Dan, Gorm, Skjold and Tyra fields and discoveries outside this area. When this happens, the Consortium will lose the majority of its acreage for oil and gas exploration, and there will no longer be a basis for the current high level of exploration activity.

Oil - expensive to find More expensive to extract

The focus is very often on exploration, creating as it does the basis for oil and gas

production for decades to come. Today's production, and production in the immediate future, will have to come from existing discoveries; and the development and operation of these fields require much heavier expenditure than is the case with exploration. Construction costs alone of the DUC oil and gas fields in production amount to some 12 billion DKr. (accrued since 1971); on top of this comes interest incurred during construction. Additionally, annual operating costs for these fields amount to just under one billion DKr.

The major task for DUC over the coming year will be the development of new and existing production facilities on the oil and gas fields in the North Sea. In 1984 DUC decided on three new development projects amounting to approximately five billion DKr. primarily for investment in 1985 and 1986. As the only investments of their kind in Denmark, they will obviously dominate the Danish offshore supply market.

Dan F Project

By far the largest investment during the next two years is in Dan F, the project to increase production from Denmark's oldest oilfield, the Dan Field, which came on stream in 1972. To increase production, two addi-

tional platforms were installed in 1975-77 and twelve additional production wells were drilled. Production never measured up to expectations, however, despite enormous investments in time and money by the Consortium.

Extensive studies have been conducted into the viability of injecting gas or water into the reservoir to increase production. Appraisal wells have been drilled to provide information about possible production from other parts of the geological structure. Costs are enormous - appraisal drilling easily involving 50 million DKr. per well.

On the basis of these analyses and studies DUC has now decided to invest four billion DKr. in three additional platforms on the Dan Field. Two of these will be well head platforms with room for a total of 24 wells. One of these well slots is reserved for a water injection pilot programme, meaning that the effects of purified sea water being injected into the reservoir will be monitored over a prolonged period. The third platform is a combined processing and accommodation platform.

Until completion of this project early in 1987, oil and gas from the existing Dan Field platforms are taken in two-phase flow through a pipeline to the Gorm Field. The gas is reinjected into the Gorm reservoir

together with gas from the Gorm and Skjold Fields.

In the long run the Gorm reservoir will hardly be able to store such large quantities of gas, and a pipeline will be laid from Dan F direct to the Tyra Field so the gas can form part of the gas exports to shore.

The substructures for the three platforms, the so-called jackets, have been ordered in Japan, the first two for delivery in May this year. The Dan F project is expected to be ready for initial production early in 1987, and the expansion is expected to increase production by approximately one million tons in the first year. After this, however, production will decline rather rapidly. Mærsk Olie og Gas A/S, operator for the DUC, estimate increased production to average 600,000 tons per year for the first ten years.

Rolf Project

In the summer of 1984, the government received an application for the development of the Rolf Field, which was discovered by the wildcat well Rosa-1 in 1981, and will require investments in the order of 600 million DKr. The project includes a single unmanned platform to be controlled direct from the Gorm Field, which will receive the oil through an 8" pipeline. On the Gorm Field the oil will be processed together with the oil from DUC's other oilfields.

The Rolf Field is expected to start production in 1986 with a first-year volume of approximately 300,000-350,000 tons (6-7,000 BOPD) and a gradual decline in the following years.

The Condensate Project

In November 1984, DUC submitted an application to the government to install an additional module on Tyra West, at a total cost of 300-400 million DKr. The project is to increase condensate production from the Tyra Field, partly by accelerating production of condensate that would have been produced with the gas anyway, but mainly by extracting condensate that otherwise would have been left in the ground. This production increase is expected to commence in 1987.

Production

Today, DUC's production of oil and gas makes a considerable contribution to Denmark's energy supply; oil production from Danish fields in 1984 amounted to 2.3 million tons.

In 1985 DUC anticipates oil production of about 2.5 million tons, and gas production corresponding to approximately one million tons of oil. Further increases are anticipated in the following years: in 1987, for example, estimates are for more than 3.5 million tons of oil and a gas production corresponding to 2.5 million tons of oil. This means that DUC's production will be on a level to meet one third of the total Danish energy demand.



The DUC exhibition presents itself well in the hall at the Svendborg School of Marine Engineering.

DUC in Svendborg

The Svendborg Centre for Regional Development is currently showing the large Dansk Undergrunds Consortium exhibition in the beautiful hall at the Svendborg School of Marine Engineering. The exhibition was opened at a reception on February 1 by Mr Viggo Schultz, chairman of the school board. 37 display panels carry texts, photos, and drawings describing the search for and production of oil and gas from the Danish subsoil. There are also models of one of the Tyra East modules, the "MÆRSKENDEAVOUR" rig (home port: Svendborg), and the anchoring tug "MÆRSK BATTLER". Visitors may watch three DUC video films: "Oil from the Sea", "Gorm", and "Oil People", and the Danish Institute of Film Production has given its permission for the showing of "Gas Underground" from 1941

on drilling and the production of natural gas near Frederikshavn.

The A.P. Møller PR Department has designed the exhibit which was first shown at the DUC drillings in Southern Jutland in 1980-81. Since then, it has been repeatedly up-dated and expanded. It has attracted much attention and has been in almost constant use since 1981: at the Department of Geology at the University of Copenhagen, the Esbjerg Fisheries and Merchant Navy Museum, the Museum of Natural History in Aarhus, the Museum of Geology at the University of Oslo, and, until recently, at the Esbjerg Centre for Regional Development. No less than 300,000 visitors have seen the exhibition since its start nearly five years ago - a very satisfactory result.

One of the guests at the opening reception, Mrs Anne Grethe Schultz, is studying the model of the "MÆRSK ENDEAVOUR" with particular interest as she named the rig in March 1982.

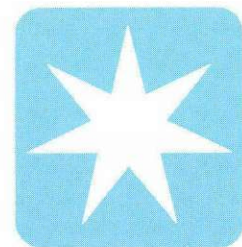




THE MÆRSK FLEET

January 1st, 1985

1985



CRUDE-CARRIERS

t.t. "MAERSK BUCHAN"
built 1968
Odense Staalskibsværft A/S
100,700 tdw.

of the same type:
t.t. "MAERSK ANGUS"
built 1967. 100,700 tdw.



t.t. "RAS MÆRSK"
built 1973
Odense Staalskibsværft A/S
286,000 tdw.

of the same type:
t.t. "ROMØ MÆRSK"
built 1973. 286,000 tdw.



t.t. "KATRINE MÆRSK"
built 1974
Odense Staalskibsværft A/S
333,750 tdw.

of the same type:
t.t. "KRISTINE MÆRSK"
built 1974. 333,750 tdw.
t.t. "KIRSTEN MÆRSK"
built 1975. 319,999 tdw.
t.t. "KAROLINE MÆRSK"
built 1975. 333,950 tdw.
t.t. "KATE MÆRSK"
built 1976. 333,850 tdw.
t.t. "KARAMA MÆRSK"
built 1977. 332,400 tdw.
t.t. "KAREN MÆRSK"
built 1977. 332,500 tdw.



PRODUCT-CARRIERS

m.t. "HERTA MÆRSK"
built 1982
A/S Nakskov Skibsværft
13,845 tdw.

of the same type:
m.t. "HULDA MÆRSK"
built 1982. 13,845 tdw.
m.t. "HENRIETTE MÆRSK"
built 1982. 13,845 tdw.
m.t. "MAERSK HARRIER"
built 1982. 13,845 tdw.



m.t. "GJERTRUD MÆRSK"
built 1974
Norway
31,500 tdw.

of the same type:
m.t. "GUDRUN MÆRSK"
built 1973. 31,540 tdw.

of similar type:
m.t. "GERD MÆRSK"
built 1977. 31,877 tdw.



m.t. "PETER MÆRSK"
built 1981
Japan
47,803 tdw.

of the same type:
m.t. "PRIMA MÆRSK"
built 1982. 47,803 tdw.
m.t. "PAULA MÆRSK"
built 1982. 47,803 tdw.



m.t. "A.P. MØLLER"
built 1984
Odense Staalskibsværft A/S
50,600 tdw.



m.t. "JESPER MÆRSK"
built 1978
Norway
58,300 tdw.

of the same type:
m.t. "JAKOB MÆRSK"
built 1976. 58,700 tdw.
m.t. "JEPPESEN MÆRSK"
built 1976. 58,700 tdw.
m.t. "MÆRSK ASCENSION"
built 1976. 58,900 tdw.



m.t. "NICOLINE MÆRSK"
built 1978
Odense Staalskibsværft A/S
68,800 tdw.

of the same type:
m.t. "NORA MÆRSK"
built 1977. 68,800 tdw.
m.t. "NIELS MÆRSK"
built 1978. 68,800 tdw.
m.t. "NELLY MÆRSK"
built 1978. 68,800 tdw.
m.t. "NELE MÆRSK"
built 1979. 68,800 tdw.
m.t. "NICOLAI MÆRSK"
built 1979. 68,800 tdw.



m.t. "DIRCH MÆRSK"
built 1982
Odense Staalskibsværft A/S
98,200 tdw.

of the same type:
m.t. "DORTHE MÆRSK"
built 1983. 98,200 tdw.
m.t. "DAGMAR MÆRSK"
built 1984. 98,200 tdw.



GAS-TANKERS (LPG/C)

m.t. "SOFIE MÆRSK"
built 1977
Norway
12,060 m³

of the same type:

m.t. "INGE MÆRSK"

built 1972. 12,060 m³

m.t. "SINE MÆRSK"

built 1976. 12,060 m³



m.t. "SALLY MÆRSK"
built 1981
Odense Staalskibsværft A/S
15,070 m³

of the same type:

m.t. "SVENDBORG MÆRSK"

built 1981. 15,070 m³

m.t. "SUSAN MÆRSK"

built 1981. 15,070 m³

m.t. "SVEND MÆRSK"

built 1982. 15,070 m³

m.t. "OLUF MÆRSK"

built 1984. 15,070 m³

m.t. "OLGA MÆRSK"

built 1984. 15,070 m³



CONTAINER VESSELS

m.s. "DRAGØR MÆRSK"
built 1974
Japan
32,153 tdw.



m.s. "ANDERS MÆRSK"
built 1976
West Germany
35,019 tdw.

of the same type:

m.s. "ANNA MÆRSK"

built 1975. 35,006 tdw.

m.s. "ARTHUR MÆRSK"

built 1976. 35,108 tdw.

m.s. "AXEL MÆRSK"

built 1976. 34,972 tdw.

t.s. "ALVA MÆRSK"

built 1976. 33,110 tdw.

t.s. "ARILD MÆRSK"

built 1976. 33,110 tdw.



of the same type with garage:

m.s. "ADRIAN MÆRSK"

built 1975. 29,910 tdw.

m.s. "ALBERT MÆRSK"

built 1975. 29,910 tdw.

m.s. "ARNOLD MÆRSK"

built 1975. 30,660 tdw.



m.s. "LOUIS MÆRSK"
built 1984
Odense Staalskibsværft A/S
53,500 tdw.

of the same type:

m.s. "LAURA MÆRSK"
built 1980. 53,763 tdw.
m.s. "LEISE MÆRSK"
built 1980. 53,763 tdw.
m.s. "LEXA MÆRSK"
built 1981. 53,763 tdw.
m.s. "LICA MÆRSK"
built 1981. 34,240 tdw.
m.s. "LEDA MÆRSK"
built 1982. 53,763 tdw.
m.s. "LUNA MÆRSK"
built 1982. 44,221 tdw.
m.s. "REGINA MÆRSK"
built 1983. 43,600 tdw.
m.s. "LAUST MÆRSK"
built 1984. 48,600 tdw.
m.s. "LARS MÆRSK"
built 1984. 53,500 tdw.



m.s. "CHARLOTTE MÆRSK"
built 1968
Sweden
24,937 tdw.

of the same type:

m.s. "CHRISTIAN MÆRSK"
built 1968. 25,007 tdw.
m.s. "CHASTINE MÆRSK"
built 1968. 25,067 tdw.
m.s. "CLARA MÆRSK"
built 1968. 25,078 tdw.
m.s. "CLIFFORD MÆRSK"
built 1969. 25,130 tdw.

of the same type with gantry crane:

m.s. "CORNELIA MÆRSK"
built 1967. 24,617 tdw.
m.s. "CECILIE MÆRSK"
built 1967. 24,617 tdw.



m.s. "MAERSK MANGO"
with gantry crane
built 1978
Japan
11,034 tdw.

of the same type:

m.s. "MAERSK TEMPO"
built 1978. 11,007 tdw.



GENERAL-CARGO VESSELS

m.s. "MARCHEN MÆRSK"
built 1974
A/S Nakskov Skibsværft
21,300 tdw.

of the same type:

m.s. "MARGRETHE MÆRSK"
built 1975. 21,300 tdw.
m.s. "MATHILDE MÆRSK"
built 1975. 21,300 tdw.
m.s. "MC-KINNEY MÆRSK"
built 1975. 21,300 tdw.



m.s. "ELISABETH MÆRSK"
built 1980
Odense Staalskibsværft A/S
29,750 tdw.



BULKCARRIERS

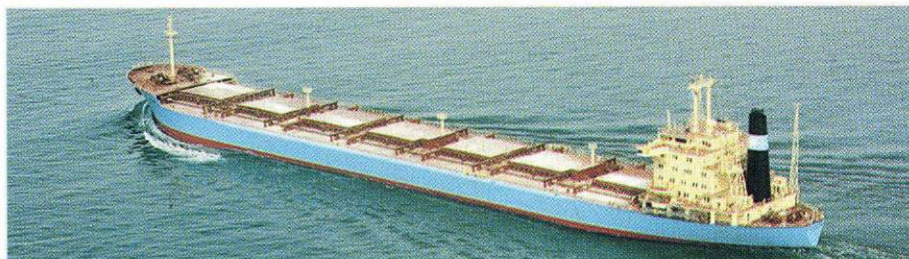
m.s. "MAERSK NEPTUN"
built 1975
Burmeister & Wain
62,972 tdw.

of the same type:
m.s. "MAERSK TRITON"
built 1977. 62,972 tdw.



m.s. "MAERSK SENTOSA"
built 1981
Japan
63,777 tdw.

of the same type:
m.s. "MAERSK SELETAR"
built 1981. 63,728 tdw.
m.s. "MAERSK SEBAROK"
built 1981. 63,801 tdw.



m.s. "MAERSK SERANGOON"
built 1983
Japan
62,680 tdw.

of the same type:
m.s. "MAERSK SEMBAWANG"
built 1984. 62,689 tdw.



m.s. "STREAM BOLLARD"
built 1973
Japan
32,502 tdw.

of the same type:
m.s. "STREAM RUDDER"
built 1973. 32,531 tdw.
m.s. "STREAM HAWSER"
built 1973. 32,592 tdw.
m.s. "STREAM DOLPHIN"
built 1973. 35,520 tdw.



PURE CAR CARRIERS

m.s. "MAERSK WAVE"
built 1980
Japan
2,000 cars

of the same type:
m.s. "MAERSK WIND"
built 1981. 2,000 cars



TUG/SUPPLY VESSELS

m.s. "MAERSK SERVER"
built 1971
Dannebrog Værft A/S
3,800 BHP, 745 tdw.

of the same type:

m.s. "MAERSK SUPPORTER"
built 1971. 3,800 BHP, 745 tdw.
m.s. "MAERSK SUPPLIER"
built 1972. 3,800 BHP, 745 tdw.
m.s. "MAERSK SHIPPER"
built 1972. 3,800 BHP, 745 tdw.



m.s. "MÆRSK TRAVELLER"
built 1974
Norway
5,300 BHP, 1,428 tdw.

of the same type:

m.s. "MÆRSK TACKLER"
built 1973. 5,300 BHP, 1,428 tdw.
m.s. "MÆRSK TENDER"
built 1973. 5,300 BHP, 1,428 tdw.
m.s. "MÆRSK TRANSPORTER"
built 1974. 5,300 BHP, 1,428 tdw.
m.s. "MÆRSK TRIMMER"
built 1974. 5,300 BHP, 1,428 tdw.
m.s. "MÆRSK TRACKER"
built 1974. 5,300 BHP, 1,428 tdw.

af lignende type:

m.s. "MÆRSK TERRIER"
built 1973. 6,180 BHP, 1,335 tdw.
m.s. "MÆRSK TRADER"
built 1973. 6,180 BHP, 1,335 tdw.



m.s. "MAERSK FIGHTER"
built 1976
Norway
7,040 BHP, 1,052 tdw.

of the same type:

m.s. "MAERSK FEEDER"
built 1976. 7,040 BHP, 1,052 tdw.



m.s. "MAERSK HANDLER"
built 1980
Sydkorea
7,040 BHP, 1,940 tdw.

of the same type:

m.s. "MAERSK HELPER"
built 1980. 7,040 BHP, 1,940 tdw.



PLATFORM/SUPPLY VESSELS

m.s. "MAERSK PUNCHER"
built 1976
Holland
3,200 BHP, 1,932 tdw.

of the same type:

m.s. "MAERSK PIPER"
built 1976. 3,200 BHP, 1,932 tdw.
m.s. "MAERSK PLOTTER"
built 1976. 3,200 BHP, 1,932 tdw.
m.s. "MAERSK PACER"
built 1976. 3,200 BHP, 1,932 tdw.



m.s. "BIN JABR 1"
built 1976
Dannebrog Værft A/S
2,400 BHP, 963 tdw.

of the same type:
m.s. "BIN JABR 2"
built 1976. 2,400 BHP, 963 tdw.



ANCHORHANDLING TUGS

m.s. "MÆRSK BATTLER"
built 1976
Odense Staalskibsværft A/S
8,400 BHP

of the same type:
m.s. "MÆRSK BEATER"
built 1976. 8,400 BHP
m.s. "MÆRSK BLAZER"
built 1977. 8,400 BHP
m.s. "MÆRSK BLOWER"
built 1977. 8,400 BHP
m.s. "MÆRSK BOULDER"
built 1977. 8,400 BHP
m.s. "MÆRSK BREAKER"
built 1977. 8,400 BHP



MULTIPURPOSE/TUG/ SUPPLY/FIRE- FIGHTING VESSELS

m.s. "MAERSK RETRIEVER"
built 1979
Odense Staalskibsværft A/S
13,000 BHP, 2,000 tdw.
of the same type:
m.s. "MAERSK RUNNER"
built 1980. 13,000 BHP, 2,000 tdw.
m.s. "MAERSK RULER"
built 1980. 13,000 BHP, 2,000 tdw.
m.s. "MAERSK RANGER"
built 1980. 13,000 BHP, 2,000 tdw.
m.s. "MAERSK RIDER"
built 1982. 14,400 BHP, 2,000 tdw.
m.s. "MAERSK ROVER"
built 1982. 14,400 BHP, 2,000 tdw.



m.s. "MÆRSK DETECTOR"
built 1981
Frederikshavn Værft A/S
9,000 BHP, 2,160 tdw.
of the same type:
m.s. "MÆRSK DISPATCHER"
built 1981. 9,000 BHP, 2,160 tdw.



m.s. "MÆRSK CLIPPER"
built 1983
Dannebrog Værft A/S
14,400 BHP, 2,085 tdw.
of the same type:
m.s. "MAERSK CUTTER"
built 1983. 14,400 BHP, 2,085 tdw.



DIVING VESSELS

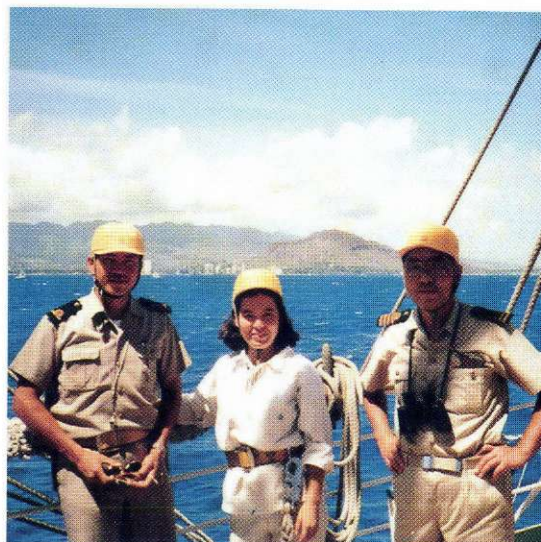
m.s. "MAERSK DEFENDER"
built 1976
Singapore
1,250 tdw., dynamic positioning,
fire-fighting, stand-by rescue.





Ayako Hayashi with Executive Vice President Bent E. Hansen of the Technical Organization at the A.P. Møller Head Office on Esplanaden, Copenhagen.

Ayako Hayashi on board the Japanese training ship "KAIO MARU" en route from Japan to Hawaii.



Anchors Away: the first Japanese female officer

When Miss Ayako Hayashi left Tokyo on December 26 as Third Officer on board the container vessel "AXEL MÆRSK" she experienced the fulfilment of an apparently impossible dream. The Press in Japan had shown quite a lot of interest in her story. In 1980 the Tokyo University of Mercantile Marine, founded in 1875, opened its doors to women, and the first female students, including Ayako Hayashi, attracted public attention.

Miss Hayashi finished her studies in March 1984, and in May she and another female graduate joined the Japanese training ship "KAIO MARU". They were the only women among more than a hundred men. Miss Hayashi signed off in August as the first Japanese woman to have obtained an officer's certificate. The Press followed her subsequent job hunt with considerable attention. She applied to all the shipping companies, but to no avail.

– Japanese laws forbid women to work at night, Ayako Hayashi explains. – But you have to, if you want to manage your duties on board. So, Japanese shipping companies do not employ female sailors.

But Maersk Line K.K. in Tokyo was in touch with the University and knew of Ayako Hayashi's qualifications. On October 1 she was appointed Assistant Cargo Coordinator, and her job was to work out loading plans for container vessels; here she could use her special knowledge of navigation and cargo handling, which she had acquired during her studies.

Her appointment was mentioned by some of the leading Japanese newspapers and shipping magazines, and even on television, which all helped to bring Maersk Line to the attention of the public in Japan.

Miss Hayashi was then sent out as supernumerary Third Officer on board some Maersk Line container vessels, so that she could get to know work on board a ship, particularly cargo handling. On December 26 she sailed from Tokyo on the "AXEL MÆRSK" bound for Hamburg. The first female Japanese officer had put to sea.

She left the "AXEL MÆRSK" in Hamburg on January 24 to study Cargo Operations there. She then flew to Copenhagen, where she spent some days at the A.P. Møller Head Office on Esplanaden. She learnt about the widespread activities of the A.P. Møller Group and about work in various Company departments, such as Ship's Personnel, the Nautical Department, Maersk Line, and Maersk Container Line.

On January 30 she flew to Genoa in Italy where she joined the "CHASTINE MÆRSK" on her voyage to New York. From New York Miss Hayashi sailed back to Tokyo on board the "LUNA MÆRSK". She returned to her job as Assistant Cargo Coordinator - a lot richer in experience.

She had dreamt of sailing for many years, but did reality live up to her expectations?

– It was very different from what I'd imagined, she answers. – But all very exciting. When you're at sea, there's not a lot to do at times, at others, though, you're terribly busy.

– Did you like being on board?

– Yes, very much. I was a little frightened at first, all my colleagues were men - and foreigners. I wondered a lot whether I'd be able to work with them. But they were all extremely kind to me.

– So, you had no problems?

– Oh, yes, I did. I'd only ever been on board a training vessel - a sailing ship - so many things were different from what I'd learnt. I was often totally confused. But it was very exciting to get to know, say, work on the bridge, and to compare the Japanese navigator's training to the Danish one, which is very different. I think it's an excellent idea to include an actual voyage in the training. We only get on board training ships, never merchant vessels until we've completed our course. Therefore, the "AXEL MÆRSK" gave me a really tough time at first, but I thoroughly enjoyed it. I learnt a lot... and, of course, that was why I was sent to sea.

RO-BOOMs - also for permanent protection

BY LARS B. RASMUSSEN, A/S ROULUNDS FABRIKER

In the past Mærsk Post has carried two articles on the Roulund anti-pollution oil boom the RO-BOOM. No. 4/1979 mentioned that a new product had been born at the Roulund Factories and that marketing was getting under way. By no. 1/1982 our first orders had proved the product to be marketable.

We had our international debut in January 1983, when we sold 2,000 metres of boom to the Australian oil company Santos for their new terminal in Spencer Bay near Adelaide. The booms were installed in conjunction with International Tanker Owners' Pollution Federation (ITOPF), who had drawn up emergency plans for Santos.

In 1983 we also began joint operations with another well-known international organization. Bombings of offshore installations threatened to provoke an oil disaster in the Arabian Gulf. The countries on the West side of the Gulf are dependent on sea water for drinking purposes and for cooling in power stations. Bahrain felt the risk to be imminent and asked the ROCC (the Regional Oil Combating Center) - a UN organization - for immediate help. They decided to purchase a large supply of anti-pollution oil booms and found the RO-BOOM to be the best.

A DC-10 chartered for Billund Airport flew directly to Bahrain with 1,800 metres of boom, various back-up supplies, and personnel. Our job was to protect the Manama desalination plant and a section of the harbour. As the danger was expected to last a long while, the booms were installed permanently. This was our first emergency assignment, and the first-ever permanent installation of oil booms, but we have since done similar jobs, also in the Middle East. Our latest project was with Britoil, the British oil company, at their oil installations in Nigg Bay in Scotland. From the start,

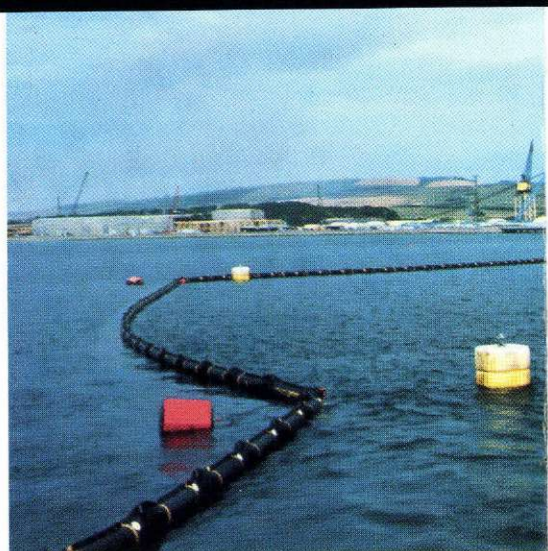
Britoil demanded comprehensive evidence of the quality of the products, because there are difficult winds and currents in the area, and because they had had bad experiences with other booms. A strict procedure was laid down including laboratory tests and full-scale trials. Britoil also wanted an account of production and quality control systems at Roulund. We asked the RTD (Röntgen Technische Dienst) control company to take on the job, and an RTD inspector was permanently stationed at the factory during the entire production period. Delivery took place in August 1984, and shortly afterwards the booms were subjected to their first storm. It created no problems, so the project must be said to be a success.

We concluded one other big project in 1984. Mærsk Post no. 1/1982 mentioned that the authorities in Nigeria were interested in the product. A contract was signed in the summer of 1983, but it took a year to provide financial security for the project. The contract was for 4,000 metres of boom, various skimmers, and four control centres totalling about 17 million Danish kroner. Delivery was handled by Oilchem Recovery Denmark A/S, a systems exporting company established in 1982 with Roulund as a major shareholder.

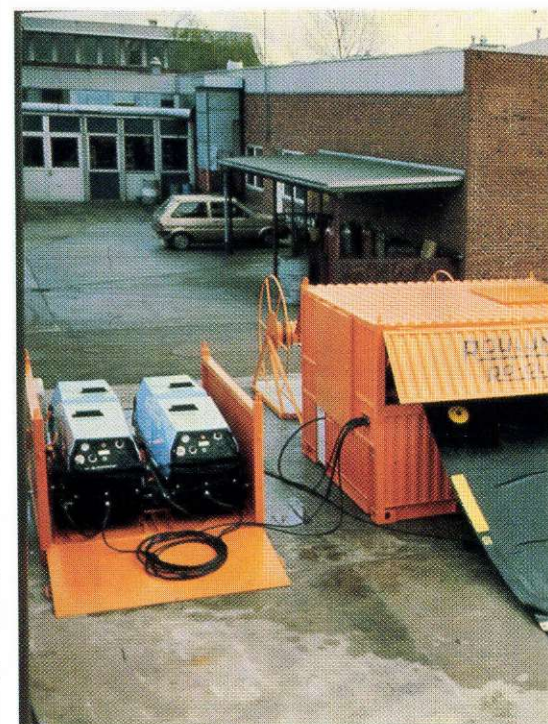
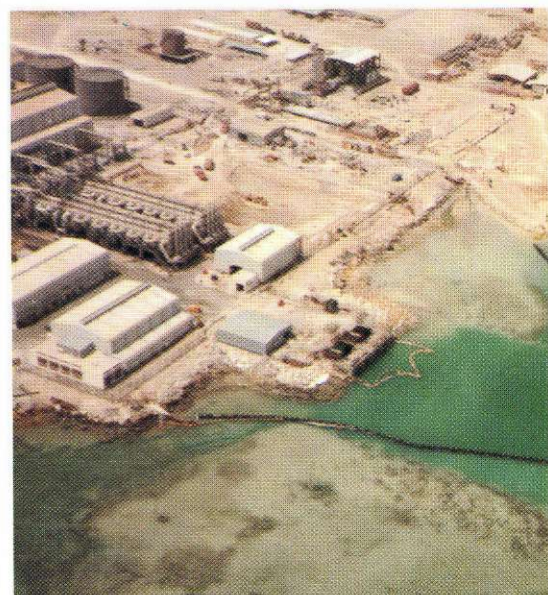
At the end of 1984 sales had reached a total of 30,000 metres of boom. Other customers included the Indian and Canadian coast guards, and the Australian government, who all showed great interest in the RO-BOOM. Today, Roulund has developed five different sizes of oil boom suitable for different uses. We have worked with a trawl manufacturer to produce an oil trawl for tar-like substances, and various special types of boom have also been developed. We are one of the first factories in the world to have designed a purification system for oil booms including a settling tank for rinsing water. By now, we have orders, with India and England, among others, for four complete systems.

In the summer of 1983 Roulund bought the English company OMI Ltd. Their production and sales of oil recovery units and spray equipment for chemical neutralization of oil waste have further expanded our range of products.

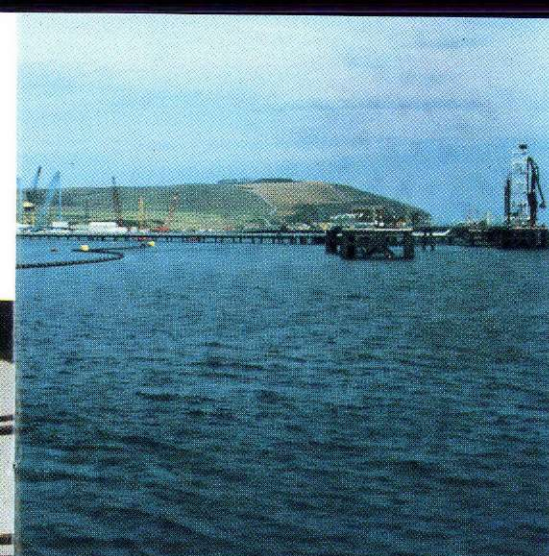
We have also turned to the Chinese market. Here, we hope that more intensive oil exploration at sea will create some interesting opportunities.



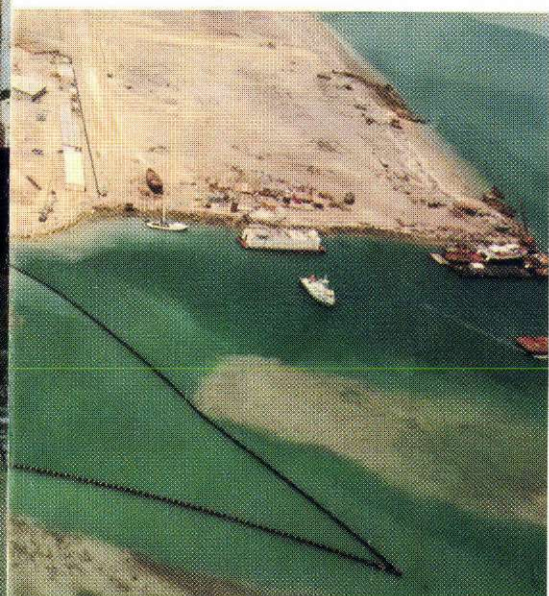
The permanent installation of a model of 1,000 metres of RO-BOOM MAY at the Britoil terminal in Nigg Bay, Scotland.



Purification system for oil booms. On the left there is a hot water unit, rinsing takes place in



The Sitra Power Plant, Bahrain.



the middle and there is a special settling tank on the right for separating oil and water.



The Maersk Air terminal at Liverpool Street Station in London.

The first international Maersk Air route

BY JENS GRABOW

November 29 saw the first flight on the new Maersk Air route between Billund and London (Southend).

Months of hard work had preceded the event. Once permission had been obtained Maersk Air had to draw up detailed plans for the flights. The permit was a direct result of Danish membership of the EEC. Before October 1, 1984, the Scandinavian Airlines System was, in theory, the only Danish airline company that could offer regular international connections, but after that date such flights could be established between any two EEC countries.

Maersk Air was the first airline company to apply for and obtain permission to operate a route under these conditions. Therefore, other EEC airline companies watch developments there very closely.

First class service received top priority from the start, and the feed-back from Maersk Air passengers has been very positive.

Check-in in London City

Maersk Air has established a "City Terminal" and a sales office at Liverpool Street Station in London. From here, tickets are sold for the whole English market, and the sales office cooperates with about 2,200 travel agencies in London alone.

At the London terminal passengers can check in their luggage. They receive boarding passes which are also valid for the train journey to the airport at Southend, on the Thames estuary about one hour's ride from central London. Fast passenger and luggage service on arrival and departure is the main advantage offered by Southend Airport.

There are sales offices and a lounge for Star Class (Business Class) passengers at Billund Airport. The terminal is being expanded,



and by late April next year Billund will have the best equipment and be the largest-but-one of all Danish airports.

Useful schedule

From Monday to Friday, there are two daily flights leaving Billund at 08.00 and 18.00. Flights leave London (Southend) at 10.00 and 20.00, arriving at Billund at 13.05 and 23.05 respectively. Passengers arrive in the City of London at 11.00 and have seven full hours at their disposal. The flight at 20.00 is the latest connection from London to Denmark each day.

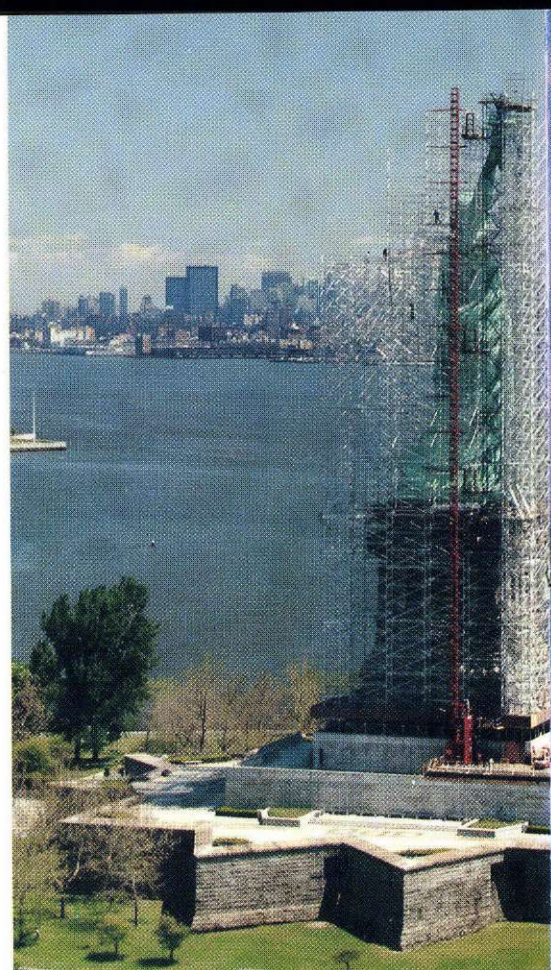
The flights were designed for businessmen from Jutland and Funen, but even passengers living in Copenhagen who want to go to London on business, may use the route to their advantage. There are excellent connections between Billund and Copenhagen.

Huge scaffolds surround the statue while work is in progress.

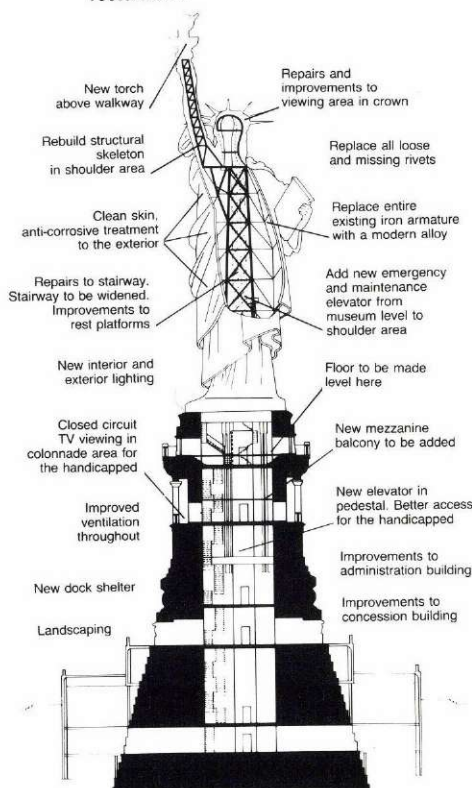
The Statue of Liberty - saved from decay

BY BARNEY BRENNAN

The idea for the Statue of Liberty was first conceived in 1871, but the monument was not completed till 1886. Time has left its mark, and work is in progress to have the statue fully restored for its centennial next year.



This is the extent of the restoration:



What do the ports of New York and Copenhagen have in common? World-renowned monuments! New York has its Statue of Liberty and Copenhagen has its Little Mermaid.

The monuments in turn share another bond - restoration. In April 1964 the Little Mermaid lost her head due to an act of vandalism and the head was finally restored five weeks later. In July 1984 she lost her right arm, but had a new one fitted within a week. The restoration of the Statue of Liberty which began last year was not made necessary by an act of vandalism - the culprit in this case is Father Time.

The Statue of Liberty is about 100 years old and its internal support structure, particularly in the area of the skin contact, has deteriorated seriously due to chemical reactions between the copper skin and the iron flatbars which hold the skin in place, salty air, humidity and simple wear and tear. The central pylons and lattice girders are in good shape, well preserved and painted. So, 80 percent of the restoration affects the internal skin support, the torch and portions of the arm attachment to the central pylons.

About 40 years ago, the statue received an internal coat of bituminous paint to reduce the progress of rust. That coat has to be removed before work on the metal can begin. One of the removal schemes is shot blast cleaning with crushed walnut shells. The statue is now fully surrounded by a tubular scaffolding structure and the fragile torch above the viewing balcony has been removed to be rebuilt.

On May 18, 1982, President Ronald W. Reagan announced the formation of the Statue of Liberty-Ellis Island Centennial

Commission. The goals of the Commission are to:

Restore and preserve the Statue of Liberty and Ellis Island.

Establish a lasting memorial to the immigrants who created America.

Plan and implement centennial celebration events.

Develop plans to ensure continuing support of the Statue of Liberty-Ellis Island national monument after the centennial celebration. Raise \$230 million to accomplish these tasks. The statue of the Little Mermaid was inspired by Hans Christian Andersen's fairy tale of that name. But who had the idea for the Statue of Liberty?

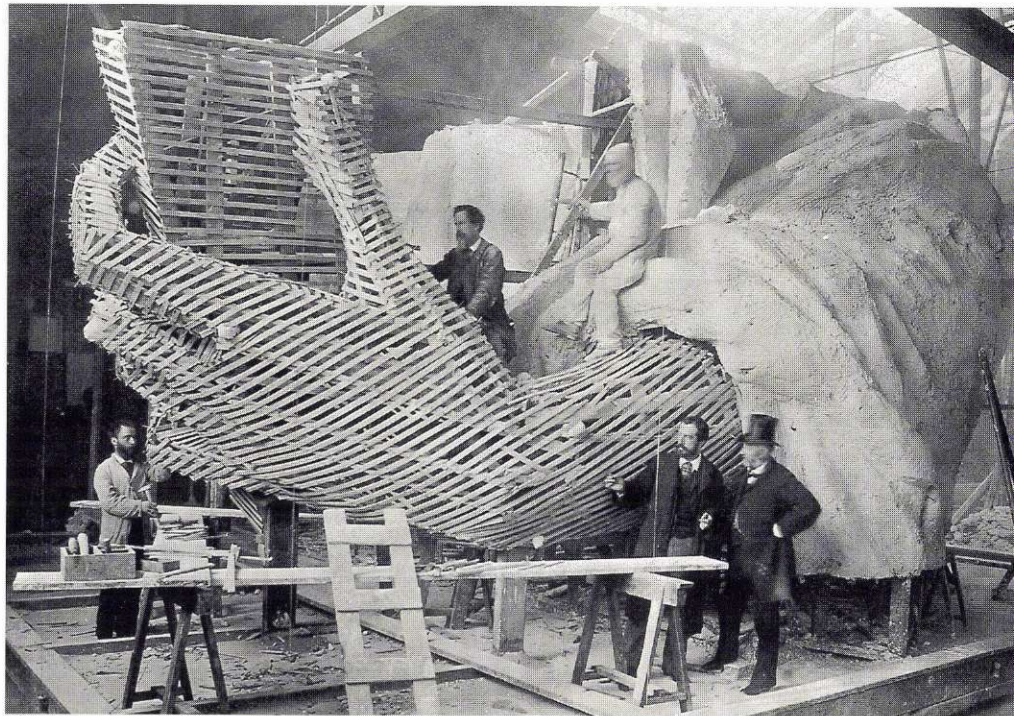
During the reign of Napoleon III in France, the ideals of Liberty, Equality, Fraternity were no longer honored and aristocrats throughout the land were yearning for a revival of those principles. In 1865, one of these, a lawyer, by the name of Edouard-Rene Lefebvre de Laboulaye, suggested to a sculptor friend of his, Frederic Auguste Bartholdi, a German-born artist from Colmar, that it would be a good and worthy idea for the French people to bequeath a gift to the American people (who still cherished the freedom brought about by the American Revolution). The gift should embody the values of French/American relations during the American Revolutionary War.

The idea fell on fertile ground, in that Bartholdi agreed to visit the U.S. a few years later, in 1871, to learn more about the country which was to receive a gift which had not taken form or dimension at that time.

When he arrived by ship in New York, he determined that what is now Liberty Island (then Bedloes Island) would be the ideal site



Construction of the Statue of Liberty in Bartholdi's warehouse workshop in Paris, 1882 and 1883. Wood and plaster mock-ups were used, and they, in turn, had been built from smaller scale models. The picture shows the sculptor, second from the right, a visitor and several assistants with a section of the statue's left arm. Copper sheets were hammered to the shape of the plaster forms and finally riveted together to form the 151-foot-tall statue.



for a monument; majestic, thrilling and breathtaking.

Just prior to that visit, he had witnessed the opening of the Suez Canal in 1869, where he had gone to obtain a commission to build a monument to Ismail Pasha, the ruler of Egypt. He proposed to erect a giant Egyptian peasant woman, twice the size of the Sphinx, who would stand beside the entrance to the canal, holding a lamp. The giant statue would thus serve a practical purpose too, as a lighthouse. That dream did not materialize but he carried the seed with him on his trip to America two years later.

In the meantime his friends at home as well as cultural/political societies in the New World, became interested in the project and supported fund raising efforts in both France and America, for what some thought would be a fashionable thing to do. The statue became a cultural project which attracted wealthy Frenchmen who were seeking to be identified with it.

After all, the cost estimate for the statue was then \$250,000; a small price to pay for such an elaborate show of idealistic patriotism. While that effort proceeded, Bartholdi contacted the well-known engineer, Gustave Eiffel (primarily remembered today for the Paris tower that bears his name), to design a support structure for his, as yet, paper creation. The cost estimate reportedly jumped up to \$400,000.

Undaunted, Bartholdi, then using the facial features of his mother and the arm form of his wife, proceeded to build a four foot high plaster model, which was successively enlarged four times to a nine foot high model, until finally, after another four-step

enlargement, he had formed, in sections, a 151 foot masterpiece.

He used tons of plaster, lath, wire and wood splines to form the mould for the 300 copper sheets which had to be hammered into position to eventually form the skin. The skin was supported by some 1600 pieces of iron armature flat bars 3" by 5/8" in size, which again was supported by a system of lattice girders and brackets. His schedule called for a completion of the project by 1876, the American Centennial.

It is said that at that point, when construction of the statue made visible progress, politics set in.

That is to say, the French/American Committee or its predecessor group, argued that the cost of the statue should be equally shared by both countries, with final estimates now approaching \$800,000.

They agreed that the American people should raise funds and build the pedestal, while the French would continue to build and transport the statue to America. So that neither of the two countries would be upstaged, the pedestal had to equal the height of the statue.

The pedestal was designed by a man named Richard M. Hunt, then the dean of American architects. Eiffel's great pylon had to fit securely into the base; the base had to be large enough to give the statue a majestic dominance of everything around it, but not so large as to overwhelm the statue itself. Hunt's solution was wonderfully simple. The pedestal stands 89 feet high, and in turn it rests on a 65-foot, 11-point, starshaped base that had been part of an abandoned fort. There are forty shields, representing the States of the Union at that time. The form is

monolithic but it is relieved of monotony by a Doric frieze, a triple balcony and blocks that project like a random checkerboard. It was handsome and solid.

In the meantime, Bartholdi soon found out that he could not meet his 1876 date. So he accelerated the building of the arm and torch assembly and sent it to Philadelphia for the Centennial exhibition.

He finished the rest of the statue in France and disassembled the monument for shipping in 214 specially designed wood crates to New York, where it was reassembled in 1886 on the pedestal already in place.

The final cost of both pedestal and statue, amounted to one million dollars. For at least ten years following its dedication, the statue was used by the Port of New York as a lighthouse, directing the approach into the harbor through the Verrazano Narrows.

Today, we look to July 4, 1986, for a rededication of the Lady, her skin and dress unwrinkled and with a new lease of life to last a hundred, perhaps several hundred years before she needs an operation again.

Rounding up...



Efficient maintenance of containers

Maersk Line keeps several thousand containers in constant use all over the world: on ships, trucks, and trains, and in all kinds of weather. They must be in good condition, and numerous senior officers have been given temporary assignments

ashore, e.g. in Hong Kong, Kobe, and New York. They act as inspectors assisting Company agents in maintaining containers efficiently.

In January these officers attended courses in Copenhagen, and Taiwan, where this picture was taken. Most of the inspectors are First Officers, but a single Engineer can also be seen in the group.



Exclusive certificate for the Yard

Odense Staalskibsværft A/S - commonly known as the Lindø Yard - has been awarded the Quality Assurance Certificate by Lloyd's Register of Shipping in London in recognition of the high quality of its work. It is the only shipyard in Europe - and

one of only seven in the entire world - to have received the Certificate.

On December 10, the Chairman of Lloyd's Register of Shipping, Mr H.R. Macleod (right) was present at Lindø in person to present the Certificate to Managing Director Troels Dilling of the Yard.



"ID Award 1985" to Rosti

The Margrethe bowl is one of Rost's greatest export successes. Households all over the world use it every day. It was named after Princess Margrethe, as she then was, and designed by the Swedish count Sigvard Bernadotte and the Danish designer Acton Bjørn. On February 13, it

received the "ID Award 1985" for excellent industrial design: a product combining form, function, and aesthetic beauty.

At the ceremony Prime Minister Poul Schlüter (right) gave the coveted prize to Managing Director Mikael Olufsen of Rosti.



Children on the Tyra field

On November 29, seven school children visited the Tyra Field in the North Sea. No Dansk Undergrunds Consortium platform had ever been visited by children before, but this was a very special occasion. The trip by helicopter from Esbjerg to the Tyra Field was the prize in an essay competition organized by

Five girls and two boys won the

competition. Mr Mogens Welling, D.O.N.G., and Mr Michael Clausen, Mærskolie og Gas, showed them round the big processing platform and the production platforms sending natural gas more than 200 kilometres to the west coast of Jutland. It was a great and unusual experience for the children, even more so because the North Sea was particularly rough that day with strong winds and waves several metres high.



Beating rice biscuits in Japan

On December 25, the "ALBERT MÆRSK", having been refitted for diesel power instead of turbines, was delivered in Innoshima. Hitachi Zosen arranged a reception for representatives from Hitachi, supervising inspectors from the A.P. Møller Shipping Company, and representatives of the ship's crew and Technical Organization in Copenhagen.

At that time of the year the Japanese keep up an old tradition of beating and rolling rice biscuits. The ceremony was reenacted at the reception. First, a special type of rice was used to make rice pudding. This was then placed in a large stone trough which had been heated with water and rags to prevent

the pudding from sticking. Some of the guests were then given traditional Japanese jackets and scarves plus large wooden clubs. With these the guests then hammered away on the pudding until it turned into a doughlike substance. It took nearly one hundred blows and some kneading before the dough was ready. It was then formed into small rolls, filled with cocoa and sugar, and passed round.

The picture shows one of the most ardent clubbers, Executive Vice President Bent E. Hansen, Technical Organization. He put everything he had into his blows, whereas some of the guests seemed unused to lifting anything heavier than a ball-point pen.

Silver wedding on board



On December 29, Chief Engineer John Bleg Jensen and his wife Maj celebrated their silver wedding on board the "MC-KINNEY MÆRSK" in Bombay Harbour. Songs and early morning coffee marked a traditional start to the day, followed by flowers presented by the staff from the agent's office. The ship was due to sail that day, so further festivities were postponed to the following day when the couple were hosts at a very nice dinner.

The "ANDERS MÆRSK" came first

Many MÆRSK ships take part in swimming competitions arranged by the Merchant Marine Welfare Council. Mærsk Post has received a letter from Chief Engineer H.C. Dyrhauge of the "ANDERS MÆRSK":

"In Mærsk Post no. 2/1984", Captain E. Rye Lund, wrote that his ship was well in front in the competitions for 1984. This inspired some members of our crew to take part. From April 1 to November 30, 55 people did the 200 metres test in the ship's swimming pool. They collected 261.89 points - and finished far ahead of the "ADRIAN MÆRSK" in second position with 185.64 points! Number three was also a MÆRSK ship, I believe".

Indeed, it was. The "ALVA MÆRSK" won 133.28 points and finished third. Other MÆRSK ships also achieved fine results. The "DIRCH



MÆRSK" finished sixth, followed by the "SUSAN MÆRSK", the "LUNA MÆRSK", and the "NORA MÆRSK" in seventh, eighth, and ninth place, respectively. No fewer than seven MÆRSK ships finished among the top ten.

The picture shows Chief Engineer H.C. Dyrhauge (left) receiving the cup from Mr Erik Dannesboe, the Rotterdam representative of the Welfare Council.

The "LICA MÆRSK" in Mina Qaboos, Oman



The US-Middle East service made its first direct call at Mina Qaboos in Oman on October 10, and to celebrate the event, the Port Services Corporation presented a gift to the Master of the "LICA MÆRSK".

The photograph was taken on board and shows, from left to right: Mr Saud Bin Ahmed Al Nahari, Operations Manager, P.S.C., presenting the gift to

Captain Poul Martin Lausten of the "LICA MÆRSK", Mr J.N. Vaincourt-Strallen, Managing Director of Oman United Agencies, Mr A. Hems, Shipping Manager, O.U.A., Mr C.C. Fernandes, Sales Representative for Maersk Line, O.U.A., and Mr Saud Hamoud Said Al Kahify, Acting Deputy Operations Manager, P.S.C.

Rounding up...



The "A.P. MØLLER" through the Panama Canal

From February 4 to 6 the "A.P. MØLLER" passed through the Panama Canal for the first time. The picture shows Captain W.C. Calkins (left), Chief of the Navigation Division of the Panama Canal, presenting a plaque in commemoration of the occasion to Captain Johannes

Djurhuus, Master of the "A.P. MØLLER". The new product-carrier was en route from Hamburg, West Germany, to San Francisco with a cargo of gasoline. The presentation took place on board the vessel in Pedro Miguel Locks.

Uniforms in Bangkok



Quite often in the past, authorities and customers have experienced difficulties when trying to contact our personnel in port. The reason was, simply, that they had no means of identifying Maersk Line staff. Therefore Maersk Line, Bangkok, decided to issue uniforms to all employees working inside the port area: an idea put into effect

two years ago, and with great success. Today our terminal staff wear dark blue trousers and light blue shirts. The photo shows the uniform with a hand-woven Maersk logo in the upper right-hand corner of the shirt pocket.

Pornchai Vimolratana



New ship named for the U.S.

On Saturday, February 9, Mrs Leo L. Collar, wife of Vice President Mr Leo L. Collar of Crowley Maritime Corporation, named a container vessel the "AMERICAN HAWAII" at the Lindø Yard. The ship weighs 24,200 tons deadweight and is the second of three container vessels of the RO/LO type which Lindø is building for the American shipping company Crowley Maritime Corporation in San Francisco.

The first in the series, m.s. "SEA WOLF", was handed over by the Lindø Yard on December 10. The event was noted internationally; the ship was of a completely new design and it was built and delivered in record time, only about 14 months after the Yard had signed the contract for the three ships. m.s. "SEA WOLF" is the first ocean-going ship with an unmanned engine room sailing under American flag.

One picture shows the sponsor Mrs Leo L. Collar and her hus-



band Mr Leo L. Collar (right) with Managing Director Troels Dilling of the Yard. The other shows the "AMERICAN HAWAII" being towed out from the Lindø Yard.



Maersk U.K. Men of the Year

Annual Men of the Year awards for outstanding effort and performance have been introduced at Maersk Line U.K. First Salesman of the Year is Liverpool's Mr Richard Roughsedge, and the award for best administrative results went to Mr

John Whatmore, London. The picture shows Mr Whatmore (left) and Mr Roughsedge (right) displaying their trophies, together with Mr Chris Jephson, General Manager, Maersk Line.

Art at Esplanaden

The new A.P. Møller Arts and Crafts Association has had a busy winter. The first exhibition was opened in mid-December in the canteen at Esplanaden and included paintings by Carlo Rosberg. The picture shows the artist, now 82, who gave a talk on "Artists' Lines" with examples of the very personal styles characteristic of Chagal, Klee, Picasso, Matisse and other famous modern artists. Rosberg also showed slides of Lofoten, the Norwegian fishing islands in the North Atlantic which has inspired many of his paintings. A TV film on the artist and his work concluded the evening. In mid-January the Association had an exhibition of paintings by Simon Shanfi who finds most

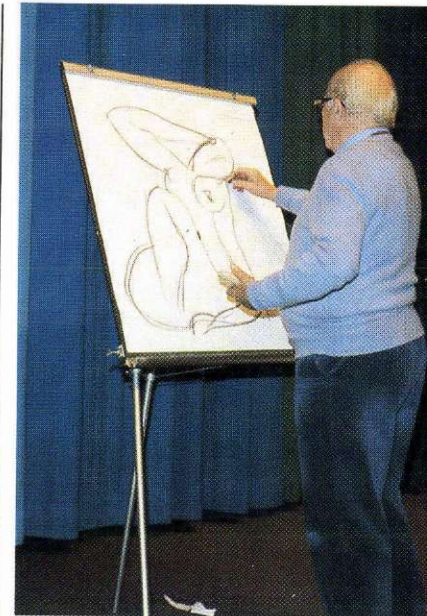
of his subjects in North-Jutland landscapes, and at the beginning of February the Association arranged a showing of some 30 paintings due to be hung on board the next new Company ship, Lindø no. 106. Also shown were ceramics by Lise Jonas, who has created large wall mosaics for some A.P. Møller container vessels. Many Danish artists were represented at the exhibition, eight of whom were present at the opening where members could discuss the paintings with them.

In March there was an exhibition of paintings by Eduard Borgegaard, whose paintings hang on board several Company ships.

In January, February, and March

the Association also arranged three evening visits to the Ordrupgaard exhibition of works by Vincent van Gogh and Paul Gauguin, and two guided tours of the sensational exhibition at Louisiana.

In April sculptures by Steffen Lüttge and paintings by Gerth Krieger were on show in the Canteen. The Annual General Meeting of the Association will be held in May. Lots will be drawn among members for numerous works of art purchased by the Association during its first year. The, by now, more than 200 members are no doubt looking forward to this event.



Singapore celebrates 25 years of independence

A large exhibition arranged by the Singaporean government marked the first 25 years of independence in the country.

"The National Exhibition" was held from November 16 to December 30, 1984, at the World Trade Centre Exhibition Halls, next door to the World Trade Centre Building which houses our office.

This was the largest exhibition ever organized in Singapore. It covered an area the size of three soccer fields and took several thousand people nearly a year to put together.

The exhibition gave Singaporeans an opportunity to see their



country's achievements over the last 15 years in politics, defence, culture, economy, and physical development. But, of course, Singapore was proud to show the exhibition to foreign guests, too. With visitors totalling nearly 2.5 million the exhibition must be said to have fulfilled its objective.

One picture shows the three large exhibition halls as seen from the Maersk Line office; the other gives an impression of the large exhibition.

David Tan

"Man of the Year" is a woman



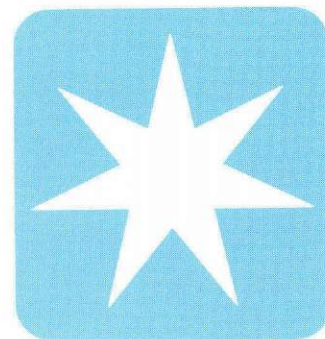
At the New Year the Technical Organization at the A.P. Møller Head Office in Copenhagen nominated their "Man of the Year 1984". She is a woman, Ms Kirsten Marie Jensen of Ship's Personnel.

Kirsten Marie Jensen, a former radio officer with the Mærsk fleet, was chosen for her diligence and enthusiasm. She often works long hours to get things done; she is very helpful and always has a big smile for colleagues and sailors visiting Ship's Personnel.

Ms Jensen has been ashore for only one year, but already she is on her third job.



Personalia



ESPLANADEN



25 Years Anniversary

1. Hans Georg Andersen
19 April
2. John Erland Larsen
20 June

40 Years Anniversary

3. Anker Juel Krintel
12 June
4. Henning K. Movang
26 June

Retiring

5. Peter Hansen
1 June
6. Augusta Friis Hansen
1 July

MÆRSK OLIE OG GAS



40 Years Anniversary

1. Captain Hans Jørgen Nielsen
14 May

25 Years Anniversary

2. Børge Hyldstrup Larsen
1 June

THE FLEET



25 Years Anniversary

1. Captain Torben B. Christiansen
1 January
2. Boatswain Arne G. Kristensen
10 February
3. Chief Engineer Einar Clausen
8 April
4. Electrician Jørn A. Thomsen
7 May
5. Captain Viggo Petersen
16 May
6. Chief Engineer Knud J. Hansen
26 June

Retiring

7. Captain Fin Ibsen
23 April
8. Captain B. B. Brinkholt
30 April
9. Chief Engineer Kaj H. Lauridsen
20 June
10. Captain J. V. A. Nielsen
30 June
11. Captain E. Møller Christensen
30 June

ORGANIZATIONS ABROAD



25 Years Anniversary

1. S. Akimoto, Tokyo
1 April
2. H. Iwata, Tokyo
1 April
3. H. Fukui, Osaka
1 April
4. Y. Kato, Osaka
1 April
5. F. Kumada, Kobe
1 April
6. Y. Satake, Osaka
18 June

Retiring

7. B. Clarricoates, London
1 April

BUKH



25 Years Anniversary

1. Holger Petersen
10 June

THE YARD



40 Years Anniversary

1. Karl Åge Johansen
10 May

25 Years Anniversary

2. H. P. Nielsen
1 April
3. Jørgen Christensen
12 April
4. Poul Erik Jensen
26 April
5. Bjarne E. Bredbjerg Nielsen
26 April
6. Per Blichert-Hansen
1 May
7. Kaj Damsted Pedersen
24 May
8. Karl Egon Madsen
24 May
9. Antero Ätto Rousku
31 May
10. Gert Petersen
31 May
11. Knut O. Anstensrud
1 June
12. Kjeld Birger Rasmussen
1 June

13. Hans Chr. Haarup
14 June
14. Svend Åge Kjærsgaard
14 June
15. Knud V. Jensen
20 June
16. Willy Haugaard
28 June
17. Jens Chr. Thomsen
26 June

ROULUND



25 Years Anniversary

1. Georg Andersen
1 March
2. Niels Henry Laursen
19 March
3. Bent Knop
11 April
4. Bent J. Hansen
29 April
5. Jørgen Detlevsen
30 May
6. Ove Elsborg
1 June
7. Rasmus Chr. Rasmussen
16 June

New local correspondents



Tom Sørensen



*Hans
Blicher Hansen*

With this issue of Mærsk Post Mr Tom Sørensen, Hong Kong takes over as local correspondent after Mr Thomas Thune Andersen, now stationed in Guangzhou in The Peoples Republic of China.

In Jakarta Mr Hans Blicher Hansen replaces Mr Steen Withen Nielsen as local correspondent for Indonesia. The latter has been transferred to Norfolk Line and stationed in Great Yarmouth, England.

Obituary

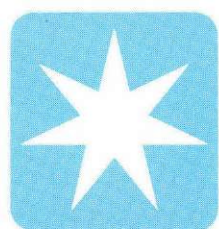
The A. P. Møller Companies regret having to announce the following deaths:

Captain Knud Nielsen
ex m.s. "MÆRSK TRACKER"
13 January

Jens Chr. Andersen
Værftet
14 January

Agus Soepriyadi
Surabaya
22 March

Chief Steward Aage Clausen
ex m.s. "STREAM HAWSER"
13 April



MÆRSK

Containerhandling in Rotterdam.

