ACT news

"ENDEAVOUR" SAILS IN

"Australian Endeavour" sails into Sydney Harbour, heading for a terminal which "is fast reaching a state of strangulation" according to Australian authorities.

"MAKING A CONTAINER OPERATION PAY" — *Alexander Macintosh*

SHIP replacement costs and the maximum utilisation of container space were two of the matters referred to by Mr Alexander Macintosh, Managing Director of Associated Container Transportation (Australia) Ltd, when he spoke about "Making a container operation pay" in New York earlier this month.

Mr Macintosh, in his paper at the International Management In Shipping conference, organised by the "Financial Times" and "Fairplay International", said that results in the container business had to be judged against the right yardstick.

He went on: "With new ship costs inflating at an average of about 25 per cent per annum since 1967 — when we ordered the first three of the eight containerships we now operate with the Australian National Line — it is important to take into account the realistic cost of replacement when measuring results. The ship, which cost £5 million seven years ago, costs more than five times that if ordered today. Therefore, you cannot afford to sit back and be satisfied with a return which looks adequate against the original cost. If you do, you are operating your last containership. You will not be able to afford another one."

Alexander Macintosh

continued on page 8

NEW BID TO EASE PORT 'STRANGULATION'

PORT congestion is a major factor contributing to the current problem of shortage of space in ships to Australia.

The situation, particularly in Sydney, is now so serious that the city's Chamber of Commerce has asked the Australian Premier to set up an official enquiry into all aspects of cargo movement through the Port. In its monthly newsletter, the Chamber says the Port is "fast reaching the state of strangulation".

"Two months backlog of booked cargo to Australia would seem to prove the point.

"Sydney's current congestion is unprecedented — imports currently 36 per cent higher than in the previous year. Incoming ships now dispersed over fewer wharves than before — but there is more of it. A similar situation exists in Melbourne.

"A basic reason for all the disruption is the, by now almost universal, argument about 'who does what?' In this case, who unpacks the containers — waterside or transport workers?"

The report continues: "Not only is this argument disrupting the import side (UK exports) but there is a 'flow-on' problem due to containers being 'tied-up' whilst awaiting unloading.

WATERFRONT STOPPAGES

"In the first two months of this year, waterfront stoppages reached their highest ever level — totalling 45,518 man hours in January alone at Sydney. This compares with a figure of 17,591 in November and 862 in December last.

"During this period, ships of all types were banked in Sydney Harbour spending far longer than usual loading and discharging.

"In-port times of between 25-30 days have not been unusual.

"On top of all this came the recent industrial ban imposed by the Transport Workers' Union on container handling, affecting the delivery of the containers from terminals.

"Predictably perhaps, importer and exporter alike tend to blame the shipping companies and more specifically, 'containerisation' for all their problems.

"It is sometimes forgotten that modern high performance ships and

continued on page 8

ACTA Ship Earnings Top £60m

IN its first year of operations with its full fleet of containerships, Associated Container Transportation (Australia) Limited, world's largest operator of refrigerated containers, had a turnover of £64.7 million, made up of ship earnings of £60.9 million and other revenues of £3.8 million.

The total turnover of £64.7 million compared with £39.2 million in 1972, when the ACTA fleet was incomplete.

ASSETS

The principal assets used by the company are owned by the shareholding lines — Blue Star, Cunard/Port and Ellerman — to whom profit earned is transferred.

The Chairman of ACTA, Sir Basil Smallpeice, said that during the year services were maintained with a fleet of seven ships owned by the separate UK shareholding lines, together with two ships owned by The Australian National Line, and a further containership taken on long-term charter from P&O. The total number of containers used in the three services was 24,800 on December 31, 1973, of which 7,600 are refrigerated.

ACTA APPOINTMENTS

Mr H. J. O'Regan has been appointed chief executive director of ACTA Pty Ltd and associated companies in Australia. Mr C. S. Cullen, previously deputy general manager has been appointed general manager and director.

AT THE ACTS KEYBOARD

At the heart of ACT's world-wide communications network are the Telex girls at the Southampton Head Office.

SEE PAGE 2

First Nuclear Container Ship ready in two years' see pages 4&5

More reefer space

THE reefer capacity of ACT 1 has been increased by some 40 per cent, from 326 to 454 slots, under ACTA/ANL's reefer enhancement programme. Of these, 48 are in the form of standard banks connected to the ship's ducted cold air system. An additional 80 insulated containers can be individually cooled by specially designed Lloyd's approved marine refrigeration units.

Installation of the additional container refrigeration on ACT 1 was completed during an eight-week period in Germany, earlier this year. "Australian Endeavour" returned to the builders last month for installation of the additional equipment, and ACT 2 follows next month.

PORTS OF CALL
Number 8

SOUTHAMPTON — THIS

SOUTHAMPTON, which was once the port for deep sea UK passenger travel, is now living up to its claim to be Britain's second port for the despatch and receipt of world cargoes.

The claim is based solely on dry cargo, container traffic and passengers, and does not include petroleum imports through Fawley.

During 1973, for example, for the second consecutive year, deep sea container traffic through the port doubled, according to the British Transport Docks Board.

Traffic in this category totalled 1,684,000 tonnes last year, compared with 821,000 tonnes the year before and 439,000 in 1971.

Deep sea container traffic doubled—and still room for expansion . . .

TRIO'S PART

And last year's increase was due almost entirely to the full implementation of the TRIO service now providing a sailing from Southampton to the Far East every 4/5 days. (TRIO is made up of BLC, OCL, Hapag-Lloyd, NYK Line and Mitsui-Osk Line.)

Port officials at Southampton calculate that last year, one standard ISO 20ft container was loaded or discharged every 2.3 minutes. The number of containers of all sizes dealt with rose from 74,000 in 1972 to 162,000 last year.

Southampton is now, after London and Liverpool, Britain's third biggest container port in terms of tonnage but, in terms of cargo value, comes second to London.

The port, as it stands, has capacity for a further five container berths, with 165 acres of back-up land. The two berths used by the TRIO service are 204 and 205.

With a combined quay length of 640 metres, they are served by three container cranes and 20 hectares of marshalling and stacking area which is part of the developing Western Docks Extension project.

This project can provide for development a further 1,830 metres of deep water quays together with the above mentioned support area. To meet the demands of traffic generated so far by the development, and to handle further expansion, a four-lane roadbridge has been built to connect the container terminals with the nearby motorway.

Also adjacent to these berths is the new Maritime Freightliner Terminal, designed to cater for all railborne containers passing through the new complex. Six Freightliner services every day connect Southampton with Barling, Birmingham, Coatbridge (Glasgow), Leeds, Liverpool and Manchester.

TRIANGLE'S BASE

The site is dominated by two 0-50-2 Stothert and Pitt cranes. The four rail tracks are connected at each end to the main line, allowing trains to run in at one end and out the other. There are also two roadways.

Recently, Sir Humphrey Browne, chairman of the British Transport Docks Board, declared that Southampton was preferable to the proposed container port at Maplin and was an ideal link with the major European ports, sited as it was at the base of a triangle, formed by the Midlands, South West and South East of England.

WHAT'S THIS THEN?

WELL, if you're a connoisseur of such things, the number plate will be a dead give-away.

It's the Rolls-Royce Phantom VI used by Her Majesty the Queen on her State visit to Australia and New Zealand.

The Rolls-Royce, shipped by R. & J. Park Ltd, came back to the UK aboard ACT I. It was wrapped in polythene sheeting and placed in a crate before being containerised. All part of the ACT service.

Here the Rolls-Royce is being examined by a Customs Officer at the Orsett containerbase.

'80 per cent of cargo containerised within the decade'

GIVING this year's "Reginald Grout Memorial Lecture" to the Chartered Institute of Transport, in London, Mr James Payne, deputy chairman of Blue Star and formerly managing director of ACTA, said he believed that by the end of the decade more than 80 per cent of British liner tonnage serving regular trade routes would be container tonnage — either cellular or Roll-on Roll-off.

"This massive investment in new tonnage has better prospects of giving the shareholder a proper return than any previous investment in tonnage for liner trades," he said.

CONFIDENT

"Our future depends on strong Conferences, supported by strong commercial shipper bodies. Within the Conference system, the shipowners must offer a comprehensive service to meet the requirements of all shippers.

"Provided we achieve these objectives — and there is no good reason why we should not — I am confident of our future prosperity."

In his address on "British Liner Shipping — its Future Prospects and Problems", Mr Payne dealt first with the British Liner Shipowner, and said that he (the shipowner) probably owned a mixed fleet of conventional ships and had a substantial investment in container ships. If not, he was certainly wondering when he would have to invest in container tonnage.

ANOTHER GENERATION

Mr Payne continued "The container ships now operating in a number of trades, have been built with relatively cheap money at what now seem to be shipbuilding prices of another generation."

Monetary factors were undoubtedly going to force everyone concerned in the industry to give further serious consideration to the size of ships built. The temptation in the future, based on pure economics, would undoubtedly be to build fewer and still bigger containerships.

FINE BALANCE

"It is my belief that container consortia will have to be careful not to go too big in the size of ship because of the disastrous effects the loss of a vessel would have on a trade which has a fine balance between space offered and space required.

James Payne

"Further, bigger ships probably mean less competition in services offered to shippers and I believe shippers will always want a choice of operator and not have to put up with Hobson's choice."

Of the Conference system, Mr Payne said: "In my opinion the shipowner has no divine rights in any trade any more than the shipper has a divine right to a service he is not willing to pay for.

ENVIRONMENT

"The Conference system does not give anyone divine rights; what it should do, though, is create an environment in which shipper and shipowner can work together on a basis of mutual trust for mutual benefit. To achieve this position, it is essential that the shipowners can and do work together and that the shippers are also a cohesive force working through their own shipper association."

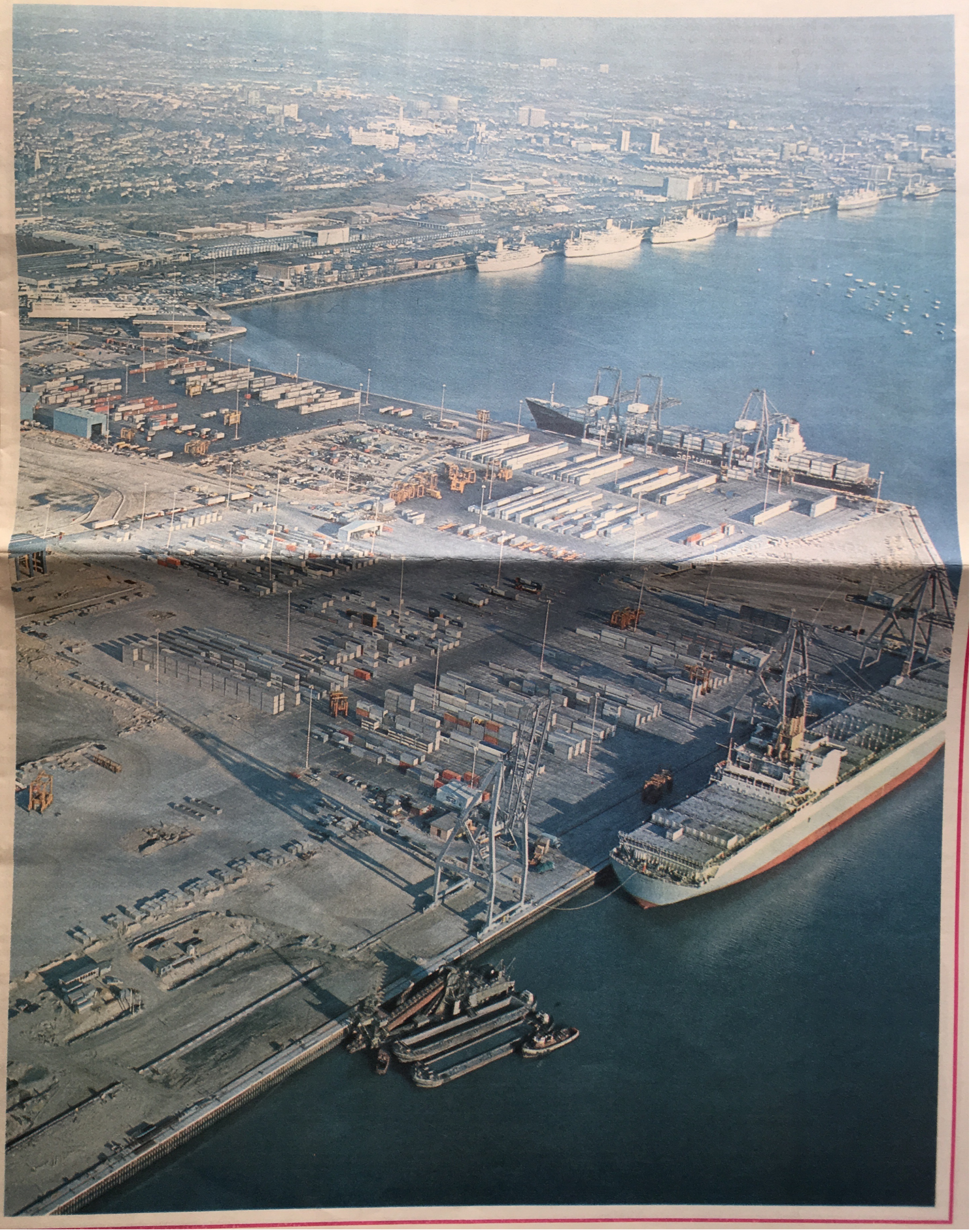
Next, Mr Payne referred to the importance of efficiency in land based services, in which, with the advent of the container era, the shipowner found himself far more involved than ever before.

MORE PAPER

He said the container revolution had produced more paper than any other. If the quantity of paper in the system could be reduced, overheads, too, could be reduced.

A change in the whole tariff structure seemed inevitable but such change would require the co-operation and a change of attitude from exporters, consignees, banks and statutory authorities. When the time came, all concerned would have to consider the problem with open minds.

S IS NOW YOUR LIFE



W. D. EWART, Editor of 'Fairplay International', writes about the rebirth of a

"FIRST NUCLEAR CONTAINER SHI BE READY IN TWO

MORE than 15 years ago, the practical feasibility of using nuclear power as the main source of propulsive energy for merchant ships was established but, of course, the economies of the marine nuclear system were totally unattractive. The pressurised water reactor system was examined in great detail and all related technical problems including the pumps, containment vessel, heat exchanger and the piping system were solved.

The present technical director of Lloyd's Register of Shipping, Mr Brian Hildrew, was among the first marine engineers to become involved in marine nuclear power and his work on the subject is both comprehensive and encouraging and a study of his paper, "Problems of Merchant Ship Nuclear Propulsion" presented to the Institute of Marine Engineers, London in 1962, shows how much attention was given to marine nuclear plant more than 12 years ago.

Like so many investigations, the marine nuclear plant was ahead of its time in terms of power, fuel costs and finance but today, with demands for 100,000 hp, fuel prices quadrupled and 300,000 ton tankers costing more than £30,000,000, the nuclear plant has become attractive.

Between 1957 and 1963 interest in the subject reached a peak in the United Kingdom. However, the development of a marine nuclear plant went no further than the drawing board and model test tank, and it was left to the USA and USSR to put theory into practice and build a nuclear-powered merchant ship. In America, the 21,000 ton, 21-knot cargo ship *Savannah* entered service powered by a 20,000 shp pressurised water reactor system and Russia completed the triple-screw ice breaker *Lenin* powered by three nuclear reactors (of the pressurised water type) developing a total output of 44,000 hp.

In a highly competitive market, experience is an expensive commodity particularly when it is achieved without profit. This was so in the case of the *Savannah* and will also apply to the other two atomic merchant ships, Japan's *Mutsu* and West Germany's *Otto Hahn*. Both vessels are experimental and although a small amount of cargo can be carried — approximately 14,000 tons in the *Otto Hahn* and 2,400 tons in the *Mutsu*—the principal objective is operational experience. Each ship has a 10,000 shp nuclear reactor plant.

General agreement now exists regarding the conditions under which a nuclear powered vessel becomes more economical than a conventionally-powered vessel.

These conditions are:

1 Large installed power (in excess of 50,000).
2 Long round voyages.
3 Few ports.
4 Fast port turnrounds.
5 High speed.

The growth of industrial production and the expansion of trade between Europe, the USA and Japan means a considerable increase in the demand for cargo transport over very long distances. This requires large, fast and, therefore, high-powered ships. The introduction of containers on a massive scale makes rapid loading and discharge possible and further, there has been a reduction in the ports used by a container ship on the major routes.

The container ship appears to be one of the most suitable applications for nuclear propulsion and several designs have been suggested for such a ship; the most comprehensive study on the subject has been made by a team of experts from Vickers (Shipbuilding) Ltd. In 1969 the Group produced design particulars of a vessel of 59,300 tons displacement and 31,400 tons deadweight with a length overall of 895ft, a moulded beam of 105½ ft, and a moulded depth of 80ft. A conventional steam turbine with an output of 95,000 shp at 140 rpm would be installed. The steam would be supplied from a nuclear reactor and the vessel would have a speed of 27 knots.

ATOMIC ENERGY

According to the design particulars this vessel would be able to carry 1,800 containers of the 20ft type all stowed under deck. Various ship types were studied by the group with assistance from the United Kingdom Atomic Energy Authority on reactor design, and a pressurised water reactor designed by the Authority was chosen for the studies.

Details have been published concerning an American design of nuclear powered container ship to carry 2,217 containers of the 20ft type. The displacement of the vessel is stated to be 49,610 tons and the deadweight is 23,250 tons. The proposed power is 120,000 shp and this would give a service speed of 30 knots. A pressurised water reactor is specified with steam conditions of 52 kg per sq cm and 310 deg C.

One West German shipyard is involved in the design of a large, fast 80,000 shp nuclear-powered container ship capable of carrying 1,800-2,000 two majo are invest nuclear p

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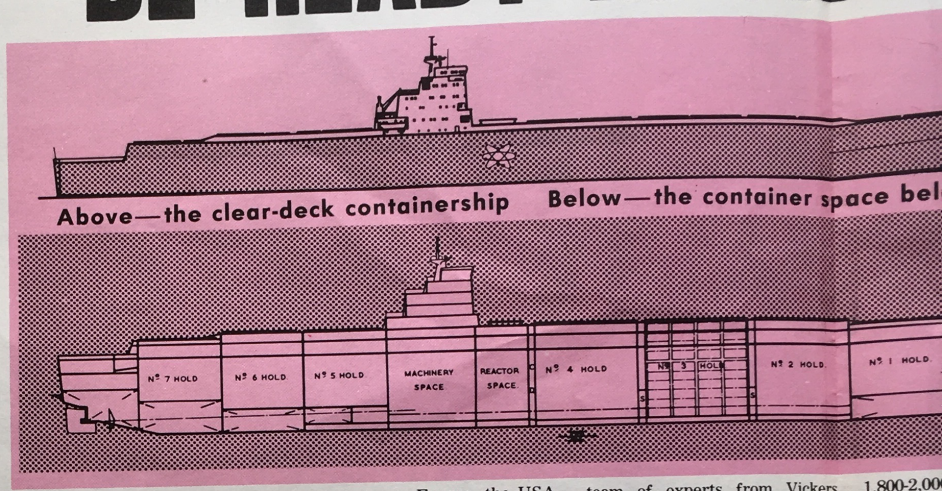


IT'S CALLED BENLIBERTY!

SINCE the war, Ben Line have become by far the biggest East of Scotland shipping company and the Scots have, therefore, tended to overlook the slight liberties taken by the Company with local geography.

Liberties like "Bennevis" for Ben Nevis, for example. The company history shows that the reason for this was born in the early days of telegrams when the cost was a penny per word of up to ten letters. Having one word named ships saved an awful lot of pennies!

Incidentally, Ben Line got round the problem of Ben Viorlich by dropping the first "i", making it Benvorlich. And this has now become the accepted way of spelling both mountains bearing this name!

COMPUTERISED AGENTS

BURGER AND ZOON BV, one of Rotterdam's leading ships agents — they represent BLC in the Benelux countries, France, Switzerland and part of Germany — have installed a larger computer, due to the sheer volume of paperwork handled for their various interests.

The computer has not been housed in their main office — it's in a nearby building, completely separate. This is because the new department allows competing companies computer time and wanted to indicate its commercial neutrality.

Burger and Zoon has a 50 per cent holding in Conva — Container Vervoer Agenturen — which holds ACT's Rotterdam agency.

The 250,000th ACT container— and they celebrated at both ends!

THE "AUSTRALIAN ENDEAVOUR" makes ACT News headlines yet again. To her fell the honour of carrying ACT's 250,000th container on the return leg of her first round-trip this year.

Yes, after only five years, the Group had carried 250,000 containers on the two-way service. And to mark the occasion, Australia's Minister for Shipping and Transport, Mr Charles Jones, attended a special ceremony aboard the "Endeavour".

In the picture on the right below, Mr Jones is in the centre. Others in the front row (left to right) are Mr R. Robin (general manager of A.N.L.), Mr H. J. O'Regan (general manager, ACTA Pty Ltd), Sir Reginald Reed (deputy chairman of Australian Coastal Shipping Commission) and Mr F. A. Bock (chairman of Rice Growers' Co-operative).

ONE OF SIX

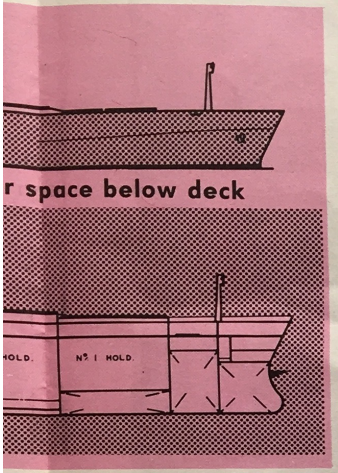
The container was one of six, laden with rice from Australia's Rice Growers' Co-operative, destined for the UK. It was loaded at Sydney's Glebe Island Terminal, watched by Mr Jones, Sir Reginald Reed, deputy chairman of the Australian Coastal Shipping Commission and representatives of both ACTA and ANL.

When the "Endeavour" docked at Tilbury, there to greet her and take delivery of the consignment was Mr R. Sheridan (director, Gilbert J. McCaul Ltd, shippers of this consignment).

Welcoming committee for the special box — (left to right) Francis Eastop, Assistant Regional Sales Manager, ACTA South Region; Tony Williamson, Terminal Manager, Seaforth (standing in for Giles Plummer, who was in hospital); Ron Sheridan, Director, Gilbert McCaul and Co Ltd, the shippers; Richard Bills, ACTA Import Sales Manager; and Graham Wilson, Regional Manager, ACTS Southern Region.

...irth of a workable system

...SHIP COULD ...NO YEARS'



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1,800-2,000 containers and at least two major UK shipping groups are investigating the economics of nuclear power in such vessels.

The Babcock and Wilcox second generation steam system, the consolidated nuclear steam generator, has flow passages within the reactor and the steam generators are within the pressure vessel. *With no large pipes to* rupture, the plant safety factor is higher than in other designs.

The system is based on the generally preferred power conversion arrangement for nuclear marine propulsion known as the pressurised water system (PWR). This system, which is used in various forms for every nuclear-driven ship now in service, uses highly purified water to remove heat generated by the fission process of fuel elements in a reactor. The boiler consists of a shell and tube heat exchanger in which the feed water is evaporated inside the tubes by heat transferred from the reactor heated water surrounding them.

HEATED WATER

Heat is generated by the reactor core which, in one design, consists of bundles of sealed zirconium tubes containing uranium fuel pellets. These pellets are heated by the fission process which is controlled by moving nuclear "poison" in and out of the reactor core by electrically driven control rods.

The combination of high shipbuilding costs and quadrupled fossil fuel prices has made nuclear power attractive for other than special ship applications and it is probable that five nuclear tankers with a speed of 24 knots could replace eight fossil-powered vessels travelling at 15.5 knots. At current prices, the capital cost of the five nuclear tankers would be about the same as, or less than, the eight conventional ships and the annual fuel savings could be five to six million dollars.

Unfortunately it is not possible to guarantee that once a nuclear ship has been built, there would not be delays caused by the need to secure the necessary approval for the vessel's entry into certain sea and port areas.

POLITICAL PROBLEMS

No shipowner could afford the initial cost of a nuclear ship that could be literally tied up with red-tape to such an extent that the purchase price could not be regained. The US Maritime Administration is considering an incentive plan for the first three ships in which they themselves would pay a shipowner when his vessel is completed, which the owner would pay back as he saved fuel during the ship's operation.

After a long period of development, the UK nuclear power industry has become an essential part of the country's economy and it is to be hoped that the shipping industry will be able to take advantage of the extensive experience in nuclear power generation which is available in the UK. It is the right time to invest in nuclear ship development, secure in the knowledge that the economics of such a venture can only improve. Eventually it should be possible to export marine nuclear plants.

By the end of 1976 the first nuclear powered containership could be nearly ready to enter service but it may be necessary for such a vessel to be fitted with equipment for the self-discharge of its cargo of containers.

AN OLD SOLDIER COMES HOME

WHEN the Aberfeldy Highlander returned to the UK after a tour of duty in Hong Kong this well-travelled soldier emerged bright and shining from the Ben Line container, in which he had been quartered for the trip, to be welcomed by 2nd Lieutenant Andrew Maitland of The Black Watch.

The silver statue has been in existence since 1907, when it was presented to the Regiment by Colonel, the Hon H. E. Maxwell, DSO, and is a replica of The Black Watch Memorial at Aberfeldy dating back to 1739.

"Something a bit different" was a Mediaeval party

"WE wanted to do something a bit different this year" Bob Harkins told ACT News. He was referring to ACTA Scotland's annual dinner and the "something different" meant holding the function in a Mediaeval setting — at Cambusnethan Priory, Lanarkshire.

ACTA staff and their guests assembled at the Priory for a meal which included "Cullen's Skink", "Gillies Whim" and "Ranald's Fancy".

Music was provided by suitably garbed minstrels and the dishes served by "lusty wenches", also suitably garbed.

Our picture, taken during the proceedings (front row, left to right) Mrs Eric Ferguson, Mr R. L. Davis (Marketing Manager, ACTA), Mr M. Morse (assistant General Manager, ACTA), Mr Eric Ferguson (Director, Australian Canned Fruit (IMO) UK Ltd), Mrs J. Bell, Mr J. Bell (Blackwood Morton and Sons Ltd), and Mrs Morse.

Back row (left to right) Mrs Davis, the Banquet's King, Mrs Harkins, Mr Harkins (Regional Sales Manager, ACTA, Scotland), and the Banquet's Queen.

The ballet goes by box

FOR their recent tour of Australia and New Zealand, the Scottish Theatre Ballet shipped their props, costumes, scenery, etc, in two ACT containers, a 20ft and a 40ft.

For the first part of their tour — Perth, Melbourne, Adelaide and Sydney — they required both containers but for New Zealand, where they performed in Wellington and Dunedin, they took only the lighter container.

This was shipped to New Zealand aboard the "Remuera" and flown back to Sydney at the tour's end to link up with the other container for the return journey on ACT2.

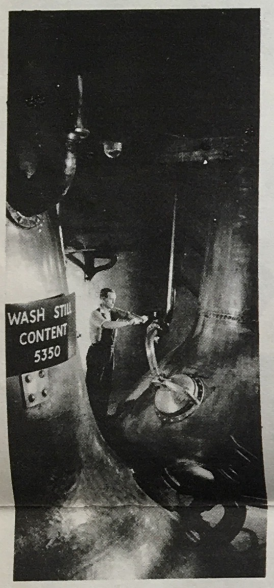
THEY'VE WHISKY GALORE FOR EXPORT

NEARLY 80 million gallons of Scotch whisky worth some £260 million were exported last year and the amount exported is increasing by millions of gallons each year.

Australia and New Zealand are two of the largest importers of Scotch — last year their imports grew by 40 per cent and 77 per cent respectively — and more and more Scotch is going by container to them and the rest of the world.

The USA is by far the biggest customer, importing some 33 million gallons last year, followed by Japan, Italy, France, West Germany, Australia and New Zealand. Close behind come Canada, Brazil (there's an awful lot of something there!), Belgium, Spain, Republic of South Africa and, believe it or not, Venezuela.

The smallest customer last year was Albania, which bought only 15 gallons (possibly for some visiting dignitaries), and lumping numbers two to 12 together, they import a total of 26 million gallons.



There seems to be no doubt that in the 1970s Scotch whisky has become a truly international drink (and to think that less than 100 years ago the Scots still kept it to themselves!), but how did it all begin?

The fiery brew which has sustained the Scots for centuries was known as *uisge beatha* — Gaelic for "water of life". Now, of course, as an international drink it is far removed from the early potent distillation.

Though *visge beatha* is as old as the hills — reputedly invented by the Irish under the guidance of blessed St Patrick himself — the whisky which we all know so well is hardly more than 100 years old.

For the Scotch we drink is blended from malt whisky, matured in casks for at least three years, and grain whisky, sometimes as many as 40 different whiskies being used.

The proportion of malt to grain remains the Scotch blenders' dark secret — but it's unlikely to be 50/50 and is more likely to contain more grain than malt.

The nearest one can get to the older style whisky is malt — and single malts at that. As these are rarely advertised, one must rely on personal recommendation from people who have discovered them.

PROOF

Whisky, in this country, is normally 70 per cent proof. Just what does that mean? Well, proof spirit is one of a standard and approved strength. This strength is arrived at by weighing it (with a hydrometer) at 51 deg F. It should weigh twelve-thirteenths of an equal volume of water at the same temperature. In other words, proof is spirit which contains 57.1 per cent alcohol by volume or 49.28 per cent alcohol by weight.

So who should we thank for bringing whisky to us? It was not until 1885 that whisky became readily available to the Sassenach and the man responsible — a name that, naturally, lives on in the product — John Dewar.

Born on a Perthshire farm in 1806, John went to Perth to look after a relative's wine cellars. After nine years he was made a partner and in 1846 decided to set up on his own, opening a wine and spirit business in the High Street.

Soon he started blending his own whisky and bottling it. When he died in 1880, his son, also John, took over an enterprise, sound and flourishing, albeit only in Scotland.

A container being loaded with Drambuie for export to Australia by ACT.

It was young John (only 24 when his father died) and his brother Thomas who really made whisky history. They decided to invade England with their blended Scotch and Tommy set off for London, and soon bottled Dewar's blended whisky was available in many of London's hotels and restaurants.

In 1896, having already leased their own distillery from the Duke of Atholl, they built one at Aberfeldy. Agents were set up all over the world and in 1901 Dewar's passed the million-gallon-a-year mark.

Today, 90 per cent of Dewar's production is exported. But Dewar's were, of course, only one of the "Big Five" whisky magnates who established whisky outside the boundaries of Scotland in the late 19th century. Oldest of them all is Haig and oddly enough, this is the only one not of Highland origin. The family was originally Norman and settled in the Lowlands in the mid-13th century. The others are Walkers, Buchanan and White Horse.

All, of course, are members of the Distillers Company Limited, formed in 1877 as a combination of six Lowland distilleries. Although DCL built its first malt distillery in 1890, it was not until this century that it moved into the field of blending.

DCL has played a tremendous role in the development of the Scotch whisky trade during the past 50 years. Today, it owns more than 40 distilling and blending firms together with 41 malt distilleries and five grain distilleries.

Outside DCL, there are a number of independent distillers. Of the 92 malt distilleries in the Highlands, only 39 are in the DCL group and similarly, three out of ten Lowland.

The bulk of the malt whisky produced by these is sold for blending and probably only about five per cent of their total combined output is actually bottled as malt whisky. Some of the better known of these are Glenlivet, Glen Grant, Glenmorangie, Laphroaig and of course, one of the largest, Bells, who also blend.

Other non-DCL whiskies include Long John, Grant's (Standfast), Queene Anne, Whyte and Mackay and, of course, Teachers. These are all blended whiskies.

SHAME!

Four million gallons of Scotch are lost each year due to absorption or evaporation while maturing in the cask.

The actual "manufacture" — a description which is totally inaccurate as whisky is distilled, matured, blended and matured again — is a process which is both fascinating and somewhat mysterious. Although the industry knows how to produce whisky by these various processes, there is still an unexplained part of the spirit's development. Two distilleries, using the same malts and grains and the same water from the same stream, can produce two totally dissimilar whiskies.

Because of this "X" factor, there is a lot of superstition in whisky distilling. The building of a new distillery, for example" will usually lead to a "mirror image" being produced, down to identical rivets in identical positions.

Malt whisky is made in Pot Stills by a process which is centuries old. The basis is barley which is soaked in water and spread over the malting floor to await the processes of nature. Seeds germinate, and while they do the barley is turned, usually with wooden shovels to ensure thorough germination.

When the grain is "green" — not literally, more of a straw colour — germination is stopped by drying over a peat fire. Yes, that's peat smoke you can taste! The dried malt is then finely ground and mixed with hot water to extract the sugar, the whole sugary liquid being transferred to wooden vessels for fermentation. Yeast is added and fermentation produces an unrefined form of alcohol, after some 36 hours.

So far, all that has occurred is "brewing" and now comes the really important stage — distilling.

Pot Stills have always been made from copper. This rough form of alcohol is transferred to the stills where it is distilled twice, only the middle "cut" of the second distillation being collected for maturing.

There are in fact three stills — the wash, low wines and the spirit stills. The liquid is heated until it vapourises, the vapour passing up the still's neck, through the worm tub where the surrounding cold water causes it to condense back into liquid.

It then passes to the spirit safe to be tested. Once it has become true whisky, it is run into the spirit receiver. It is the stillman who decides the precise moment when acceptable "true whisky" has been distilled. The testing is usually done by adding water to a sample; if it turns cloudy, it's not "true whisky".

Maturing takes place, wherever possible, in sherry casks. These are continuously in short supply so new oak casks are often used as an alternative. And it's sherry, soaking back from the wood into the malt liquid which gives whisky its distinctive colouring (although caramel is also used today).

Before being run into the casks, the proof — usually between 115° and 120° — is reduced by the addition of more spring water, to about 110° and will be reduced yet again, before bottling, to 70°, by the addition of further water. But before then the blending takes place.

So far, we've dealt purely with malt whisky. The distillation of the grain whisky is somewhat different. It is produced in a Patent Still by a continuous process and in addition to malted barley, unmalted barley and maize are used. The end product is a whisky which has less flavour and character than malt. (Some distillery workers prefer to drink malt whisky direct from the still, before it has matured; they would not do this with grain whisky).

The unmalted cereal is crushed

continued on next page

AGE

The age shown on a bottle of blended whisky, legally, refers to the age of the youngest whisky contained therein — and there can be as many as 40 different whiskies in a blend. A whisky described as "eight years old" is likely to contain much older malts.

Lumb's wool – and it's a record

Earlier this year, ACT 6 carried one of the most valuable cargoes of wool to leave Australia during the wool selling season.

Packed into a 20ft ACT container were four bales of super fine spinners wool consigned to the Huddersfield, (Yorkshire) mills of Joseph Lumb and Sons Limited.

Australian wool broker, J. B. Devereux and Co, paid 1,220 cents a kilo for the wool at sales in Newcastle — almost twice the previous price for NSW wool during the season.

FINEST WOOL

In the same container, also destined for Joseph Lumb and Sons, were four bales worth 1,000 cents a kilo (about $1,000 a bale), and several more worth 900 cents a kilo.

All the wool was grown in the Walcha-Uralla districts, on the northern NSW tablelands, an area traditionally producing some of the finest wool in the State.

Joseph Lumb and Sons have been one of the most consistent buyers of Australian super fine wool for more than a century, and on arrival, the wool will be processed and spun into high quality men's suiting — possibly for re-export to Australia!

Do you hear that whistle down the line?

FAST and reliable haulage over medium and long distance at low cost. That's the basic principle behind the Freightliner concept of transporting containers by rail.

Containers are collected in train-load quantities at terminals throughout the UK, designed for rapid transfer of containers between both road and rail and sea and rail. The containers are carried on specially designed railway wagons, although the actual collection and delivery is carried out by road transport.

Freightliners Ltd, maintain that the container train is the ideal means of feeding production line, distribution depot and containership.

How did it all begin?

Freightliners Ltd, was formed in 1968, its shares being owned by the National Freight Corporation (51 per cent) and British Railways (49 per cent). However, the first Freightliner service went into action between London and Glasgow in November 1965 and in the first full operational year, some 27,000 containers were carried. Figures issued last year indicate that more than half a million containers were carried in 1972.

Incidentally, in 1971, Freightliners signed their biggest ever contract. It was with ACT Ltd, on behalf of BLC, and OCL, and provided for the transport of more than 100,000 containers to and from Southampton and ACTS container bases over a ten year period. Under the contract, six Freightliners would travel daily in each direction, five days a week.

From the one service between two terminals have sprung more than 180 services between 24 terminals, accepting all types of traffic, and a further six at ports and inland customs depots exclusively for import/export traffic. These latter normally adjoin Container bases.

Freightliner terminals are equipped with modern loading machinery and monitoring systems. Transferring containers between road vehicle and rail car, are goliath-type cranes for top and bottom lifting.

Retractable arms, each fitted with a grab, engage with either lifting plates in the base or twist locks in the top corner of each container. This four-point lift keeps the container level during movement and ensures the container will not slip or be released accidentally during lifting.

All the space on Freightliner trains is booked in advance and each container has a specific numbered space at the terminal. It is the operator's responsibility to ensure via his monitoring system that the right container goes to the right space.

Once fully loaded, the Freightliner train sets off on its journey. The trains, provided by British Railways to Freightliner's requirements, run to schedules.

The majority of the services provide overnight transit so that traffic collected one day is normally delivered the next.

The actual Freightliner trains consist of up to 20 flat bogie wagons each providing 60ft of container space. They are air-braked and run in continuously coupled sets. Hauled by diesel or electric loco's, their start/stop average is around 50 mph with a maximum speed of 75 mph.

When carrying a full complement of laden containers, the maximum gross trailing load can be up to 1,400 tons, of which two-thirds is payload. The trains are, in effect, continuous moving platforms up to 1,250ft long.

Freightliner's own containers — which are used only inside the UK and Ireland — are standard ISO in lengths of 10, 20, 30 and 40ft, and are usually of steel and light alloy construction.

In addition, privately owned containers either of the standard type or for conveying liquids and bulk commodities, are carried.

Looking to the future, Freightliners Ltd, foresee the further development of long distance routes and an extension of the co-operation with both dock authorities and shipping interests in developing maritime container traffic.

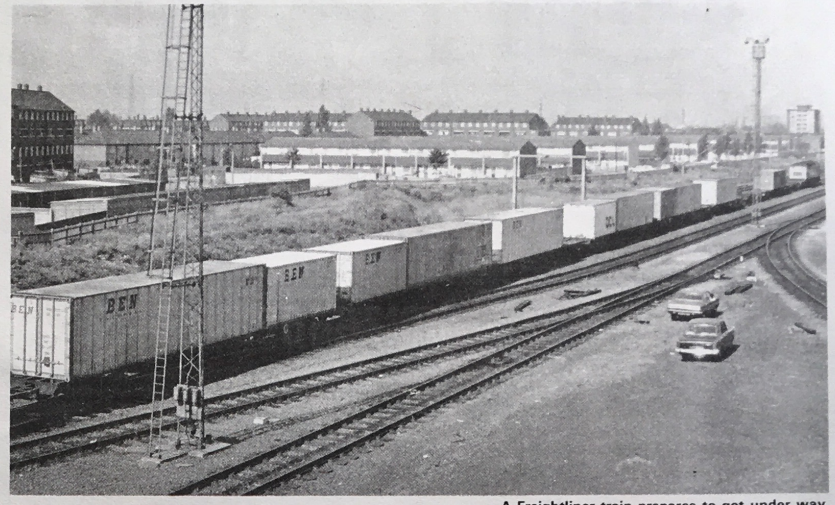
ADVANTAGES

The advantages of containerisation itself are already well known and do not require further underlining. With complete container trains, carrying, say, 120 standard ISO 20ft containers, providing fast transit and reliable scheduled deliveries, yet another advantage becomes obvious.

In view of the current concern with the environment, which has now become international, moves are constantly afoot to get traffic off the roads and onto rails. One can imagine the outcry if a convoy of 120 container lorries hit the road for Birmingham from Tilbury, or to Glasgow from Liverpool. With the rail system, use of container lorries is restricted to short haul, from terminal to customer.

According to the annual report of the NFC for 1972, the average haul by road is 29 miles whereas the average by rail is more than 70 miles.

Operating on a strictly commercial basis, Freightliners are consistently expanding their operations and estimate that next year they will carry more than one million containers. For a system which is simple, readily understandable and requires little documentation, it's not hard to realise the benefits.



A Freightliner train prepares to get under way.

This lorry is ready to be unloaded onto the special all containertrain which will speed the container to its destination, providing fast and reliable haulage at low cost. Overnight service is the rule, so that freight collected one day is normally delivered the next.

The container is lifted gently onto the train by this modern piece of loading machinery. More than 500,000 containers a year are carried by Freightliner service in Great Britain from their 24 terminals and six customs depots exclusively for export/import traffic.

NEW TIN SHIPPING TECHNIQUE

IT HAS taken two years of trial, error and experimentation to solve the thorny problem of shipping tin concentrates from Tasmania to the UK.

Now, the Tasmanian mining group, Renison Ltd, has achieved maximum utilisation of 20ft containers for their product.

At first, Renison shipped their concentrate via ACTA in 44-gallon drums — the concentrate is in very fine particles, like sand. However, the container could only take 39 of these drums which meant no more than 12 tons per container instead of the 18 tons which is its capacity.

Next stage was to try putting the tin concentrate in polypropylene biscon bags which increased the capacity to 14 tons per container but was still not completely satisfactory.

Finally, it was decided to try bulk shipment. The half-height containers were shipped from Melbourne to Devonport and then taken by road the 120 miles to Renison's, on Tasmania's West Coast.

And this time, utilising a polythene liner inside the container, the whole capacity of 18 tons was used. This method has had the result of reducing the packing costs from $263 to less than $10 and will enable Renison to increase their monthly shipping rate.

Death to the Fruit Fly

ACTA's Cargo Care Division has been instrumental in opening up a valuable new export market for Victoria's fruit growers. The market is the USA and the instrument, the in-transit sterilisation of fresh fruit to kill off fruit flies.

A series of tests, devised in conjunction with the Commonwealth Department of Primary Industry, the CSIRO, and SRCA and fruit inspectors from Victoria's Department of Agriculture, were carried out on apples and pears during the '71 and '72 growing season.

IN REEFERS

The sterilisation process involves shipping the fruit in reefers and holding its temperature below 33 deg F (0.6 deg C) for 14 days, during transit.

This obviously requires careful monitoring of the cargo at all times, and to ensure there would be no temperature fluctuations thermocouples were inserted in selected areas of the fruit and attached to recording devices outside the containers. Readings were taken at regular intervals, to ensure the temperature remained within the critical levels.

All the consignments passed the rigid tests and stringent requirements of the U.S. Department of Agriculture.

'Whisky galore'

continued from previous page

and cooked to break up the starch. Transferred to a mash tun, wet ground malted barley is added together with hot water, and the mixture stirred. After fermentation, the liquid is transferred to the patent still for distillation.

In both processes the liquid is heated and the resulting vapour is condensed by either cold water on the outside of the container in the case of malt or by the incoming colder liquid in the case of grain. Like the malt, the grain whisky is reduced in proof by the addition of water before being casked for maturing. Being nearer a natural spirit than the malt, the grain takes less time to mature.

After maturity, the malt and grain whiskies are blended. Having been assembled from the various distilleries, the whiskies are run through blending troughs into large vats. Here, they are usually "roused" by running compressed air into the vats.

The blended whisky is then stored in oak casks for at least six months — not to mature but to "marry" — before being bottled.

Some blenders, however, "marry" their malts and grains separately, bringing them together in a blend, only when actually bottling.

Just how many bottles of whisky are produced each year is hard to say. The last production figures available apply to 1968 when 114.9 million proof gallons were produced. That year, some 10 million proof gallons were retained for home consumption (presumably including the English and Welsh!) and some *60 million* proof gallons exported!

THERE'S A DRAGON AT THE BOTTOM OF THE AIRFIELD

IN the five years since the ACTA/ANL service from the UK to Australia, and then New Zealand, got under way, the 250,000-plus containers carried have held many varied loads — cars old and new, foodstuffs of all kinds, personal possessions and so on.

There's really nothing new even about putting an aircraft in a container. But this one *is* just a little bit different . . .

On her maiden voyage, the "Remuera" carried a dismantled DH 84 Dragon, an aircraft which has been out of production for many years.

The Dragon in question was built in 1942 and used as a navigational trainer by the Royal Australian Air Force.

After World War II, it was part of the Flying Doctor Fleet in the Northern Territory, finally ending its working life with missionaries in Northern Australia.

Now, it is going to the Strathallan Collection, a private venture owned and operated by Sir William Roberts, Bart, at Strathallan Castle, between Perth and Sterling. Sir William has been building his collection only since 1970 and plans to open it to the public once most of his aircraft are in flying condition.

The collection was started when Sir William, a private pilot since 1957, decided that one of the Hurricanes used in the film "The Battle of Britain" should be preserved in this country. After lengthy negotiations with the film company, he acquired the Hurricane together with two Spitfires, in flying condition. And the collection was born.

Next acquisitions were a Lysander and a Blenheim from Canada — these had been in storage on a Manitoba farm. A Fairy Battle was located in Michigan, USA, a "British" North American Harvard was bought in Holland, and again from Australia, a Lockheed Hudson.

LIVING MUSEUM

Sir William's collection is designed to be a living museum of the greatest piston engined Second World War aircraft.

Supplier of aircraft from the Australian end is Mr Maurice Whittington of Sydney, a specialist vintage-aircraft dealer.

Of the containerisation of planes, he says. "Without doubt, containers are the ideal method of shipping these valuable items. Previously we were forced to ship aircraft in secondhand crates which had been used to import Cessna and other light aircraft.

Mr Whittington had no such problems with the Hudson, however — that was flown to Scotland by the former world speedway champion, Lionel van Praag, last spring.

So, if you've a Second World War aircraft for sale, try Sir William.

Willing hands from Strathallan help unload the Dragon's fuselage from an ACT container.

ACT FOR ART'S SAKE

OPERATING on the PACE service, ACT 4 is rapidly gaining a reputation both as a floating art gallery and as an undercover (as opposed to underwater) operator. On her last trip to Australia from the U.S., she carried an exhibit from the Museum of Modern Art in New York which is going on show in Melbourne, Sydney, Adelaide and Perth, before returning to New York in November. Worth more than U.S. $500,000, the exhibit is entitled "Some Recent American Art".

However, also on board, under a cloak of secrecy and the enigmatic entry in the manifest "Art Crate", was *IT*. *IT* was in a standard 20ft container on its own, although *IT*'s size was just 17ft by 8ft. Described as "by far the most valuable consignment ever carried in one container", *IT* was a painting, described as controversial, and entitled "Blue Poles". *IT* is worth $1.3m.

SECRECY

So great was the secrecy surrounding this painting — bound for the Art Gallery of New South Wales — that only ACTA chief executives in the U.S. and Australia, the Master of ACT 4, and his two senior officers knew that "Blue Poles" was aboard. And they were all sworn to secrecy!

On arrival at Sydney's Glebe Island Terminal, the "Blue Poles" container was first off and, together with a police escort, was carried in a security truck to the Art Gallery. Television cameramen, reporters and Pressmen were there in force to see the seal on the container broken, but all they saw was a crate.

IN ONE PIECE

And — unlike the jewelled coach in "Banacek" — the painting was still there and all in one piece.

The art exhibition, on the other hand, consisting of more than 30 pieces, was treated quite openly. One of the two containers used was, in fact, an open-top to take some of the larger pieces. These were crated first, due to their delicate nature and were loaded and unloaded from the container by a "cherry picker" crane.

'Container Operation'

continued from page 1

Discussing container revenue, Mr Macintosh said this depended not only on the freight rate per ton, but also on how much cargo was fitted into the box. It was worth spending time, effort and money to encourage shippers to get more of their cargo into the container.

"You can help improve the load factor per container by giving inducements to your customers to put more in each container, ideally on a sliding scale so that with each extra ton packed, the rate of freight drops," Mr Macintosh said.

"In the trade to Australia from Europe, sliding scale reductions have had a very pronounced effect on the load factor per container, and increased the ratio of shipper packed containers to carrier packed boxes."

JET SERVICE

A BLC Container arrives at Southampton Terminal with a Rolls Royce RB211 aero engine, destined for All Nippon Airlines in Japan. It travelled in the BENALDER. Although it may seem a little incongruous for an RB211 engine to be hauled by a mere 190 hp prime mover from Derby, for the remainder of the journey the 88,000 hp engine of BENALDER was more in keeping with its potential power.

'Port Strangulation'

continued from page 1

systems are designed for high-speed discharging and unloading. Where this is not possible, the operators face considerable losses — it has been estimated that unnecessary delay can cost more than £9,000 per day.

"Shipowner and importer alike have a common objective — which will, in turn, benefit the UK exporter — and that is to speed up the turn-round of ships and generate an even flow of cargo from discharge point to consignee."

CHARTERS

Meanwhile in the UK, aware of the seriousness of the space shortage in Europe, ACTA/ANL have been chartering space and ships, wherever possible, since September last. Up to the end of May more than 3,500 additional slots were made available on the Group's UK/Australia run and current charters will provide a further 5,500 additional container slots in the coming months — and ACTA/ANL has no intention of resting on its laurels.

Ship charters, dependent on availability, have ranged from single voyages to as many as five round trips. Container ships chartered include Atalanta, Columbus, Capricorn, Gutenfels, Moira, Malmos, Monsoon — a brand new 19,000 ton 22½ knot vessel—and the Visurgis. Conventional ships: Anna Presthus, Anne Reed, Edith Howaldt Russ and Sig-Ragne.

ACTA/ANL will continue to charter ships and slots wherever these are available until such time as the situation has eased.

Ben Line into offshore drilling

EMBARKING on a new venture are Ben Line who, together with the Ocean Drilling and Exploration Company — ODECO — are setting up a British offshore drilling company. The company, called Ben-Odeco Ltd, will be based in Edinburgh.

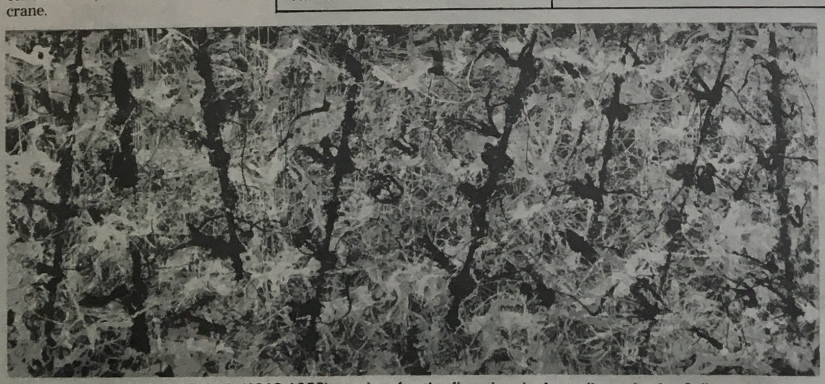
Another Company, called Ben Line Offshore Contractors Ltd, (BLOC) has also been formed in conjunction with North Sea Assets Ltd, and Royal Bank Development Ltd, Ben Line being the majority shareholder. BLOC will become a 50 per cent partner in Ben-Odeco.

UP TO 3,000 ft

The Company already owns its first jack-up rig, the "Ocean Tide", and has ordered an advanced "dynamically positioned drillship" to be built by Scott Lithgow at a cost of some £16m. The vessel has been designed to drill at depths of up to 3,000ft.

It will maintain its exact position while drilling by use of a complex positional sensing system coupled with computer-controlled operation of the main twin propellors and five lateral thrusters, used in combination.

With an overall length of 488ft and a disposal deadweight of 7,000 tons, the vessel will have a cruising speed in excess of 13 knots. Expected to come into service early in 1976, she will have accommodation for 100 and an endurance at sea of more than three months.



"Blue Poles" by Jackson Pollock (1912-1956) on view for the first time in Australia at the Art Gallery of NSW.

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