

# ØKEAC

Bladet

Magazine

482



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24 tons of refined cast iron, steel and electronics



## Den nye vægkalender er på vej New wall calendar on its way

### Forsiden:

Det Jysk-Fynske Elsamarbejde ELSAM har overtaget det første af de to store kulskibe, som er kontraheret ved Lindøværftet, og hvis tekniske drift og bemanning er betroet ØK. Billedet viser »Elsam Jylland« på jomfrurejsen. Se i øvrigt artiklen side 8.

### Front page

The Jutland-Funen Electric Power Co-operation, ELSAM, has received the first of the two large coal bulk carriers ordered from the Odense-Lindø Shipyard. Our Company has been entrusted with the technical operation and the manning. The photograph shows "Elsam Jylland" on her maiden voyage. For more details, refer to the article on page 8.

På en kold dag på Rådhuspladsen i København gør det godt med et par varme pølser. Og hvis de er fremstillet af ØK-selskabet Plumrose, vil de naturligvis være ekstra attraktive.

Dette er et af motiverne på Kompagniets vægkalender for 1983, der er på vej til filialer og datterselskaber for i et antal af 14.000 eksemplarer at blive fordelt blandt forretningsforbindelser, m.fl.

Kalenderens forside giver et optimistisk indtryk af det dejlige danske forår, idet motivet her er et frodigt blomstertæppe foran Rosenborg Slot i København.

Kalenderens 13 motiver er trykt i fire farver på en Heidelberg Speedmaster hos Bonde's Bogtryk/Offset, som vist på bladets bagside.

On a cold day at the Copenhagen Town Hall Square it will do you good to have a few hot sausages. And, if they have been made by our Company's subsidiary, Plumrose Ltd., they will, of course, be extra delicious!

This is one of the motifs of our Company's 1983 wall calendar, 14,000 printed copies of which are being sent to branches and subsidiaries to be distributed to business connections and so on.

The front page of the calendar offers an optimistic impression of the wonderful Danish spring, the theme being a luxuriant carpet of flowers in front of Rosenborg Castle in Copenhagen.

The calendar's 13 motifs have been printed in four colours on a Heidelberg Speedmaster printing press at Bonde's Bogtryk/Offset Ltd. in Copenhagen, as shown on the back page of this magazine.



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# Kompagniets første halvårsmeddelelse

Den konjunkturafmatning, som har præget de seneste år, er yderligere tiltaget i den forløbne del af 1982, og selv i lande i Det fjerne Østen, som længe formåede at opretholde en imponerende vækst, konstateres nu en betydelig afdæmpning i udviklingen. Et kærkomment fald i rentefoden for de betydeligste kapitalmarketers vedkommende er slået igennem i de seneste måneder. Medens man selvsagt ikke skal undervurdere den positive virkning heraf, forudsætter en fortsættelse af denne tendens, at først og fremmest USA opnår en sund, økonomisk balance.

For ØK koncernen som helhed har første halvår 1982 været svagt og driftsresultatet ringere end for den tilsvarende periode i 1981. De væsentligste årsager er følgende:

I betragtning af Kompagniets betydelige gældsætning i US\$ betyder den voldsomme kursstigning, vi har set siden årsskiftet, en alvorlig belastning af Kompagniets regnskab som helhed.

For handelsaktiviteternes vedkommende har forretningen med

Nigeria været stærkt reduceret som følge af importbegrænsende foranstaltninger i Nigeria, affødt af svigtende olieindtægter.

I industriktoren har resultatet for papirmasse- og tømmervirksomheden Tahsis Company Ltd. i British Columbia været påvirket af svage konjunkturer i de for virksomheden vigtigste markeder. Plumrose-koncernen i USA såvel som i Singapore er ramt af høje omkostninger, og i Danmark har Plumrose's mejerisektor været udsat for så hård konkurrence på eksportmarkederne, at en fortsættelse af denne sektor som tidligere meddelt har vist sig umulig. Nakskov Skibsværfts ordrepottefølge er tabgivende på grund af et højere timeforbrug end forudset på det tidspunkt, da de pågældende ordrer blev indgået.

Skibsfartsaktiviteterne har, for så vidt angår liniefart, været påvirket af fragtkrigslignende tilstande i trafikken mellem Europa og Det fjerne Østen. Uden for liniefart har et stærkt faldende fragtmarked, fortrinsvis på tørlastområdet, ramt de af Kompagniets

bulk carriers, som ikke har været beskæftiget under langsigtede certepartier eller lastkontrakter. Med de hidtil foretagne dispositioner og med gennemførelsen af de relativt få endnu udestående dele af strukturrationaliseringen er den nødvendige tilpasning af ØK koncernen ved at være på plads. Omkostningerne ved denne tilpasning har været betydelige, og de tab, der herved konstateres som »ekstraordinære omkostninger«, vil derfor også i regnskabet for 1982 figurere med et stort beløb, men budgetteres til at blive af ubetydelig størrelsesorden i årene 1983 og 1984.

Den igennem flere år stedfundne, stadige stigning i koncernens gæld er nu standset. Gælden vil ydermere ved årets udgang være væsentlig mindre end ulyt. 1981 og forventes fortsat nedbragt i løbet af 1983. Denne udvikling har selvsagt også betydning for en reduktion af finansieringsomkostningerne.

Alle kræfter er sat ind for at øge indtjeningen, og den koncentration, som gennemføres omkring færre aktiviteter, begynder at vise

resultater. Således tegner andet halvår af 1982 bedre end første halvår, men for året som helhed bliver resultatet trods alt utilfredsstillende. For 1983 er der udsigt til en markant forbedring, men det er på indeværende tidspunkt sandsynligt, at det først bliver for regnskabsåret 1984, at resultaterne af den primære drift vil kunne berettige til udlodning af dividende.

København, 13. oktober 1982.

Bestyrelsesrådet

## Our Company's interim report per 30/6 1982

The recession which has prevailed in recent years has accentuated in the course of 1982. Even countries in the Far East are now experiencing a considerably reduced level of activity after several years of impressive growth. A welcome reduction in rates of interest of the major capital markets has taken place in recent months, and though the positive effects should not be underestimated, a prerequisite for a continuation of this tendency is first and foremost that the USA achieve a healthy economic balance.

For the EAC Group as a whole, the first six months of 1982 have been unsatisfactory with consolidated results inferior to those of the corresponding period of last year. The main reasons are the following:

Because of our Company's considerable borrowings in US-dollars the steep rise in the value of the dollar which we have seen since the beginning of this year has had a major impact on results overall.

As far as our trading activities are

concerned, a fall in oil revenues in Nigeria has led that country to introduce stringent import restrictions causing a considerable decline in our business with Nigeria.

In the industrial sector, the results of the pulp and timber company, Tahsis Company Limited in British Columbia, have been affected by the recessionary conditions prevailing in its most important markets. The Plumrose group's activities in the USA and Singapore have suffered from high costs, and in Denmark Plumrose's dairy sector has experienced competition in export markets of an intensity which, as previously advised, has made it impossible to continue that sector. Nakskov Shipyard is experiencing losses on its order portfolio because of lower productivity than estimated at the time when the orders were accepted.

With regard to shipping, the liner business has been affected by what approximates freight war conditions in the trade between Europe and the Far East. In the non-liner sector, a dramatic de-

cline in world freight markets has affected those of our Company's bulk carriers which have not been employed under longterm charter parties or freight contracts.

With the measures already instituted and with those few still to come the required structural changes of the EAC Group are about to be in place. The price has been high, and the related cost which is recorded in the accounts under "Extraordinary Expenses", will therefore be considerable also in 1982. On the other hand, similar expenses for the years 1983 and 1984 are budgetted to be insignificant.

The steady increase over several years in the Group's debt has now been halted. Furthermore, at year-end the debt will be considerably smaller than at the end of 1981, and it will be further reduced during 1983. This development is obviously significant also for a reduction of financing costs. All activities focus on the improvement of profitability, and the benefits accruing from the concentration now effected on fewer activities are beginning to

show. Accordingly, the second half of 1982 will represent an improvement over the first half-year, but the year as a whole will nevertheless be unsatisfactory. For 1983 there are prospects of a marked improvement. However, on present indications it will not be until 1984 that the result of the primary activities for that year will justify the declaration of a dividend.

Copenhagen, 13th October, 1982.

Supervisory Board

# Newspaper comments on biannual report

## **EAC shows huge loss despite amputations**

This was the headline of the Danish daily AKTUELT – mouthpiece of the Social Democratic party – to its comments on the biannual report, which also included the following observations by Mr. Erik Traberg, Deputy Director of the Labour movement's trade council:

"It actually comes as no surprise that it has not been possible to straighten up a ship of this size within a period of only 6 months. Shareholders have also been expecting bad news which is apparent from the negative development in share prices. EAC shares are today sold at a rate of 80 against 140 only a year ago".

## **Several years before EAC can declare dividend**

was the headline of the Danish daily BERLINGSKE TIDENDE to its comments on the biannual report and the article included the following:

## **Clear and to the point**

Yesterday The East Asiatic Company published for the first time a biannual report. The contents are clear and to the point although the report is not accompanied by the biannual accounts: "The first six months of 1982 have been unsatisfactory with consolidated results inferior to those of the corresponding period last year".

The article in BERLINGSKE TIDENDE went on to mention the salient points of the biannual report and included, furthermore, the following supplementary comments by Mr. Henning H. Sparsø:

"It has not been our intention to issue biannual accounts but purely a biannual report though I do not rule out that EAC may issue midyear accounts some day in the future.

Quite some time has passed since we started our efforts to increase EAC's earnings i.a. by concentrating on fewer activities and quite a few pieces are now in place. The relatively few items which still remain will be settled within a very short period of time. The necessary adaptation of the EAC Group of Companies will then have been completed ...

– As is the case with other ship-owners, EAC has been affected economically. The liner services as well as the general freight market – primarily the dry cargo sector – witnessed heavy declines. I do, however, believe that our efforts in this field will start showing results in 1983 ...

– The prerequisite for carrying on the Nakskov Shipyard lies in securing new profitable orders ..."

## **EAC continues registering large losses – increase in borrowings halted**

the Danish commercial daily BØRSEN headlines an article which, among other things, states:

"EAC has stopped the increase in borrowings and the basis for improved earnings has been achieved. Such are the positive signals contained in the biannual report which The East Asiatic Company submitted yesterday. The negative side: that the biannual working result covering the first six months of 1982 is further reduced as compared with the "disastrous annual accounts" for 1981 when EAC lost more than 500 million kroner".

The article also included the following interview:

EAC's presiding Managing Director brought home to BØRSEN that he considers EAC a well consolidated concern, viewed on the background of the "harsh medicine" the Company has swallowed in effecting rationalizations, and on the background of the economic turn which has taken place at the beginning of the second half of 1982. Henning Sparsø: It is a historical fact that we have stopped the increase in borrowings, on which our financing costs are dependant. In addition we can but hope – although we are not too optimistic as to this point – that the decrease in the rates of interest which we have witnessed during recent months will be maintained or continued.

Questioned whether he is satisfied with the biannual result Mr. Henning Sparsø answers:

– I shall not be satisfied until we resume payment of dividend providing such dividend is justified by the primary working result.

BØRSEN: In other words, you are dissatisfied?

Sparsø: That's right, but I cannot imagine how it could have been done better.

BØRSEN: Is EAC's management efficient enough?

Sparsø: No, but then again I doubt that any management who is asked the same question can state that it is good enough. This would amount to arrogance. It is, however, my considered opinion that EAC's management – and this applies to all levels – is exceptionally good. But we would certainly be fools if we maintained that things cannot be done better. The leader who maintains such attitude won't last long.

## **No dividend from EAC until 85**

was the caption of BØRSEN's stock exchange report on 14th October which, amongst others, stated: "It has never happened that a stock exchange registered company questions payment of dividend 2½ years ahead.

Not least this type of information does credit to the Company as such information is of the greatest value to investors".

## **Prolonged crisis in EAC – no dividend until 1985**

was the headline of a front-page article in the Danish daily POLITIKEN which ended: "The her-

alded considerable improvement" of the result failed to turn up. According to the management this was due to developments in economic trade conditions.

– We have to admit that we did not anticipate the rather serious setback in economic trade conditions, says EAC's presiding Managing Director H.H. Sparsø.

## **On the Copenhagen stock exchange**

the biannual report on 14/10 resulted in a drop in the price of shares of 2½ points for EAC and 5½ points for EAC Holding.

On 18th October the stock exchange did, however, register an increase to 81 for EAC and 80 for EAC Holding as against 82½ for both prior to publication of the biannual report.

## FINANCIAL TIMES

Friday October 15 1982

### **East Asiatic sees 1983 recovery**

**By Hilary Barnes in Copenhagen**

EAST ASIATIC Company, the Danish shipping, trading and industrial group which suffered heavy losses in 1981, has also suffered an unsatisfactory start to this year. The second half will be better, according to an interim report, although the result for the full year will also be unsatisfactory.

A substantial improvement in earnings is expected in 1983 but the dividend is unlikely to be restored before the 1984 results are known, the company said.

The interim statement, which gave no figures, said that the steady growth of debt over the past few years has been stopped. Debts will be substantially reduced by the end of this year and will fall further in 1983.

Added to its unsatisfactory operating profits this year the group will have to bear large extraordinary costs in connection with a reorganisation which is near completion.



# Containerfabrikken i Kina er indviet

Den første dansk-kinesiske fabrik, der er bygget i Den Kinesiske Folkerepublik som et joint-venture mellem Kompagniet og de kinesiske myndigheder, åbnedes officielt den 22. september i Shekou – et nyt industriområde i Shenzhen-området, der er nabo-amt til Hong Kong, i Guangdong-provinsen (Canton).

Ved indvielsen talte Mr. *Yuan Keng*, der er viceformand for det store, kinesiske statselskab China Merchants Steam Navigation Co. Ltd., og som betegnedes fabrikken som et strålende eksempel på industrialisering og internationalt samarbejde. Direktør *Henning H. Sparsø* udtrykte Kompagniets stolthed over at være blandt de første deltagere i udviklingen af Shekou's industrizone og i skabelsen af et foretagende, der ønskes gjort til en profitabel mønstervirksomhed med kvalitetsproduktion, en kompetent teknisk stab og en moderne, progressiv ledelse.

Derefter åbnede Guangdong-provinsens guvernør, Mr. Liu Tien Fu, officielt fabrikken under stærkt bifald fra et stort antal repræsentanter for de kinesiske myndigheder og for erhvervslivet i Hong Kong, og ceremonien sluttede med afbrænding af et stort og festligt fyrværkeri.

## Skatte-lettelser skal udvikle industrizonen

Den nye containerfabrik er opført af selskabet China International Marine Containers Ltd., hvori Kompagniet – hvis handel med Kina kan føres mere end 80 år tilbage – er partner med China Merchants Steam Navigation Co. Ltd. CMSN ejes fuldt ud af Kinas kommunikationsministerium i Beijing, men har hovedkvarter i Hong Kong, hvorfra de daglige aktiviteter styres.

Samarbejdet mellem ØK og CMSN om containerfabrikation indledtes, efter det kinesiske kommunikationsministerium i 1979 havde pålagt CMSN at udvikle Shekou til et industriområde med aktiviteter, i hvilke fremmede investorer kunne deltage på joint-venture basis. Sådanne investorer tilbydes dels faglært arbejdskraft til nye industrier, der bygges i området, og dels fritagelse for eksport- og import-skatte samt skattefrihed i de første 4-5 år.

## Fabrik på 6000 m<sup>2</sup>

Fabrikken, der påbegyndte produktionen i maj, ligger lige ved Shekous nyanlagte havn på et 13.000 m<sup>2</sup> stort areal, hvoraf fabrikken dækker de 6000 m<sup>2</sup>, mens resten af området bruges til lager og opbevaring af færdige containere. Området er lejet på en 25-årig kontrakt. Fabrikken er udstyret med moderne, europæiske maskiner, der betjenes af 150 medarbejdere, udvalgt gennem Shekou Labour Service Bureau. Danske virksomheder har leveret udstyr til fabrikken for ca. 5 mio kr. Det drejer sig om svejsemaskiner fra Megatronic, transportsystemer fra Jokan, hydrauliske presser fra Nymi og male- og tørrekabiner fra Moldow i Søborg. Leverancerne er finansieret under danske eksportkreditter.

ØK står for den daglige, administrative ledelse, medens den øvrige ledelse rekrutteres fra Kina og Hong Kong.

## 4000 containere om året

Den nye fabrik skal producere 4000 20-fods containere om året, men kapaciteten kan ved en mindre udvidelse og installering af flere maskiner øges til 7-8000 enheder om året. Kunderne vil hovedsageligt være europæiske og amerikanske rederier eller leasing-firmaer, der opere-

rer i Det fjerne Østen. Salget formidles af to agenter – CMSN dækker Kina og ØK resten af verden. Levering foregår normalt med pramme til container depoterne i Hong Kong, der kun ligger 20 sømil fra fabrikken.

## Vældig vækst i Shenzhen

Kun to dage før container-fabrikken officielle åbning bragte »Asian Wall Street Journal« en stor forside-historie om Shenzhen-amtets forestående, rivende udvikling.

En 20-års plan, der er udarbejdet for industrizonens udvikling, forudsiger udenlandske investeringer på tilsammen 7,2 milliarder dollars, hvoraf de første 1,6 mia allerede er tegnet i forbindelse med udarbejdelsen af 1320 forskellige projekter. Den 327 km<sup>2</sup> store industrizonens indbyggertal vil vokse fra 100.000 i dag til 800.000 ved århundredskiftet, og amtets nationalprodukt skal stige fra 420 mio \$ i år til 3,5 mia i år 2000.

De nye industrier vil omfatte et petrokemisk anlæg, der skal behandle olien fra Det Sydkinesiske Hav og fremstille 66 mio tønder olie om året på et raffinaderi, samt en cementfabrik med en kapacitet på 1 million tons cement om året.

Zonen får 50 hoteller, hvoraf de første 10-15 vil stå færdige i 1985.

Fotografierne giver et indtryk af fabrikken, produktionen og de fremstillede containere.



# Container factory inaugurated in China

The first Danish-Chinese factory built in the People's Republic of China as a joint venture between our Company and the Chinese Authorities was officially inaugurated on 22nd September in Shekou, which is a newly developed industrial area in the administrative district of Shenzhen, neighbouring Hong Kong in the Guangdong Province. Mr. Yuan Keng, who is the Vice Chairman of the large Chinese state-owned company, China Merchants Steam Navigation Co. Ltd., delivered a speech at the inauguration and viewed the establishment of the factory as an outstanding example of industrialization and international co-operation. Mr. Henning H. Sparsø, Managing Director of EAC, Copenhagen, expressed our Company's pride by being among the first participants in the development of the Shekou's Industrial Zone and in the creation of an industrial undertaking desired to be a profitable model-enterprise having a quality production, a competent technical staff, and a modern progressive management.

Thereafter, Mr. Liu Tien Fu, the Governor of the Guangdong Province, officially inaugurated the factory cheered strongly by a large number of representatives from the Chinese Authorities and the business community in Hong Kong, and the ceremonies ended with a great and festive show of fireworks.

## Tax privileges to promote the industrial zone

The container factory has been erected by a new joint venture company, China International Marine Containers Ltd., in which our Company – whose trade with China can be traced more than 80 years back – is a partner with China Merchants Steam Navigation Co. Ltd. CMSN is fully owned by China's Ministry of Communication in Beijing, but has its headquarters in Hong Kong directing the daily activities.

The co-operation between our Company and CMSN was initiated after the Chinese Ministry of Communication in 1979 had assigned CMSN to develop Shekou into an Industrial Zone with activities in which foreign investors could participate on a joint-venture basis. Such investors are offered skilled labour for new industries established in the district and exemption from ex- and import duties as well as tax-holidays for the first four to five years.

## Factory of 6,000 m<sup>2</sup>

The factory, which commenced production in May, is located close to the port of Shekou on a 13,000 m<sup>2</sup> compound, where the factory itself occupies 6,000 m<sup>2</sup>, and the balance is used for warehousing and storage of finished containers. The area is rented under a 25-year lease.

The factory is equipped with modern European machinery operated by 150 employees recruited through the Shekou Labour Service Bureau. Danish companies have delivered equipment worth about D.Kr. 5 million to the factory, i.e. welding machines from Megatronic, materials handling systems from Jokan, hydraulic presses from Nymi, and a paint-and-drying plant from Moldow in Søborg (Copenhagen). These supplies are financed by Danish Export Credit.

Our Company is responsible for providing the General Manager, whereas the other managerial staff has been recruited from China and Hong Kong.

## 4,000 containers annually

The new factory is to manufacture 4,000 containers annually, however, through a small extension and installation of additional machinery, the production can be increased to 7,000 to 8,000 units per year. The customers will mainly be European and American shipping companies and leasing companies operating in the Far East. The sales function is handled by two agents: CMSN covers China and EAC the rest of the world. Deliveries are normally made by barges to the container depots in Hong Kong, a distance of only 20 nautical miles from the factory.

## Great growth in Shenzhen

Only two days before the official inauguration of the container factory, the "Asian Wall Street Journal" published a front-page story about the Shenzhen district's coming rapid development.

A 20-year plan covering the development of the Industrial Zone anticipates foreign investments totalling US\$ 7.2 billion of which the first 1.6 billion has already been committed in connection with 1,320 various projects. The 327 km<sup>2</sup> Industrial Zone's population will grow from today's 100,000 to 800,000 at the turn of the century, and the GNP of the

district will increase from this year's US\$ 420 million to 3,500 million in the year of 2000.

The new industries will include a petrochemical plant to treat the oil from the South China Sea producing 66 million barrels of oil per year at a refinery and a cement factory with a capacity of 1 million tons a year. The zone will have 50 hotels of which the first 10-15 will be ready in 1985.

The photographs offer an impression of the factory, the production and the containers.



# ELSAM-kulskib på jomfrurejse med ØK-bemanding

Det første af de to bulkskibe, som Det Jysk-Fynske Elsamarbejde ELSAM har kontraheret ved Lindøvværftet, afsejlede den 24. september på sin jomfrurejse til Richard Bay i Sydafrika, efter at fru Sonja Grønborg Christensen, gift med ELSAM's formand direktør P. Grønborg Christensen, den 17. september havde givet skibet navnet »Elsam Jylland«.

## ØK bemander skibet

ELSAM har betroet Kompagniet den tekniske drift og bemanning af de to store skibe, lige som ØK står for forhyringen af det menige mandskab. ØK har desuden ansvaret for skibenes tekniske drift, d.v.s. reparation, vedligehold, dokning, navigation, sikkerhed, opretholdelse af klassecertifikater, etc.

»Elsam Jylland« føres af kaptajn Poul Erik Rasmussen med Gunnar Egholm Rasmussen som maskinchef. Overstyrmand er Knud Sehested og Aage Christensen er hovmester/kok.

## ELSAM varetager den kommercielle drift

ELSAM, der selv står for den kommercielle drift af skibene, herunder befragtning, udpegning af laste- og lossehavne m.m., indkøber næsten 5.000.000 tons kul om året, hovedsageligt fra USA, Australien, Canada og Sydafrika, og fra 1986 skal der yderligere hentes to millioner tons årligt fra Colombia i Sydamerika. Mellem en fjerdedel og en trediedel af disse meget store kulmængder ventes hjemtaget af de to skibe.

## Største danskbyggede og danskejede bulkskibe

De to massegodsskibe bliver de største af denne type, der hidtil er bygget ved dansk værft og ejet af dansk reder. Deres længde er 270 m og bredden 42 m. Sidehøjden er næsten 23 m og dybgangen 16,5 m. Skibet har en dødvægt på 137.000 tons og drives frem af en femcylindret B&W dieselmotor, der yder 17.950 BHK og giver en fart på 14,4 knob. De ni lastrum er forsynet med hydraulisk drevne siderullende lugedæksler.

De 24 besætningsmedlemmer bor alle i enkeltkamre med eget bad, og apteringen omfatter desuden saloner, messer, motionsrum og svømmebassiner, m.m.

## ELSAM coal bulk carrier on maiden voyage manned by EAC

On 24th September the first of the two coal bulk carriers ordered by the Jutland-Funen Electric Power Co-operation, ELSAM, from the Odense-Lindø Shipyard commenced her maiden voyage, sailing for Richard Bay in South Africa. On 17th September Mrs. Sonja Grønborg Christensen, wife of Mr. P. Grønborg Christensen, Chairman of ELSAM, had named the vessel "Elsam Jylland".

## EAC mans the ship

ELSAM has entrusted our Company with the technical operation and manning of the two large vessels, and our Company will also be responsible for the engagement of the crew. Besides, our Company will be responsible for the technical operation, that is: repairs, maintenance, docking, navigation, security, maintenance of classification certificates etc.

»Elsam Jylland« står ud på jomfrurejsen efter den første last kul.

»Elsam Jylland« commencing her maiden voyage to load her first cargo of coal.

Skibets navnemoder, fru Sonja Grønborg Christensen, og Lindøvværftets administrerende direktør, Troels Dilling.

The ship's godmother, Mrs. Sonja Grønborg Christensen, and Mr. Troels Dilling, Managing Director, Odense-Lindø Shipyard.

The "Elsam Jylland" is commanded by Captain Poul Erik Rasmussen, and Mr. Gunnar Egholm Rasmussen is Chief Engineer. Mr. Knud Sehested is Chief Officer, and the Chief Steward is Mr. Aage Christensen.

## ELSAM in charge of commercial operation

ELSAM will be responsible for the commercial operation including freighting, designation of loading and discharge ports and so on. The Co-operation buys annually close to 5,000,000 tons of coal, primarily from the U.S.A., Australia, Canada, and South Africa, and as from 1986 another two million tons will be imported from Colombia in South America per year. Approximately 30% of these very large quantities of coal are expected to be transported to Denmark by the two new vessels.

## Largest bulk carriers built in Denmark for Danish owners

The two bulk carriers will be the largest of this type of vessel so far built at a Danish shipyard for Danish owners. Their length o.a. is 270 metres, and the moulded breadth is 42 metres. Their moulded depth is nearly 23 metres, and the draught is 16.5 metres. They have a dead weight of 137,000 tons and are powered by a 5-cylinder 17,950 B.H.P B&W diesel engine permitting a speed of 14.4 knots. The 9 holds are equipped with hydraulic-driven side-moving hatch covers. All the 24 crew members have single rooms with individual bath room, and the accommodation includes also saloons, mess rooms, physical training rooms, and swimming pools and so on.





# New joint venture between Mitsui O.S.K. Lines Ltd. and EAC

Mitsui O.S.K. Lines Ltd., Osaka, and The East Asiatic Company, Ltd., Copenhagen, take pleasure in announcing the formation of a joint venture to be known as MOL-EAC Transport Co., Ltd.

Mitsui O.S.K. Lines and The East Asiatic Company have decided to join forces in establishing MOL-EAC Transport Co. Ltd. in order that the new company may pursue such opportunities for ocean transport which may arise as a result of the two parent companies' combined efforts.

MOL and EAC, through their worldwide net of own offices and agencies, are both well known for their participation in a wide variety of shipping and other transportation activities. Consequently, the new company may be expected to find areas where, through rationalization and joint efforts they will be able to offer a better service for the shippers.

MOL-EAC Transport Co. Ltd. has its registered address at Connaught Centre, 19th floor, Hong Kong, and business is conducted through the two partners' agents and own offices throughout the world.



The photograph shows – (Mr. Umezono was unable to participate in the dinner after the board meeting held on 21/09/1982) – in front row from left: Mr. Kiichiro Aiura, Executive Vice President of Mitsui O.S.K. Lines in Tokyo, Mr. Henning H. Sparsø, Managing Director, EAC, Copenhagen, Mr. S. Temporin, Mitsui O.S.K. Lines, Mr. F.S. Dam, MOL-EAC Transport Co.

In the back from left: Mr. M. Furukawa, EAC, Tokyo, Mr. S. Tanaka, Mitsui O.S.K., Mr. A. Holst Larsen, EAC, Mr. T. Sugimoto, Managing Director of Mitsui O.S.K. Lines, Mr. F. Ollendorff, General Manager, EAC, Copenhagen, Mr. N. Matsuno, Mitsui, and Mr. N.-E. Lockenwitz, Branch Manager, EC, Hong Kong.

## Samarbejde mellem Mitsui O.S.K. Lines og ØK

Mitsui O.S.K. Lines Ltd., Osaka, og A/S Det Østasiatiske Kompagni, København, har sammen dannet et datterselskab ved navn MOL-EAC Transport Co. Ltd.

Mitsui O.S.K. Lines og Det Østasiatiske Kompagni har besluttet i fællesskab at etablere MOL-EAC Transport Co. Ltd., for at dette nye selskab kan følge op på sådanne muligheder for ocean-transport, som fremskaffes ved de to moderselskabers forenede anstrengelser.

MOL og ØK er begge velkendte gennem deres verdensomspændende net af egne kontorer og agenter for deres deltagelse i mange forskellige former for skibsfart og anden form for transport. Som følge heraf forventes det nye selskab at finde niches, hvor det vil være muligt gennem rationalisering og fælles styrke at tilbyde en bedre service til afskiberne.

MOL-EAC Transport Co. Ltd. har sin officielle adresse på Connaught Centre, 19th Floor, Hong Kong, og aktiviteterne foretages gennem de to partners agenter og egne kontorer over hele verden.

Billedet viser – idet Mr. Umezono var forhindret i at deltage i middagen efter bestyrelsesmødet 21/9 1982 – i forreste række fra venstre: Mr. Kiichiro Aiura, exec. VP Mitsui O.S.K. Lines i Tokio, direktør Henning H. Sparsø, Mr. S. Temporin, Mitsui O.S.K. Lines, Mr. F. S. Dam, MOL-EAC Transport Co. Ltd.

Bageste række fra venstre: Mr. M. Furukawa, EAC i Tokio, Mr. S. Tanaka, Mitsui O.S.K., Mr. A. Holst Larsen, EAC, Mr. T. Sugimoto, Man. Director Mitsui O.S.K. Lines, underdirektør F. Ollendorff, EAC, Mr. N. Matsuno, Mitsui, og filialbestyrer N.-E. Lockenwitz, EAC i Hong Kong.

## Fabrikant Svend Bergsøes runde dag

Kompagniets partner i den metallurgiske industri, fabrikant Svend Bergsøe, fyldte i september 80 og blev på fødselsdagen fejret ved en reception på fabrikken i Glostrup af en vid kreds af fremtrædende danske erhvervsfolk. Billedet viser Svend Bergsøe mellem Kompagniets gratulanter, de administrerende direktører Henning H. Sparsø, t.v., og O. F. Andreasen, t.h.

## Mr. Svend Bergsøe's birthday

Our Company's partner in the metallurgical industry, Mr. Svend Bergsøe, Manufacturer, completed his 80th birthday in September and was on his birthday celebrated at a reception at the factory in Glostrup (Copenhagen) by a large group of prominent people of the Danish business community. The photograph shows Mr. Svend Bergsøe between our Company's congratulators, Managing Directors Mr. Henning H. Sparsø (left), and Mr. O. F. Andreasen (right).



# ØK Data fordobler omsætningen ved sammenlægning med RC DATAcenter

ØK Data har foretaget en betydelig ekspansion i datavirksomheden gennem en sammenlægning af datterselskabet ØK Data med RC DATAcenter, således at de to selskabers aktiviteter i fremtiden sker i ét selskab: ØK Data.

Det nye ØK Data vil blive en af de største dataservicevirksomheder i den private sektor med en samlet medarbejderstab på op imod 450 og en omsætning på ca. 200 mio. kr. Sammenlægningen åbner samtidig mulighed for gennemførelse af en vækst-strategi, der bliver væsentligt mere effektiv, end hvad noget af de to selskaber ville have mulighed for at gennemføre hver for sig. ØK Datas internationale erfaring og ekspertviden om udvikling og drift af store edb-systemer samt RCD's brede kundeunderlag og datamatiske traditioner vil udgøre fundamentet for en betydelig, fremtidig vækst.

Den nye, fælles organisation er nu i hovedtræk fastlagt og vil være funktionsklar den 1. januar 1983. Selskabet vil blive ledet af direktør Ole Stangegård med vicedirektør Leif Saalbach Andersen som stedfortræder og stabschef. De tre liniedivisioner – storkunde-, produkt- og teknologidivisionen ledes af underdirektørerne John Lucas, Poul Ørum og Kjeld Hansen.

Efter sammenlægningen har ØK Data kontorer i Århus, Aalborg og Odense med hovedsæde på Grønningen 17 i København.

RC DATAcenter var en af de virksomheder, der opstod ved Regnecentralens rekonstruktion i 1979. Den har i dag 250 medarbejdere og en årlig omsætning på 90 mio. kr. ØK Data beskæftiger 220 i Danmark og udlandet og har ligeledes en omsætning på ca. 90 mio. kr., hvoraf knap 45 pct. hidrører fra omsætning med ØK-koncernen. ØK Data indtrådte i RC DATAcenter i 1981 som minoritets-aktionær og har siden stået for leveringen af IBM-datakraft til RC DATAcenter og dets kunder. Sammenlægningen markerer en stærk udvikling på det private, danske datamarked og i ØK's globale virksomhed inden for kommunikation.

Udsnit af ØK Datas edb-anlæg i Frihavnen i København, hvortil hovedparten af dataudstyret fra RC DATAcenter vil blive flyttet.

Some of EAC Data's EDP equipment in the Copenhagen Freeport to which location the main part of RCD's equipment is to be moved.

Investeringen er samtidig udtryk for Kompagniets ønske om at satse på et forretningsområde – informationsteknologi, som både er i hastig udvikling, og som repræsenterer den højteknologiske aktivitetstype, der i stigende grad skal bidrage til ØK's indtjeningssevne og vækstsmål.

ØK Datas hovedkontor på Grønningen i København

EAC Data's head office at Grønningen in Copenhagen



# EAC Data doubles turnover through amalgamation with RC DATAcenter

Our company has undertaken a major expansion in its data activity through an amalgamation of its subsidiary, EAC Data with RC DATAcenter A/S whereby the activities of the two companies in future will be conducted in one company: EAC Data, Copenhagen.

The new EAC Data will become one of the largest data-service undertakings in the private sector in Denmark with a total force of about 450 employees and a turnover of about D. Kr. 200 million. At the same time the amalgamation opens up possibilities to implement a growth strategy much more effective than what the two companies would have been able to achieve separately. EAC Data's international experience and expertise relating to development and operation of large EDP systems and RCD's broad customer infrastructure and data-traditions will form the foundation for a considerable future growth.

The new, joint organization, the main outlines of which have already been determined, will be on stream as at 1st January 1983. The company will be managed by Mr. Ole Stangegaard, Managing Director, with Mr. Leif Saalbach Andersen as Deputy Managing Director and chief of staff. The three line divisions: – large accounts, products, and technology divisions will be managed by the General Managers, Messrs. John Lucas, Poul Ørum and Kjeld Hansen.

EAC Data will after the merger have offices in Aarhus, Aalborg and Odense with head office at 17, Grønningen in Copenhagen.

RC DATAcenter A/S came into existence when Regnecentralen A/S was re-structured in 1979. Today it employs 250 people and has an annual turnover of D. Kr. 90 million. EAC Data has a staff of 220 in Denmark and abroad and similarly a turnover of D. Kr. 90 million of which 45% originate from within the EAC Group. EAC Data joined the RC DATAcenter A/S in 1981 as a minority shareholder and has since then been responsible for the supply of IBM data service to the RC DATAcenter A/S and its customers.

The amalgamation marks a strong development in the private Danish data market and in our Company's global communication activity. At the same time, the investment signifies our Company's desire to engage itself in a business field – information technology – which is not only in a process of rapid development but also representing the high-level type of technology activity that increasingly is to contribute to our Company's earning capacity and growth objectives.

Den nye organisation blev præsenteret ved et medarbejdermøde i Moltkes Palæ i København den 29. september (fotoet) og på møder i Århus, Aalborg og Odense den følgende dag.

On 29th September the new organization was presented at an employee meeting in Moltkes Palæ in Copenhagen (the photograph) and at meetings in Aarhus, Aalborg, and Odense the following day.

Mr. Ole Stangegaard,  
Managing Director



Mr. Leif Saalbach Andersen,  
Deputy Managing Director



Mr. Kjeld Hansen,  
General Manager



Mr. John Lucas,  
General Manager



Mr. Poul Ørum,  
General Manager



# NYT OM NAVNE/PEOPLE

**Kuala Lumpur:** Lederen af plantagen River Estates Sdn. Bhd. i Malaysia, *A. J. Ritchie*, forlader efter 12 års tjeneste plantagen og sin stilling, som han har sagt op for at slutte sig til sin familie i Australien. Hans højre hånd, *C. Y. Chok*, overtager stillingen som Acting General Manager for River Estates og efterfølges som Manager af Tomanggong Estate af den hidtidige senior assistent *Liew Ah Luk*. Herefter bestyres samtlige plantager i Malaysia af lokalansatte executives: *C. Y. Chok*, River Estates, *Liew Ah Luk*, Tomanggong Estate, og *S. Kumarasamy*, Dagat Estate.

**Kuala Lumpur** Mr. *A. J. Ritchie*, the manager of our Company's plantation, River Estates Sdn. Bhd. in Malaysia will be leaving our Company after 12 years' service to join his family in Australia. His chief assistant, Mr. *C. Y. Chok*, will take over the position of Acting General Manager of River Estates, and he in turn will be succeeded by Mr. *Liew Ah Luk*, Senior Assistant, as Manager of Tomanggong Estate. After these staff changes, all the Malaysian estates will be managed by locally employed executives: Mr. *C. Y. Chok*, River Estates Sdn. Bhd. Mr. *Liew Ah Luk*, Tomanggong Estate, and Mr. *S. Kumarasamy*, Dagat Estate.

From left: Mr. *C. Y. Chok*, Acting General Manager, River Estates, Mr. *Paul Wong*, Manager, Sandakan office, & Mr. *S. Kumarasamy*, Manager Dagat Estate



**Hong Kong:** Kasserer *Fung Yiu Wah*'s 25 års jubilæum i EAC, Hong Kong blev fejret ved en reception i Connaught Centre den 1. maj. Jubilæren blev lykønsket af bl.a. Mr. *K. C. Wong*, Marketing Manager, Skibsafdelingen, EAC Hong Kong.

**Hong Kong** In celebration of Mr. *Fung Yiu Wah*'s 25th anniversary with our Company in Hong Kong, a reception was held at the office in Connaught Centre on 1st May. Mr. *Fung* has been serving our Company for 25 years as a cashier and was congratulated – amongst others – by Mr. *K. C. Wong*, Marketing Manager of EAC Hong Kong's shipping department.

Mr. *Fung* (right) is being congratulated by Mr. *K. C. Wong*



**København:** Lederen af Generalkonsulatet for Thailand i Danmark, *Erik Bach*, er ved dekret fra det thailandske kongehus udnævnt til konsul for Thailand i Danmark fra og med den 15. juli 1982 – i øvrigt 30-års dagen for Erik Bachs ansættelse i Kompagniet. Erik Bach var direktør for Dumex i Bangkok før sin hjemkaldelse til Danmark i 1978.

**Copenhagen** Mr. *Erik Bach*, 46 years old, head of the Royal Thai Consulate General in Denmark, has by decree issued by the Thai Royal House been appointed Consul of Thailand in Denmark effective from 15th July, 1982, which date, incidentally, was the

30th anniversary of Mr. Erik Bach's employment with our Company. Mr. Erik Bach was the Managing Director of Dumex Limited in Bangkok before his transfer to Denmark in 1978.

Mr. Erik Bach, Consul of Thailand in Denmark



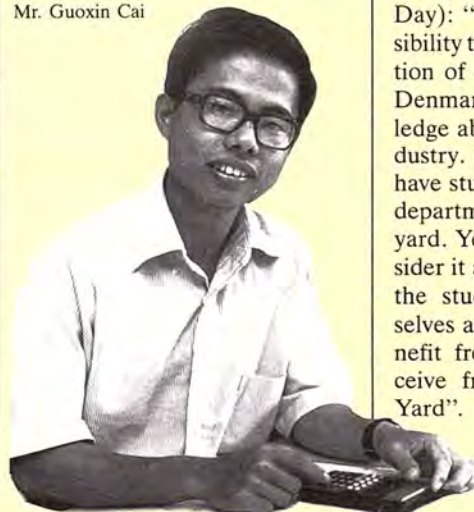
**Nakskov:** Energi og lærelyst præger historien om en ung kineser, der har suppleret sin uddannelse på Polyteknisk Lærestalt i København med nogle måneders arbejde på Nakskov Skibsværft. Han hedder *Guoxin Cai*, er fra Fu-ting i Kina og har præsteret at tage rundt om jorden til et fremmed land, lære dettes sprog, så at han nu taler det flydende, tage studentereksamen og siden påbegynde en akademisk uddannelse i skibsbygning, som han altså supplerede med en praktisk læretid på ØK-værftet i Nakskov. Altsammen på fem år. *Guoxin Cai* er en af 20 unge kinesere, der uddanner sig i Danmark. Han boede under opholdet i Nakskov på H.N. Andersen Kollegiet i værftsbyen. Og værftets direktør, *Sv. Rahbek Rasmussen*, fortæller i den lokale avis, »Ny Dag« om baggrunden for studieopholdet:

– Vi føler det som en forpligtelse at være med til at uddanne de unge, der kommer til Danmark for at lære mere om værftsindustrien. Derfor har vi ofte studerende i ingeniør-afdelingerne på Nakskov Skibsværft. Vi anser det nu ikke blot som en tjeneste, vi

gør de studerende. Vi er også glade for de impulser, vi får under besøgene på værftet...

**Nakskov** Energy and eagerness to learn are the characteristics of a young Chinese, who has added a few months' work at Nakskov Shipyard Ltd. to his education at the Copenhagen University of Technology. His name is Mr. *Guoxin Cai*, and he is from Fu-ting in China. He managed to travel around the world to a foreign country, whose language he not only learned, but now is commanding fluently. He has also passed the examination for the General Certificate of Education, after which he commenced an academic education in ship-building, which he has further supplemented with a practical training course at our Company's shipyard in Nakskov as already mentioned. And all this in a space of five years! Mr. *Guoxin Cai* is one of 20 Chinese who are studying in Denmark. During his training in Nakskov he stayed at the H.N. Andersen College, and the Yard's Managing Director, Mr. *Sv. Rahbek Rasmussen* explains the background to the local newspaper "Ny Dag", (New Day): "We feel it is our responsibility to contribute to the education of young people coming to Denmark to acquire more knowledge about the ship-building industry. For that reason we often have students in our engineering departments at Nakskov Shipyard. Yet, we do not merely consider it a favour which we render the students, because we ourselves are happy in return to benefit from the impulses we receive from these visits to our Yard".

Mr. *Guoxin Cai*



**Chicago:** Billedhuggeren *Gutzon Børglum*, der skabte det mest berømte monument i USA, Mt. Rushmore monumentet med gigantiske profiler af en række amerikanske præsidenter, var fætter til ØK-manden *Niels M. Børglums* farfar, og for Niels Børglums far, der mødte Gutzon Børglum i København omkring 1925, har det altid været en drøm at besøge USA og se de fire præsident-hoveder. Sønnens stationering i Chicago, hvorfra han i øvrigt nu er på hjem til Danmark for dels at holde orlov og dels forberede overflytningen til Alfragt a/s, gjorde det muligt for Niels Børglums forældre at få drømmen opfyldt og dels opleve en biltur gennem hele Midtvesten, dels besøge det imponerende monument. Man havde ikke meddelt nogen noget om besøget, men på en eller anden måde fik direktøren for det firma, der står for turistbutikken og restauranten på Mount Rushmore nyt om det danske selskabs besøg og fik arrangeret en fotografering. Et af billederne havnede i Rapid City Journal, der naturligvis hæftede sig ved, at Niels Børglums søn er opkaldt efter oldefaderens fætter og bragte fotografiet af den 7-årige danske dreng foran the »Shrine of Democracy«

**Chicago** Mr. *Gutzon Børglum*, the sculptor who created the most famous monument in the U.S.A., the Mt. Rushmore Monument with its gigantic profiles of a number of American presidents, was a cousin of the grandfather of an EAC employee, Mr. *Niels M. Børglum*. Mr. Niels Børglum's father, who met Mr. Gutzon Børglum in Copenhagen in the year of 1925, always dreamt of visiting the U.S.A. to see the sculptured heads of the four presidents. Niels Børglum's secondment to

The young boy, Gutzon Børglum in front of Mt. Rushmore Monument which his great-grandfather's cousin created

Chicago, from where, incidentally, he is on his way to Denmark for home-leave before being transferred to Allfreight Ltd., made it possible for his parents to have their dream come true, at the same time getting the opportunity of experiencing a motor-drive through the whole Middle West. Nobody was officially informed about the visit, but somehow the manager of the firm behind the touristshop and the restaurant at Mount Rushmore found out about the Danish party's visit and arranged for photographs to be taken. One of the photographs landed in Rapid City Journal, which, of course, observed that Mr. Niels Børglum's son is named after his great-grandfather's cousin and then published the photograph of the 7-year old Danish boy in front of the "Shrine of Democracy".

Mr. Niels M. Børglum



**Esbjerg:** En anden ØK-mand, der har med shipping at gøre, er blevet omtalt i den danske avis »Vestkysten«. Det er den 24-årige *Anders Fink*, der kom med i en reportage i bladet fra søfartsskolen i Nordby på Fanø. Anders Fink er fra Gistrup ved Aalborg, hvor han tog HF før ansættelsen i ØK. Han fik sin uddannelse på Hovedkontoret i København og klarede den afsluttende prøve efter at have aftjent sin værnepligt i Livgarden, men fik lyst til at komme ud og sejle og blive navigatør. Kompagniet gav ham en chance derfor ved at gøre ham til shipshore-man på containerskibet »*Boringia*«, der sejler på Vestafrika-ruten, og senere til aspirant på containerskibet »*Falstria*«, som trafikerer Kompagniets rute mellem Nordeuropa og Nordamerikas vestkyst.

Nu går han på søfartsskole i fem måneder, skal derefter sejle i 25 måneder som aspirant og håber på at komme på navigations-skole og 2-3 år senere klare navigatørek-samen. Hvorfor han har ønsket at gå den vej? »Man møder mange spændende mennesker til søs og kommer ind på livet af dem. Det er et frit liv med sin egen, helt specielle atmosfære, som i hvert fald tiltaler mig«, forklarer Anders Fink i avisen.

**Esbjerg** Another EAC employee engaged in shipping has been mentioned in the Danish daily newspaper "Vestkysten" (The West Coast). He is the 24-year old Mr. *Anders Fink*, who was referred to in an article dealing with the pre sea school in Nordby on the island of Fanø. Mr. Anders Fink is from Gistrup

close to Aalborg (northern Jutland), where he passed the HF examination before being employed by our Company. He was trained at our Head Office in Copenhagen and passed the final examination after having completed his military service in the Royal Life Guards, but he wanted to go to sea and become a navigator. Our Company offered him a chance by making him a shipshore-coordinator on the container vessel m.s. "Boringia", servicing the West Africa route, and subsequently a deck cadet on the container vessel m.s. "Falstria", servicing our Company's route between North Europe and the west coast of North America.

He is now attending a five-month training at the pre sea school and is thereafter to serve on board a vessel for 25 months as a deck cadet, hoping to be accepted by the navigation school and pass the master's examination 2-3 years later. Why did he decide on this career for himself? "You meet many exciting people at sea and get very close to them. It is a free life with its own very special atmosphere, decidedly appealing to me", explains Mr. Anders Fink to the newspaper.



Mr. Anders Fink

**Nakskov:** Maskinarbejder *Tage Olsen*, Nakskov, havde den 9. juli været ansat på Kompagniets datterselskab, A/S Nakskov Skibsværft, i 50 år. *Tage Olsen*, der i sin tid også udlærtes på værftet som maskinarbejder, har samtlige år været knyttet til maskinafdelingen om bord ved arbejde på værftets nybygninger. På jubilæumsdagen fejredes han ved en sammenkomst på direktionskontoret og fik overrakt den kongelige belønningsmedalje samt en gave fra værftet. Det var samtidig *Tage Olsens* sidste dag på værftet, idet han efter de mange års gode indsats ønskede at gå på efterløn.

**Nakskov** On 9th July Mr. *Tage Olsen* had been employed with our company's subsidiary, Nakskov Shipyard Ltd., for 50 years as an engine fitter. Mr. *Tage Olsen*, who also served his apprenticeship at the Yard, has during all these years been attached to the engineering department, executing work on board the Yard's newbuildings. On the anniversary day he was celebrated at a get-together at the office of the management, and he was awarded the "Royal Medal of Award of Second Class" and presented with a gift from the Yard. It was also Mr. *Tage Olsen's* last

day at the Yard, as he had wished to retire after all these years of good service.

*Tage Olsen* (t.v.) studerer brevet, der fulgte med den kongelige belønningsmedalje, sammen med værftsdirektør, ing. S. Rahbek Rasmussen

Mr. *Tage Olsen* (left) studies the letter accompanying the "Royal Medal of Award of Second Class", together with Mr. Sv. Rahbek Rasmussen, Managing Director of the Yard





CPT 8525-anlægget demonstreres under Erik Levison's åbent-hus arrangement.

The CPT 8525 system being demonstrated at the Open-House arrangement held by Erik Levison Ltd. in Copenhagen.

## ØK præsenterer avancerede CPT tekstbehandlingssystemer

ØK har i en række lande introduceret en ny serie meget avancerede tekstbehandlingssystemer fra det amerikanske firma CPT. I Danmark har ØK-selskabet Erik Levison ApS agenturet for CPT og præsenterede den nye serie ved et åbent-hus arrangement.

Den ny produktlinie – CPT 8500 serien – består af fire forskellige systemer, hvoraf det mindste har en intern hukommelse eller lagerkapacitet på 96 K og én diskette station, medens det største har en hukommelse på 128 K og to diskette stationer. – K står for kilobyte, der svarer til 1.024 bytes, hver svarende til et tegn eller en karakter, d.v.s. et bogstav, tal, punktum eller lignende.

Den ny serie er en videreudvikling af CPT 8100-serien, der blev lanceret i fjor, og den opfylder alle de krav, der kan stilles m.h.t. den rigtige ergonomiske udformning, således at der sikres operatøren de bedst mulige arbejdsforhold. Således er tastaturet flytbart med den rigtige hældning, tasterne er matte og refleksfri, og den refleksfri skærm er positiv, hvilket vil sige, at man ser sort tekst på hvid baggrund med en fast skrivehastighed. Hvis diskette stationen ikke har været aktiveret i 20 sekunder, standser den automatisk, således at operatøren ikke bliver forstyrret af unødvendig støj.

CPT har desuden netop introduceret en verdensnyhed, Office Dialog Link (ODL), der er et netværk, der kan kobles direkte på det interne telefonnet. Til ODL kan kobles edb, skærmterminaler, fotosats, m.m., hvorved der opnås et integreret system, hvor alle enheder kan kommunikere med hinanden. Dette er et langt skridt hen imod fremtidens kontor, eller som det rigtigere må kaldes: det rationelle kontor.

CPT er hjemmehørende i Minneapolis, Minnesota; det er repræsenteret i ca. 60 lande, har en årsomsætning på over 135 millioner dollars, og der er på verdensplan installeret cirka 50.000 CPT tekstbehandlingssystemer.

## EAC introduces CPT's advanced word processing systems

Our Company has in a number of countries introduced a new series of very advanced word processing systems from the American company, CPT Corporation. In Denmark the CPT agency is held by our Company's subsidiary, Erik Levison Ltd., who introduced the new series at an Open-House arrangement.

The new line of products – the CPT 8500 series – consists of 4 different systems, of which the smallest has a 96 K resident memory or storage capacity and one disk unit (diskette drive), while the largest has a resident memory of 128 K and two disk units – K for kilobyte, corresponding to 1,024 bytes being a sign or a character, i.e. a letter, figure, point or the like.

The new series is a further development of the CPT 8100-series, which was introduced last year, and it meets all the demands in regard to the correct ergonomic version, ensuring the best possible working conditions for the operator. The keyboard is thus moveable with correct inclination, the keys are mat and non-reflective, and the non-reflective screen is positive, i.e. one sees black characters on a white background. Should the disk drive not be activated within 20 seconds, it will stop automatically, thus not disturbing the operator with unnecessary noise. Furthermore, CPT has just introduced a world class novelty called Office Dialog Link (ODL), which is a network system that can be connected directly to the internal telephone network. To the ODL one can connect computers, video display terminals, phototype setting equipment, etc., through which an integrated system is obtained, where all units can communicate with each other. This is a great step towards the Future Office, or as it ought to be called: the Rational Office.

CPT, who is domiciled in Minneapolis, Minnesota, is represented in about 60 countries and has an annual turnover exceeding US \$ 135 million, and globally there are installed approximately 50,000 CPT word processing systems.

# ØK-firma stærkt engageret i olie- og gasindustrien

## Ekspederer 471.000 tons rør i år

Jutlandia Terminal ApS, Esbjerg, der er et datterselskab af det ØK- og DSB-ejede aktieselskab Alfragt, er stærkt involveret i boreaktiviteterne i Nordsøen og i transporten af rør til naturgasnettet.

411.000 tons rør til gas- og olieledningerne i Nordsøen ekspederes i år via Jutlandia Terminalens kajanlæg, og en voksende strøm af forsyningsfartøjer anløber terminalen for lastning af udrustning og forsyninger.

Samtidig har Jutlandia Terminal løst den omfattende opgave at transportere 60.000 tons rør fra Esbjerg til Nyborg, hvor rørene lastes i specielle pipe carriers, der sejler dem ud til nedlægningsfartøjet, som trækker en dobbelt rørledning til naturgas mellem Fyn og Sjælland. 55 lastbiler har kørt i en næsten ubrudt strøm over den 170 km lange strækning hele sommerperioden for at løse denne gigantiske transportopgave inden for den stipulerede tid.

Ekspeditionen i Nyborg af rørene og andet udstyr administreres også af Jutlandia Terminal, der til dette formål har etableret en midlertidig filial i Nyborg.

For at kunne deltage i boreaktiviteterne på flest mulige områder har Jutlandia Terminal opnået eneagenturet for Danmark for det skotske firma Ultraglids produkter, der omfatter forskellige olier og ubrændbare væsker, som anvendes i olieindustrien. Samtidig forhandler Jutlandia Terminal med andre udenlandske leverandører om etablering af agenturer eller lagre i Esbjerg.

Jutlandia Terminalen spiller således en stadig større rolle inden for olie- og naturgasindustrien, bl.a. fordi selskabet har forstået at leve op til de krav om hurtighed og effektivitet, der er så afgørende inden for denne branche.

## EAC firm heavily engaged in oil and gas industry.

### Handles about 471,000 tons of pipes in 1982

Jutlandia Terminal Ltd. in Esbjerg (on the west coast of Jutland), a subsidiary of Allfreight Ltd. in Copenhagen – jointly owned by EAC and DSB (Danish State Railways) – is heavily involved in the oil and gas activities in the North Sea and in the transport of pipes for the natural gas network.

411,000 tons of pipes for the gas and oil pipeline in the North Sea will be handled via Jutlandia Terminal's harbour installation this year, and a growing flow of supply vessels call at its terminal to load equipment and supplies.

At the same time, Jutlandia Terminal has been entrusted with the comprehensive task of transporting 60,000 tons of pipes from Esbjerg to Nyborg, where the pipes are loaded into special pipe carriers transporting them out to the pipe-laying vessel, which lays out a double pipe-line for natural gas between Funen and Zealand. 55 trucks have run in an almost continuous stream over the 170 km stretch during the summer period to complete this gigantic transport task before the deadline stipulated.

The handling of pipes and other equipment in Nyborg is also managed by Jutlandia Terminal, who for this purpose has established a temporary branch office in Nyborg.

In order to participate in the drilling activities in as many fields as possible, Jutlandia Terminal has obtained the sole agency in Denmark for the Scotch company "Ultraglids" products, which comprise vari-

ous oils and non-flammable liquids used in the oil-drilling industry. At the same time Jutlandia Terminal is negotiating with other foreign suppliers for the establishment of agencies or warehousing services in Esbjerg.

Jutlandia Terminal is thus playing a growing role in the oil and gas industry, also because the company has understood to live up to the demands for speed and effectiveness which are such deciding factors in this field.

De 12 tons tunge rør læsses fra lastbilerne, der har transporteret dem fra Esbjerg til Nyborg.

The 12-ton heavy pipes are unloaded from the trucks which brought them from Esbjerg to Nyborg.

Rørene lastes i pipe carriers, der sejler dem ud til nedlægningsfartøjet.

The pipes are loaded into pipe-carriers sailing them out to the pipe-laying vessel.



# Nakskov Skibsværft bygger 3300 meter bro-sektioner

Af civilingeniør Mikael Fogh, Nakskov Skibsværft.

Aktieselskabet Nakskov Skibsværft er en vigtig leverandør til Farø-projektet – broerne der fra 1985 skal forbinde Sjælland med Falster –, idet værftet fremstiller de 48 brosektioner med en samlet længde på 3300 meter.

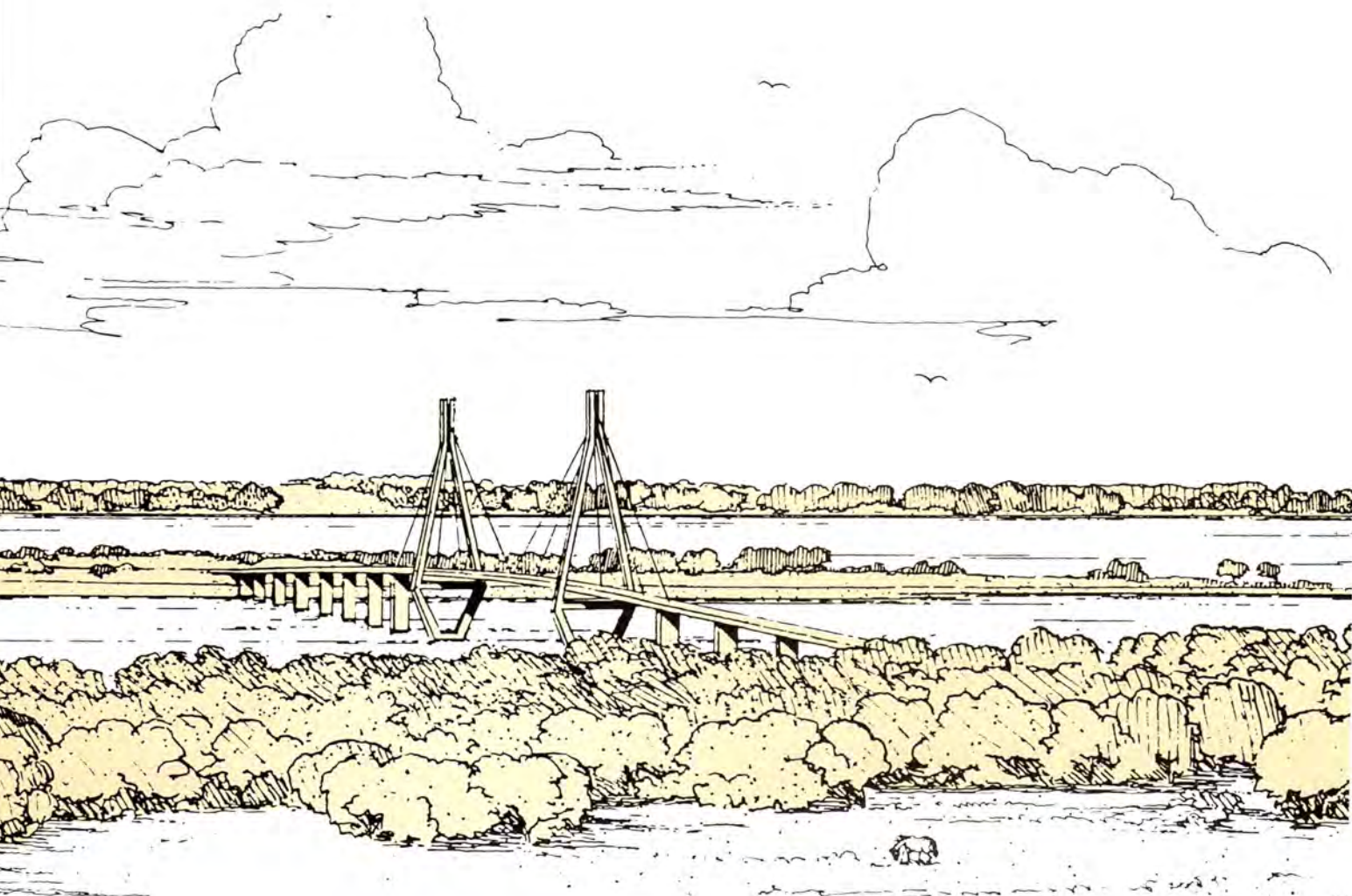
Farø-broerne er et led i sydmotorvejen, som udgør den nederste del af det højre ben i det såkaldte Motorvej-H.

Projektet omfatter to broer med en længde på tilsammen 3322 m. Den nordlige bro mellem Sjælland og Farø består af 20 fag med 80 m spændvidde og en samlet længde på 1596 m. Broen har to gennemsejlingsfag, hver med en fri bredde på 40 m og en fri højde på 20 m.

Den sydligste, der er vist på tegningen herunder, forbinder Farø

med Falster. Midterpartiet udføres som en skråningsbro, midterfaget har en spændvidde på 290 m, og de to sidefag har spændvidder på 120 m. De resterende fag har samme spændvidde på 80 m. Gennemsejlingsåbningen befinder sig under midterfaget og har en fri bredde på 260 m og en fri højde på 26 m. Broens samlede længde er på 1726 m.

Overbygningerne er kontinuerlige lukkede stålkassedragere. Længdeudvidelser på grund af temperaturvariationer kan kun optages ved landtilslutningerne. Monberg & Thorsen A/S er hovedentreprenør på overbygningerne til de to broer. Nakskov Skibsværft er underleverandør til Monberg & Thorsen, idet vi har påtaget os fremstillingen af brosektionerne, der består af 39 sektioner à ca. 80 m, 8 sektioner à 24 m og en sektion à 16 m.





# Nakskov Shipyard builds 3,300 metres of bridge sections

Brosektionerne, der vejer 550 tons er hver opdelt i seks delsektioner på 12 m og en på 8 m.

Delsektionerne opbygges af bundpaneler, tværskotpaneler og brodækspaneler.

Brodækspanelerne, der fremstilles på værftet består af 12 mm tykke stålplader, hvorpå der svejses trugformede profiler. Til dette formål anvendes en speciel pulvervejseautomat, der svejser begge sider af truget samtidigt.

Bundpanelerne fremstilles på Bandholm Maskinfabrik, mens tværskotpanelerne fremstilles dels på Knøl's Maskinfabrik og dels hos Poul Ree A/S.

Delsektionerne samles på Montageplanen, mellem bedding 1 & 3, hvor der er bygget specielle oplæg, afpasset til de enkelte sektioners geometri. Når en delsektion er færdig, løftes den af 100 t kranen, placeres på transportvognen, og køres til samlepladsen, vest for tørdok 2, hvor der er lavet to brobyggebeddinger til samling af 80 m sektionerne.

Delsektionen, der ankommer fra montageplanen afsættes på et fundament for enden af den brobyggebedding, hvor den skal anvendes. En wiretrukken beddingsvogn transporterer den frem til positionen på beddingen, hvor den skal opmærkes og renskæres, således at sammensvejsningen med den foregående delsektion kan påbegyndes.

Til transport af 80 m sektionerne er der bygget en portalkran, der kan flytte en sektion fra beddingen til en af de 20 lagerpladser, der er arrangeret på arealet fra beddingsområdet og ned til fjorden. Her vil der i løbet af 1982 blive færdiggjort et udskibningsanlæg, således at brosektionerne kan begynde at afsejle fra Nakskov i februar 1983. Det er tanken at udskibe brosektionerne i den højde over vandoverfladen de skal have på selve brostedet, det vil sige i en højde fra 10 m til 30 m over vandoverfladen afhængig af hvor på broen sektionerne skal anvendes.

Nakskov Shipyard Ltd. is a major contractor to the "Farø-Project" – the bridge complex which in 1985 is to connect Zealand with Falster – in so far as the shipyard will be manufacturing 48 box girder sections having a total length of 3.3 kilometres.

Work on the bridge sections is in active progress at the shipyard, and Mr. Mikael Fogh, Graduate Engineer, Nakskov Shipyard, describes (in the Danish text) the project and the construction of the very large sections.



1. Den traktortrukne transportvogn, hvorpå delsektionerne køres til samlepladsen.

2. Et tværskotpanel placeres på de udlagte bundpaneler.

3. Når delsektionen løftes fri af montageplanen ses de oplæg, der bestemmer geometrien.

4. Denne portalkran flytter de 80 m lange sektioner.



# EAC Lines serves the Pacific

## EAC Lines på Stillehavet

Our Company's EAC Lines Trans Pacific Service, has – as is the case of our Company's other liner services – acquired a reputation for effectiveness, speed and excellent service. And the five Liner Replacement vessels engaged in this route are with a new painting of the hull helping to establish the name "EAC Lines" in the Pacific. They are the "Simba", shown on the photograph, and the "Samoa", "Sargodha", "Siena", and "Sinaloa". The east-bound service will in future include direct calls at Taiwan from where there is a substantial export to the U.S.A.

On 29th November 1982 the line will be moving its head-quarters from Vancouver B.C. to Los Angeles.

The main reason for moving to South California is a desire to get nearer to the American – and more especially the Californian – market constituting an important infrastructure for the line's activities.

Kompagniets Stillehavsrute, EAC Lines Trans Pacific Service, har ligesom Kompagniets øvrige liniefart fået ry for effektivitet, hurtighed og service. Og de fem Liner Replacement skibe, der trafikerer ruten, er med en ny bemaling på siderne med til at slå navnet EAC Lines fast på Stillehavet. Det drejer sig om »Simba«, som ses på billedet, samt »Samoa«, »Sargodha«, »Siena« og »Sinaloa«. Ruten får i øvrigt fremtidig i den østgående trafik direkte anløb af Taiwan, der har en meget stor eksport til USA.

Liniens hovedkontor flyttes i øvrigt fra Vancouver B.C. til Los Angeles den 29. november 1982. Den altovervejende grund til flytningen til Sydcalifornien er ønsket om at komme nærmere til det amerikanske – og specielt det californiske – marked, der udgør et væsentligt grundlag for liniens aktiviteter.

An Agents' Meeting was held by EAC Lines Trans Pacific Service in Vancouver on 3rd to 6th August with participation of representatives from major agents, our Company's Head Office and EAC Data.

The picture shows from left to right around the table: Villy Vestergaard, EAC HO, J. K. Jørgensen, EAC HO, Bob I. Page, Bakke-A.T.P. Fremantle, Marianne Nielsen, TPS, Carl Erichsen, EAC HO, Ole K. Jensen, Bakke Sime-Darby, Singapore (half hidden), Jens P. Brøndeholm, TPS, Chresten A. Bjerrum, TPS, Tony Rupsis, EAC Steamship, Chicago, Patricia Biszewski, EAC Data, Niels U. Fischer, Johnson Walton, Vancouver, Knud E. Hansen, EAC Shipping, Hong Kong, Kevin S. Corbett, Wilhelmsen Agencies, Taipei.

### Agentmøde for Stillehavsruten

Repræsentanter for nøgleagenturer, Kompagniets hovedkontor og ØK Data deltog i dagene 3. til 6. august i et agentmøde, som EAC Lines Trans Pacific Service holdt i Vancouver. Deltagernes navne fremgår af den engelske tekst.



# Nyt lasthåndteringselskab i Australien

## New cargo handling company in Australia

Det nye lasthåndteringselskab Fremantle Cargo Services Ltd. (FCS), der er oprettet af ØK samt Mercantile Stevedores (WA) Pty, Ltd., Fremantle, og Knutsen Line A/S, Haugesund, starter aktiviteterne i november i Fremantle havn, Vestaustralien.

Billedet, der er stillet til rådighed af Fremantle's havnemyndigheder, viser, hvor langt anlægsarbejderne var fremme i juli, da containerarealet var ved at blive asfalteret.

The new cargo handling company, Fremantle Cargo Services Ltd. (FCS) established by our Company together with Mercantile Stevedores (WA) Pty, Ltd., Fremantle, and Knutsen Line, Haugesund, commences operations in November in the Port of Fremantle, West Australia.

The photograph placed at our disposal by the Fremantle Port Authority shows how far the installation work had progressed when the container area was being asphalted in July.

1. Fremantle Port Authority's værksteder, der senere bliver fjernet.

2. Bliver container-reparationsfaciliteter.

3. Her anlægges dobbeltsporet jernbane.

4. Arbejdernes kantine og omklædningsrum, m.m.

1. Fremantle Port Authority's workshops which will eventually be removed.

2. Future container repair facilities.

3. Double-track railway being laid.

4. The employees' amenities building.



# West Indian Company handles 600 cruise ships annually

Over sixhundred cruise ships carrying about half a million passengers berth annually at the West Indian Company's harbour on St. Thomas in the former Danish West Indian Islands, and this EAC group company is thus playing an important role in the islands' economic life which is dominated by the tourist industry.

The West Indian Company's harbour installation consists of a sheltered 680 metre long quay which together with two mooring dolphins enables the West Indian Company to accommodate four large cruise liners, with maximum 29½ feet draught, at one time.

Often during the peak season from December to April the number of ships calling is so great that some have to ride at anchor in the roads. The port officials, agents etc. are being transported to and from the ships by the company's own launch carrying the good Danish name, "Thorvald". Some cruise ships like the "Norway" and the "Queen Elizabeth 2" are too large to come alongside the quay and have to lie at anchor outside the harbour entrance.

The West Indian Company handles clearance of the ships, supplies of bunkering water and provisions, arranges air transport for passengers and crews, and so on.

In addition, the West Indian Company's harbour facilities include roll-on/roll-off ramps handling a large share of the islands' imports.

The company's activities also comprise sale of beer, soft drinks, and snacks, and marketing of petrol and oil products from a depot close to the harbour installation. The Real Estate Department handles development of land and leasing and maintenance of the company's warehouses, shop premises etc.

The West Indian Company Limited was founded in 1912 by Danish businessmen, headed by Mr. H. N. Andersen, founder of The East Asiatic Company Limited A/S, Copenhagen, and has throughout the 70 years played an important role in the development of these former Danish possessions and their trade.

»Norway« (tidl. »France«) medbringer selv sådanne tenders eller hjælpeskibe. "Norway" (the former "France") carries her own tenders or auxiliary boats.

Over 600 krydstogtskibe anløber årligt Det Vestindiske Kompagni's kaj anlæg. More than 600 cruise ships berth annually at WICO's harbour.



»Queen Elizabeth 2« på reden.

"Queen Elizabeth 2" in the roads.



# 600 krydstogtskibe anløber årligt Det Vestindiske Kompagnis kaj anlæg

Over seks hundrede krydstogtskibe med omkring en halv million passagerer lægger årligt til ved Det Vestindiske Kompagni's kaj anlæg på St. Thomas på de tidligere dansk vestindiske øer, og dette ØK-selskab spiller således en vigtig rolle i øernes erhvervsliv, der domineres af turistindustrien.

Det Vestindiske Kompagni's kaj anlæg består af en velbeskyttet, 680 meter lang kaj med ni meters dybde, der sammen med to duc d'alber sætter D.V.K. i stand til at modtage fire store krydstogtskibe ad gangen.

I højsæsonen fra december til april er der ofte så mange skibe, at nogle må ligge for anker på reden. Myndigheder, agenter, m.fl. transporteres da til og fra skibene i selskabets egen båd, der bærer det gode, danske navn »Thorvald«. Visse krydstogtskibe som »Norway« og »Queen Elizabeth 2« er dog for store til at gå til kaj og må derfor ligge for anker på reden.

Det Vestindiske Kompagni klarer skibene, bestiller vand og anden proviant, arrangerer flytransport for passagerer og besætning, m.m. D.V.K.'s kaj anlæg er i øvrigt udbygget med roll-on/roll-off faciliteter, hvorover en stor del af øernes import ekspederes.

Selskabets aktiviteter omfatter derudover salg af øl, soft drinks og snacks samt markedsføring af benzin og olieprodukter fra et depot nær kajen. Ejendomsafdelingen er beskæftiget med udvikling af landarealer samt udlejning og vedligeholdelse af selskabets pakhuse, forretningsbygninger, m.m.

Aktieselskabet Det Vestindiske Kompagni stiftedes i 1912 af danske forretningsmænd med Kompagniets stifter, etatsråd H. N. Andersen i spidsen og har således gennem 70 år spillet en vigtig rolle i udviklingen af disse tidligere danske besiddelser og deres erhvervsliv.

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# West Africa Service holds large Agents' Meeting

## Vestafrikalinien holder stort agentmøde

Our Company's West Africa Service held a large joint meeting in Tenerife with participation of agents from Africa and Europe, who exchanged business experiences, ideas and viewpoints and discussed objectives and strategies.

The joint meeting counted 61 participants most of whom are pictured on this photograph taken on the roof of hotel "Semiramis".

Kompagniets Vestafrikalinie har på Teneriffa holdt et stort fællesmøde for afrikanske og europæiske agenter, som udvekslede erfaringer, ideer og synspunkter samt drøftede målsætninger og strategier. Fællesmødet havde 61 deltagere, hvoraf de fleste ses på dette foto på taget af hotel Semiramis.



# Forsøg på Dansk Sojakagefabrik med opdræt af ål

## Ålene opdrættes i lukket kredsløb med vand, der er renere end drikkevand.

Af projektchef, afdelingsingeniør Leif Nordstrøm, D.S.

Dansk Sojakagefabrik har indledt et spændende forsøg med åle-opdræt.

Med Vandkvalitetsinstituttet som konsulent er et forsøgsanlæg opført i en ledig bygning på fabrikken på Islands Brygge, og den 7. september blev de første ål sluppet ud i bassinerne, hvor de i et års tid skal svømme sig store og lækre – i et lukket kredsløb med vand, der er renere end drikkevand. Faktisk er der tale om rensset kommunevand uden nogensomhelst forbindelse med fabrikkens øvrige produktionsanlæg.

### Fiske-opdræt skal afhjælpe mad-manglen

Anlægget skal ses som et led i Dansk Sojakagefabriks bestræbelser for at udvikle nye, mere specialiserede aktiviteter på områder, hvor eksisterende viden og faciliteter (som f.eks. spildvarme og ledige bygninger og arealer) kan udnyttes.

Opdræt af fisk er et område, der ventes at udvikle sig kraftigt de kommende år. Verdens behov for føde, og dermed også for fisk stiger, men det er begrænset, hvor meget der kan fiskes af de enkelte arter, hvis overfiskning og faldende bestand skal undgås. Fiskeopdræt kommer derfor naturligt ind som en supplerende forsyningsmulighed.

Traditionelt dambrug, som det kendes fra ørred, kræver store mængder ferskvand og giver tilsvarende store afløb af forurenset vand. Dette begrænser sammen med årets skiftende klimaforhold produktionens størrelse.

Et mere intensivt, industrielt præget opdræt af fisk, der udvikles i disse år, er recirkulations-dambrug, hvor vandforbruget takket være rensning og genbrug ligger lavt, og hvor optimale vækstbetingelser for den udvalgte fiskeart kan holdes året rundt. (Systemet er en slags parallel til moderne kyllingeproduktion). Et recirkulationssystem kræver dog større investering end et almindeligt dambrug og anvendes derfor især til dyrere spise fisk, som f.eks. ål.

Når så mange fisk skal leve i en begrænset mængde cirkulerende vand, der kun langsomt udskiftes, er det afgørende at holde en god vandkvalitet. Der skal tilføres tilstrækkeligt med ilt til ånding, og stofskifte og ekskrementer og andre affaldsprodukter skal fjernes, da de er giftige for fiskene.

### Drikkevandet renses

Kernen i anlægget er en række fiskebassiner, hvor ålene svømmer rundt i ferskvand, der til stadighed cirkuleres. Vandet fra bassinerne løber tilbage til en tank, hvor det beluftes for at fjerne udskilt kulsyre fra ålenes ånding, og hvor det suppleres med en ringe mængde almindeligt drikkevand fra det offentlige forsyningsnet. Ved beluftningen fjernes samtidig evt. tilsat klor fra drikkevandet, der ville være skadelig for ålene.

Efter opvarmning af hele vandmængden med spildvarme til ålenes optimale væksttemperatur sendes det gennem et biologisk rensningsanlæg, hvor opløste affaldsstoffer fjernes, og derpå iltes det med tilstrækkelige mængder ren ilt til ålenes ånding og fødeomsætning, før det igen sendes tilbage til bassinerne, og kredsløbet er sluttet.

### Automatisk fodring

Ålene fodres automatisk med tørfoder i pilleform. Affald og evt. spildfoder udtrækkes fra bunden af bassinerne med en lille vandstrøm og ledes til en slags septiktank med overløb til kloak. Anlægget forurener således ikke de offentlige vandløb.

Trods ihærdige forsøg er det ikke lykkedes at afdække alle detaljer i ålens liv. Æglægning og klækning, som det sker i Sargassohavet, kan ikke eftergøres i fangenskab. Åledyrkning må derfor baseres enten på glasål, der indfanges, når de når frem til Europas kyst, og som hurtigst muligt efter indfangning bringes til anlægget, eller på de større og ældre sætteål, der fanges i de forskellige vandløb.

### Vokser fem gange så hurtigt som i naturen

Det er en stor forandring for en ål at komme fra forholdene i naturen til et åledambrug og en gradvis tilvænnning gennem en periode er nødvendig. En vis dødelighed i denne fase kan næppe undgås, men der overlever dog langt, langt flere end i naturen. Efter at være tilvænnet vokser ålene imidlertid meget hurtigere under de optimale forhold, der kan holdes i anlægget. Således viser hidtidige forsøg, at de kan vokse fra glasål à 0,2-0,5 g til spisestørrelse på 1-1½ år mod 5-10 år i naturen.

Forskellige problemer i forbindelse med opdrætsbetingelser og -teknik skal løses, før recirkulationsdambruget har fundet sin endelige form – derfor betegnelsen forsøgsanlæg, – men mulighederne synes indtil nu lovende for denne nye DS-produktion. Og det første kuld ål ventes at have nået salgstørrelsen på 250 gram engang næste sommer.

Udover produktion og salg af ål venter vi også ved at være med i udviklingen af intensivt åledambrug at erhverve know-how, som det senere vil være muligt at udnytte kommercielt.



# Experiment at Soyacake Factory with eel farming

## The eels are farmed in a closed circulation system with water, cleaner than drinking-water

By Mr. Leif Nordstrøm, Project Manager and Assistant Technical Manager at Danish Soyacake Factory Ltd.

Danish Soyacake Factory has started an exciting experiment with eel farming.

Having the "Water Purity Institute" as consultants, a pilot plant has been established in a vacant building at the factory at Islands Brygge (on the island of Amager).

The first batch of eels was on 7th September released into the fish-tanks where they are to grow big and delicious in about one year in a closed circulation system of water, that is cleaner than drinking-water. In fact, it is cleaned municipal tap water without any connection with the factory's other manufacturing plants.

### Fish farming to remedy food shortage

The pilot plant is to be viewed as part of Danish Soyacake Factory's efforts to develop new and more specialized activities in fields where existing knowledge and facilities (for instance waste heat, vacant buildings and areas) can be utilized.

Farming of fish is a field which is expected to enjoy a rapid expansion during the years to come. The world population's demand for food including fish is growing fast. However, it is limited how much may be caught of the various species of fish to avoid overfishing and a decreasing fish population. Consequently, fish farming comes in naturally as a supplementary source of supply.

Traditional trout pond farming requires large quantities of fresh-water and, correspondingly, results in large outlets of polluted water limiting the size of the production, which is also affected by the changing climatic conditions of the year.

A more intensified, industrial farming of fish in the process of being developed during these years is a pond farming plant having a water-recycling-system where the water consumption is low thanks to cleaning and recycling and where optimum growth conditions may be maintained throughout the year for the selected species of fish. (The system is kind of a parallel of a modern chicken production plant). Yet, a recycling system requires a more substantial investment than ordinary pond farming and is, therefore, especially used for the farming of the more expensive fish, for instance eels.

When such a great number of fish has to be farmed in a limited quantity of circulating water, which is only changed slowly, it is of great importance to maintain an excellent quality of water. Sufficient quantities of oxygen have to be added to ensure proper breathing, and metabolic secretion, excrements and other waste products have to be removed, being poisonous to the fish.

### Drinking-water is cleaned

The heart of the plant is a number of fish ponds where the eels swim around in fresh-water which is constantly circulated. The water from the ponds runs back into a tank where it is exposed to an air-flow in order to remove carbon dioxide excreted through the breathing of the eels and where it is supplemented with a small amount of ordinary drinking-water from the public water network. At the same time, by exposing the water to an air-flow, chlorine – which is harmful to eels – is removed.

After heating the entire quantity of the water through means of waste-heat, reaching the most favourable growth temperature of the eels, the water is circulated through a biological cleaning plant, where dissolved waste products are removed. Thereafter the water is oxidized with an amount of pure oxygen that is sufficient for the breathing of the eels and their food digestion, before the water is again sent back to the ponds, concluding and completing the rotation.

### Automatic feeding

The eels are fed automatically with dry fodder in the form of pills or granules. Waste and excess fodder, if any, are extracted from the bottom of the ponds by means of a small stream of water and are led to kind of a septic tank having vent pipes for the sewerage system. Thus, the plant does not pollute the public water systems.

Despite persistent attempts, it has never been possible to discover all details of "the life of the eel". Egg-laying and hatching, as it takes place in the Sargasso Sea, cannot be imitated in captivity. Consequently, eel farming must be based either on elvers caught when they reach Europe's coast line and which as quickly as possible after being caught are brought to the plant, or based on the bigger and older eels caught in the various streams or seas.

### Grows five times faster than in nature

For an eel, it is a great change to come from nature's conditions to a fish farm, and consequently a gradual habituation period is necessary. A certain death rate in this phase can hardly be avoided, but many more survive than is the case in nature. After having been accustomed to the conditions, however, the eels grow much faster under the optimum conditions being offered in the plant. Previous experiments are thus showing that from the stage of elver, weighing 0.2 to 0.5 g, they can grow to a size acceptable for the dining table in 12 to 18 months, as against 5 to 10 years in nature.

Various problems in connection with the farming conditions and the technique of same are to be solved before the recycling fish farming plant has found its final form – therefore the description: "experimental". However, so far the possibilities seem to be promising for this new Danish Soyacake production. And the first batch of eels is expected to have reached a saleable size of 250 g sometime next summer.

Besides the production and sale of eels we also expect by participating in the development of intensive eel pond farming to acquire a know-how which it will later on be possible to exploit commercially.

Produktionsanlæggets 20 tanke à 5.000 liter, der er bygget med Vandkvalitetsinstituttet som konsulent.

The manufacturing plant's twenty 5,000 litre tanks built with the assistance of the "Water Purity Institute".

◀ Så små og spæde var ålene, før de blev sat ud i forsøgsanlægget. Fra venstre ses ingeniør H. K. Larsen, fr. Britta Pedersen, underdirektør Erik Brandt, direktør Flemming Moerner og afdelingsleder Ib Cortzen.

The eels were so small and slender, before they were released to the experimental plant. From left: Mr. H. K. Larsen, Engineer, Ms. Britta Pedersen, Mr. Erik Brandt, General Manager, Mr. Fl. Moerner, Managing Director, and Departmental Manager, Mr. Ib Cortzen.

◀ Sojakagefabrikkens admin. direktør Flemming Moerner (t.v.), hælder de første ål ud i bassinerne, mens underdirektør Erik Brandt (t.h.) ser til.

Mr. Fl. Moerner (left), Managing Director of Danish Soyacake Factory Ltd., releases the first batch of eels into the ponds, while General Manager, Mr. Erik Brandt (right) looks on.



## 24 tons raffineret støbejern, stål og elektronik

kalder Bonde's Bogtryk/Offset A/S denne Heidelberg Speedmaster, som trykkeriet har købt gennem ØK-selskabet Erik Levison ApS, der repræsenterer Heidelberger Druckmaschinen i Danmark.

Det nummer af ØK Bladet, De nu holder i hånden, er trykt på maskinen. Dennes første tryk opgave var i øvrigt ØK's vægkalender, der i et antal af 14.000 eksemplarer sendes ud til forretningsforbindelser over hele kloden.

På fotoet vurderer direktør Svend Jensen, Bonde's Bogtryk/Offset, et prøvetryk med trykker Toni Christensen.

Erik Levison har indtil nu i alt solgt cirka 100 Heidelberg Speedmaster trykværker i Danmark.

## 24 tons of refined cast iron, steel and electronics

is the name Bonde's Bogtryk/Offset A/S (Copenhagen) is using for this Heidelberg 4-colour Speedmaster printing press bought by the printshop from our Company's subsidiary, Erik Levison Ltd., who represents Heidelberger Druckmaschinen in Denmark.

The copy of the EAC Magazine which you now hold in your hand was printed on this machine. By the way, the first printing task of this machine was that to print EAC's wall calendar, 14,000 printed copies of which are sent to business connections all over the world.

The photograph shows the Manager of Bonde's Bogtryk, Mr. Svend Jensen and Mr. Toni Christensen, Printer, inspecting a trial print.

Up till today Erik Levison has sold about 100 Heidelberg Speedmaster printing presses in all in Denmark.

