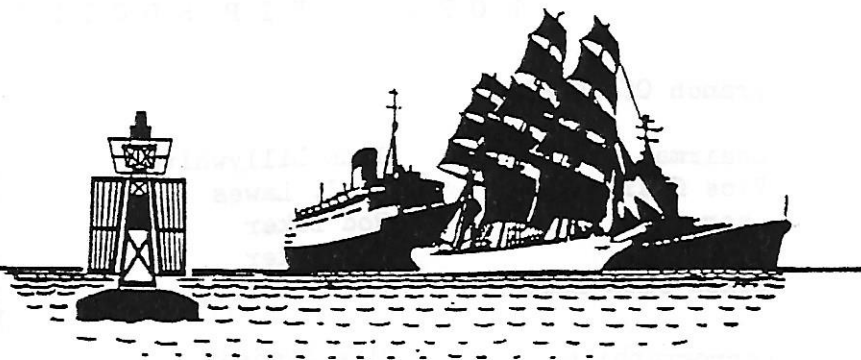


BLACK JACK

QUARTERLY MAGAZINE
SOUTHAMPTON BRANCH
WORLD SHIP SOCIETY



AUTUMN 1993.

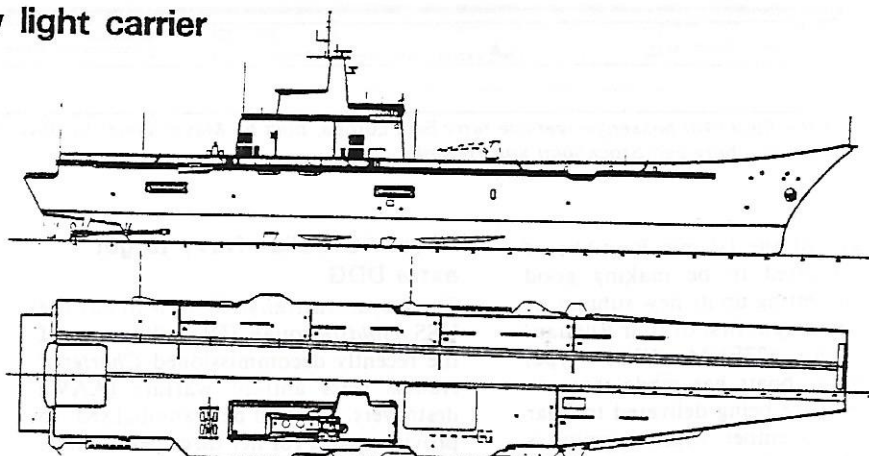
No. 87.

The Royal Thai Navy's new light carrier

THE Royal Thai Navy (RTN) issued Staff Requirements for an Offshore Patrol Helicopter Carrier (OPHC) two years ago. At one time Bremer Vulkan was reported to be the favoured builder, but in March 1991 the contract was awarded to Empresa Nacional Bazán, because of German government delays in granting an export licence, and because of extremely attractive financial terms. The contract was reported to be worth \$285 million, presumably excluding weapon systems and aircraft. The RTN can expect to receive considerable military aid through American Foreign Military Funding (FMF), particularly with procurement of weapons, electronics and aircraft.

The system engineering phase started early this year, and preparation of the building drawings is now underway. Fabrication of the hull starts at Bazán's Ferrol yard in November, with first modules to be on the slip by August 1994. The ship is to be launched as the *Chakkrinareubet* (broadly translated as Princess Royal) in February 1996. Trials should start in October 1996, with formal commissioning in July 1997.

The design is based on the Gibbs & Cox Sea Control Ship (SCS) design supplied by the US Navy as the basis for the Spanish Navy's light carrier *Principe de Asturias*. However overall dimensions are smaller, and a twin-shaft CODOG installation has been chosen, rather than single-shaft COGAG. Two LM-2500 gas turbines (33MW) and two MTU 16V 1163 diesels (8.2MW) will drive cp propellers. Maximum speed is the same as the *Principe de Asturias*, but endurance is 600nm longer, and com-



PRINCIPAL PARTICULARS RTN HELICOPTER CARRIER

| | |
|------------------------------|---------------|
| Length (wl)..... | 164.1m |
| Beam (wl)..... | 22.5m |
| Draught..... | 6.3m |
| Displacement, full load..... | 11,367t |
| Propulsion..... | 2-shaft CODOG |
| Speed maximum..... | 26.0kts |
| Speed, cruising..... | 16.5kts |
| Endurance @ 16.5kts..... | 7,150nm |
| Complement..... | 600 |

plement, including 146 aircrew, is reduced by nearly 300.

Armament will include VL Seasparrow SAMs and four CIWS for self defence.

The OPHC will be able to carry 15 SH-3D Sea King helicopters or 12 Sea Harriers. Aircraft arrangements include a ski-jump and two 20-tonne lifts, one offset to starboard ahead of the island superstructure, the other on the centreline aft. The hangar can be divided into two bays by fireproof curtains, and all workshops and support spaces are on the hangar deck. Magazine stowage is provided for 100 tonnes of ordnance. Although the ship is officially described

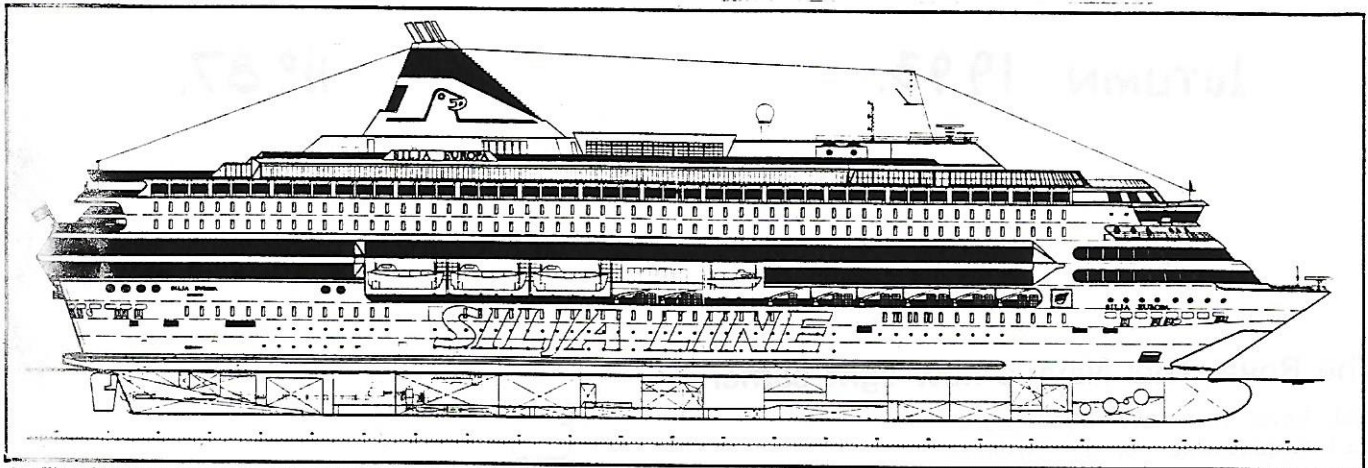
as a helicopter carrier, the RTN hopes to acquire EAV-8B Harrier II STOVL aircraft from the Spanish Navy. When the ship is operating in the amphibious assault role she will embark CH-47 Chinook helicopters, but these will be restricted to a deck park.

Details of the electronics are not yet available, but sensors will include a hull sonar, a 3-D medium-range radar, a long-range surveillance radar, and a comprehensive electronic warfare suite. The ship is to act as a flagship, and so the combat system must provide full command facilities. The RTN is particularly anxious to avoid technical risk, and is looking at an 8- or 10-console version of a proven system such as the GEC-Marconi Nautis.

The RTN's long-term plans include funding for at least one more OPHC, to realise its ambitions to be a 'blue water' navy. One of the deciding factors in selecting the EN Bazán proposals was the favourable price offered for a follow-on order.

Branch Officials.

| | | |
|-------------------|-----------------|---------------------------|
| Chairman | John Lillywhite | 1 Thornleigh Rd. (432181) |
| Vice Chairman | W. J. Lawes | (894234) |
| Secretary | Rod Baker | 29 Milbury Cres. (449972) |
| Treasurer | Don Baker | Bitterne, Southampton |
| Black Jack Editor | Frank Bandey | 40 Locks Heath Park Rd. |
| | | Locks Heath (0489 582300) |
| Reprographics | Mike Lindsay | (694558) |



Profile of the 59,914gt passenger/vehicle ferry Silja Europa, built by Meyer Werft for Viking Line but subsequently chartered to the rival Silja Line service between Stockholm and Helsinki.

THE Navy of the Islamic Republic of Iran is reported to be making good progress in setting up its new submarine force. The *Taregh*, first of four Russian-built Project 877EKM ('Kilo' type) diesel-electric boats has made three or four dives since being delivered to Shar Bahar last November. More alarming is the purchase of up to 1,800 tube-launched mines, which will give the Iranian submarine force the ability to close the Gulf at short notice. The type and manufacturer of the mines is not known, but they are probably part of the same Russian arms deal.

More information is now available about the Proj. 877EKM design. It emanates from the Rubin Central Design Bureau for Marine Engineering in St Petersburg, and the double hull is divided into six compartments. Literature from the bureau gives a surfaced displacement of 2,300 tonnes, length (oa) 72.6m, beam 9.9m and maximum draught 6.6m (fwd).

A form of auxiliary electric power plant is provided for manoeuvring in harbour or as an emergency 'get-home' unit. Maximum surface speed is only 10kts, but submerged speed is claimed to be 17kts, while range when snorkelling is 6,000nm. Maximum diving depth is 300m, but the normal operating depth is 240m, and stores are carried for 45 days. Armament includes 18 533mm torpedoes (six in the tubes) or 24 mines (2 in pairs in each tube and 12 reloads).

Royal Australian Navy to get extra DDG

The Royal Australian Navy is to buy the USS *Goldsborough* (DDG-20), one of the recently decommissioned *Charles F Adams* class anti-air warfare (AAW) destroyers. She will be 'cannibalised' to provide spares for her three near-sisters, the RAN's *Perth* class DDGs. The 5in/45 cal Mk42 gun and the Mk13 single-arm missile launcher will probably be used for shore training, and the two triple Mk32 torpedo launchers may be assigned to the new Anzac frigates.

Although plans to modernise the RAN's six *Adelaide* class (FFG-7 type) frigates have been deferred, options are being considered for a cheaper series of upgrades. Choices include modifying the Mk13 launcher to fire the Evolved Sea Sparrow point defence missile, or replacing it with a Mk41 vertical launch system (VLS). Both systems exist, most of the Mk13 launcher modification design work having been done for the Spanish Navy's sister ships. There is some doubt about the cost-effectiveness of retrofitting the Mk41 VLS, but the engineering work has already been done for the Republic of China Navy's modified FFG-7 type.

SA Navy modernises minesweepers

The South African Navy's 'Ton' type coastal minesweeper SAS *Walvisbaai* was recommissioned in mid-April following a massive repair amounting to rebuilding. The ship was docked and stripped of all internal fittings below the waterline. This permitted the keel plate, frame liners, longitudinal tie plates and reverse bars on the deep longitudinals to be removed, as well as about 90 per cent of all connecting rivets in the hull and deck structure.

In all the refit involved renewing of 300m² of aluminium plate in the hull, 6,000m of hull and deck planking, 45,000 rivets and about 26,000 plank fastenings. The most serious problem was found to be the build-up of hydrated aluminium oxide (HAO) between the alloy and the hull planking, which had forced the planking outwards in some areas. A new upper deck of three-ply laminated Okoume plywood with a 25mm capping of laminated Sapele hardwood was fitted.

The refit and repair, which cost over £4 million, lasted over two years and took up over 300,000 man-hours. In many navies the refit would have been stopped when the extent of HAO build-up became obvious, but the SAN has little or no chance of replacing its coastal minesweepers, and presumably felt that the dockyard staff could learn a lot from the exercise. Few associated with the original CMS design in the 1950s would have predicted that the hulls would still be seaworthy four decades later. ①

old southampton callers



by John S. Lindsay.

Drawing by Nigel V. Robinson.

The ESSEQUIBO and EBRO

Before the first world war, the Royal Mail Steam Packet Company's West Indies service had been very successful. The subsidies had been good and the services grew. To help maintain the services several of the old Union Lines were purchased to run on the West Indies/Canada route. The R.M.S.P. Trans-atlantic route, which was one of the Company's oldest routes incorporated in 1841 was to be updated with two new ships to give the same standard of luxury as on the South American mail service.

Two new ships were designed and orders were placed with Messrs. Workman Clark and Company of Belfast. These two ships were slightly smaller versions of the very successful "A" ships and "E" class vessels and were intended to give the same standards of luxury to the West Indies route. However, owing to the advent of the First World War, they were only to see the briefest services on this or any other Royal Mail route.

The Essequibo, the first of the pair was launched on the 6th July 1914 and the Ebro followed on the 8th September. Their particulars were as follows:- 8,480 gross regd. tons, 450 ft b.p., 57.8 ft. beam x 30.6 ft. depth. The load draft 25ft. 6ins. The ships were twin screw and were driven by quadruple expansion 4 cylinder engines having an I.H.P. of 5800 and an M.H.P. of 1055. Steam was raised by two double ended and two single ended boilers with a pressure of 215 P.S.I. They had twenty four furnaces and a service speed of 15 knots.

For cargo, there were six hatches which were served by hydraulic cranes with a single 15 ton derrick on the foremast. The rake of funnel and masts was fractionally less than the Harland & Wolff ships being $1\frac{1}{2}$ " per foot.

Accommodation was provided for 250 first class and 248 third class passengers. In keeping with contemporary fashion the public rooms represented a range of periods. The Essequibo having a dining room in Renaissance style, a Tudor smoke room and a Louis XVI lounge.

The Essequibo made her maiden voyage on the 18th November 1914 sailing from London to the West Indies, Columbia, the Panama Canal and New York. The Ebro made her maiden voyage on the 28th April 1915 on the same route. Later in the year both were requisitioned, the former to be a Hospital ship and the latter an Armed Merchant Cruiser. The Ebro was given a main armament of 8 6" guns and she served with the 10th Cruiser

Squadron until it was disbanded, she then became a Convoy Escort.

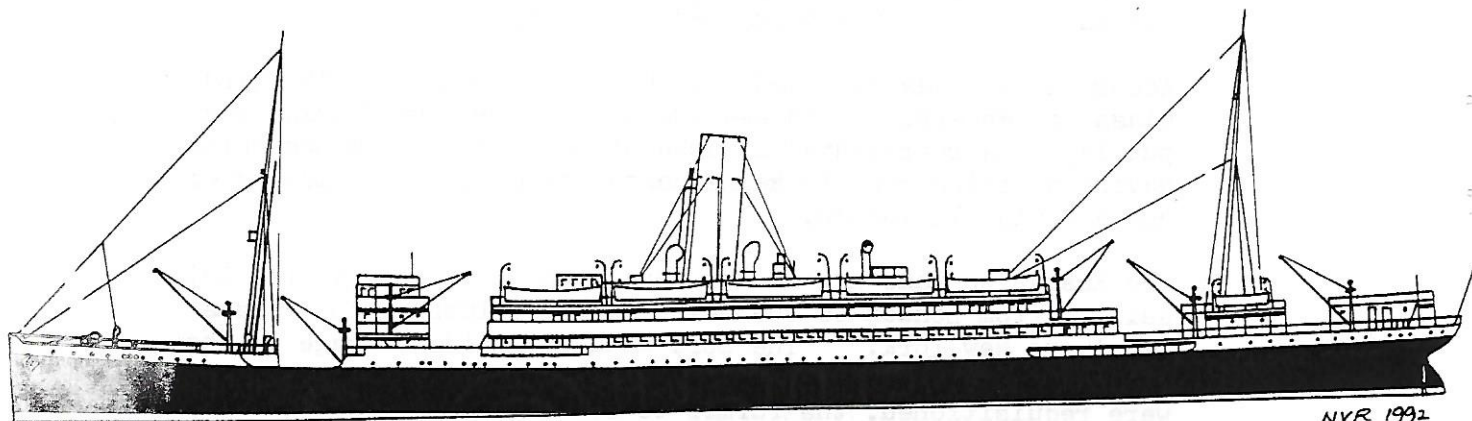
Their old service, which had been discontinued during the war, was not revised owing to the lack of further subsidy. Both ships were therefore transferred to the Pacific Steam Navigation Company's service between New York and Valparaiso via the Panama Canal. For the next ten years they sailed at four week intervals.

On the winter of 1922/23 the R.M.S.P. and the P.S.N.C. had a transfer of tonnage. The Essoquibo and the Ebro were taken over by the latter. Owing to the worldwide slump in shipping late in the 1930's they were taken out of service and laid up in the River Dart where they remained until 1935. During that year they were both sold and only realised some £21,000.00 apiece which was roughly about a quarter of what they were worth.

The Eddequibo had been purchased by Arcos Limited and sent to Southampton for a quick overhaul and then to the U.S.S.R. and renamed "Neva". Her movements were shadowed in secrecy although in the early 60's she was listed as a Russian Naval Depot ship.

The Ebro had been purchased by the Yugoslav/Lloyd Company, renamed "Princesa Olga" and sent to Southampton for overhaul. Her funnel was painted in the Company's colour of blue with black top and when completed sailed away to continue in commercial service. She was sold to Portugal in 1940 and was employed on the Lisbon/South American service until about 1953 when she was transferred to the Central American run.

Finally, in 1955 she was sold to Belgian Shipbreakers for a little over £115,000 which when one considers the ship was twenty years older, was a very good price. In their running days with the R.M.S.P. and P.S.N.C. they were very popular with the passengers and were often called the miniature "A" Class liners. Those of us who saw and remember them cannot argue with that.



ESSEQUIBO & EBRO

NVR 1992

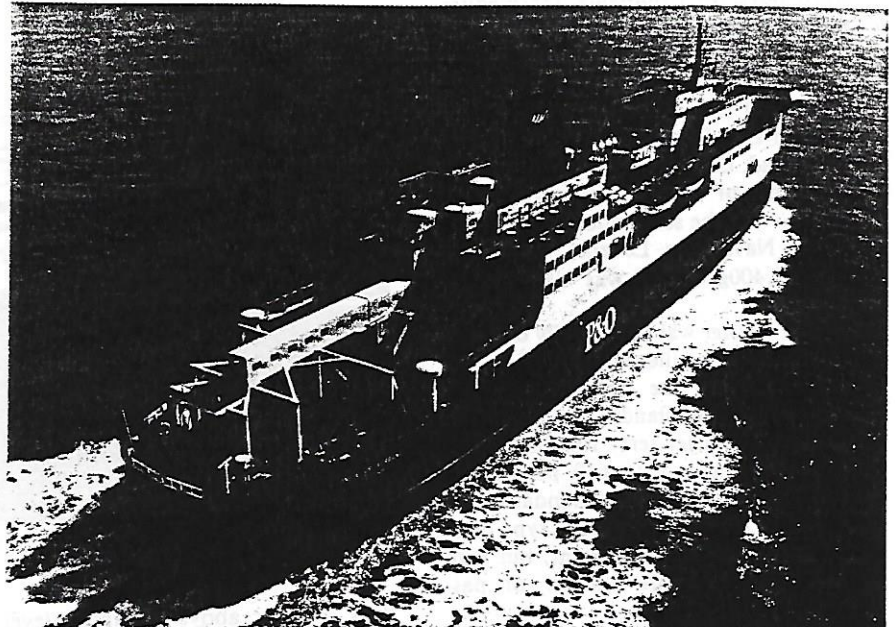
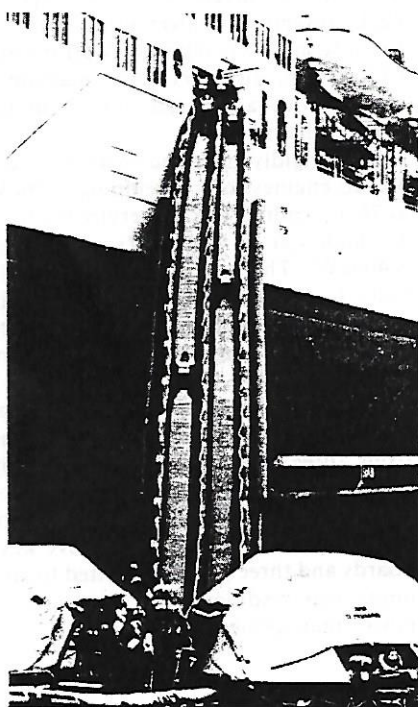
Pride of Burgundy: P&O's newest Tunnel beater

IN May last year an important decision by P&O Ferries led to major alterations being made to the last of its advanced *European Seaway*-class super-freight ships for the Dover-Zeebrugge route. The vessel was altered to become a so-called combi-ferry, with more emphasis on passengers through the provision of similar features as found on the company's passenger/vehicle designs. The reasons for this were a need for increased capacity on the short Dover-Calais service.

Full technical details of the *European Seaway* class (all built by Schichau Seebeckwerft, which, with the former Unterweser site, has been home to many P&O group ferries) were given in our special article published in November 1991 (page E515); nevertheless, the alterations made by the yard to the last of these four interesting ships, renamed *Pride of Burgundy* to reflect her passenger orientation, makes useful reading. The ferry was only delayed by three months beyond its original planned date.

Passenger capacity is now 1,320 persons, instead of the original 200 —

Pride of Burgundy is the first ship to be fitted with RFD's new twin-track escape slide. The design allows an increased passenger capacity from 400 to 450 passengers within the statutory 30min and thus more flexibility for naval architects in choosing lifesaving installations. The slide has a deployed length of 27.5m and a vertical operating height of 14.6m; deployment can be either in a fore or aft direction. Sea trials have been carried out in sea state 4-6 and Force 6 winds.



The 28,500gt *Pride of Burgundy* is the last of four *European Seaway*-class ships, all of which were originally planned to be freight-orientated. She was, however, altered at a late stage to cater for more passengers following increased bookings on the Dover-Calais route. Photo: FotoFlite.

PRINCIPAL PARTICULARS PRIDE OF BURGUNDY

| | |
|---|---|
| Length, oa | 179.40m |
| Length, bp | 170.00m |
| Breadth, moulded at main deck | 27.80m |
| Breadth, over belting | 28.30m |
| Depth, to main vehicle deck | 9.00m |
| Draught, design | 6.00m |
| Draught, two-compartment standard | 6.25m |
| Draught, scantling | 6.40m |
| Deadweight, 6.25m draught | 5,900dwt |
| Deadweight, 6.00m draught | 4,930dwt |
| Gross | 28,500gt |
| Speed, service, at 6.00m draught | 21.00 knots |
| Heavy fuel | 760m ³ |
| Diesel oil | 190m ³ |
| Fresh water | 400m ³ |
| Ballast water (excluding heel tanks) | 2,800m ³ |
| Heel tanks (one pair) | 600m ³ |
| Passengers | 1,320 |
| Crew | 80 |
| Vehicles, main deck | 975 lane metres |
| Vehicles, upper deck | 950 lane metres |
| (total equivalent: 600 cars or 120 lorries) | |
| Lorry driver cabins | 79 for 196 drivers |
| Main engines | 4 x Sulzer 8ZA40S |
| Output, mcr | 4 x 5,280kW at 510rev/min |
| Classification | Lloyd's Register |
| | + 100A1 Passenger and Vehicle Ferry, LMC, CCS |

mainly truck drivers, and the facilities include the now familiar P&O Club Lounge, also an à-la-carte restaurant, two self-service cafeterias, two lounge bars, a shopping arcade with duty-free supermarket, video cinema and play room for children. There is also a VIP room, and a rest room with pullman sleeping seats. Three combined passenger/service lifts are fitted, two of 1,500kg or 16-person capacity and one for 2,500kg or 25 persons.

The two vehicle decks are fully retained, and capacity remains the same at approximately 120 units each of 15m length or 600 cars. Also retained are the 36 sockets for refrigerated semi-trailers and containers. Despite the conversion, *Pride of Burgundy* is still planned to be

operated on the Dover-Zeebrugge freight service if a need arises.

This Zeebrugge requirement means that the relatively large cabin outfit remains in the forward superstructure, comprising 41 two-bed cabins and 38 two-berth cabins with an additional pullman berth, providing sleeping accommodation for a total of 196 passengers. The number of crew has predictably risen from 50 to 80.

To cope with the additional electrical load on the *Pride of Burgundy*, an extra diesel-alternator is installed on board. This is similar to the other three units, comprising a Sulzer 6AT25 engine developing 1,200kW at 1,000rev/min and driving a 1,437kVA Siemens alternator. Like the other three ships in the series, this vessel is also equipped with two 1,810kVA shaft-driven alternators.

An enlarged lifesaving outfit comprises four 150-person motor lifeboats, two 450-person marine escape slides, and two six-person motor rescue boats. The three earlier ships have only two 60-person Watercraft combined life and rescue boats, plus eight 25-person davit-launched liferafts.

The rationale behind the decision to alter its fourth ferry was a 27% increase in demand for bookings on the Dover-Calais crossing during the early months of 1992. Despite the shadow of the Channel Tunnel hanging over ferry operators, it is hoped that this is good news for the future; indeed, P&O now claims to be able to offer a minimum of waiting with 25 sailings daily in both directions and to have capacity for 90,000 passengers and more than 27,000 vehicles. ①

Juan J Sister: a Finnish-built ferry for Spain

A RARE event in shipbuilding circles took place in mid-1991 when Kvaerner Masa-Yards' Turku New Shipyard was awarded the contract to build a new ro-ro ferry for Compania Trasmediterranea, of Spain. Not only was it unusual in that ships ordered by Spanish state companies are almost invariably built in Spain, but this was also believed to be the first-ever Spanish vessel constructed in Finland. Christened *Juan J Sister* (the full name of a 1975-built ship — *J J Sister* — for the same operator from the Union Navale de Levante yard), this new 22,400gt ferry was delivered in May.

Juan J Sister was specifically designed (initially by Astilleros Espanoles) for traffic between the Spanish mainland and the Canary Islands. She is classed, as a car/passenger ferry for short international voyages with 610 persons on board, to Bureau Veritas standards and is of the currently popular type with principal emphasis on freight, but with space for a modest number of passengers.

There are 138 standard cabins and one two-berth cabin with disabled facilities for a total of 400 travellers; during her short journeys between the individual Canary Islands the ferry can also accommodate an additional 150 deck passengers. Public areas are quite modest for a relatively long voyage, comprising a TV lounge and bar seating 100 passengers with a swimming pool on deck 8, and a cafeteria on deck 7 which seats 240. *Juan J Sister* carries a crew of 58 and each crew member has his or her individual cabin located on decks 8 and 9.

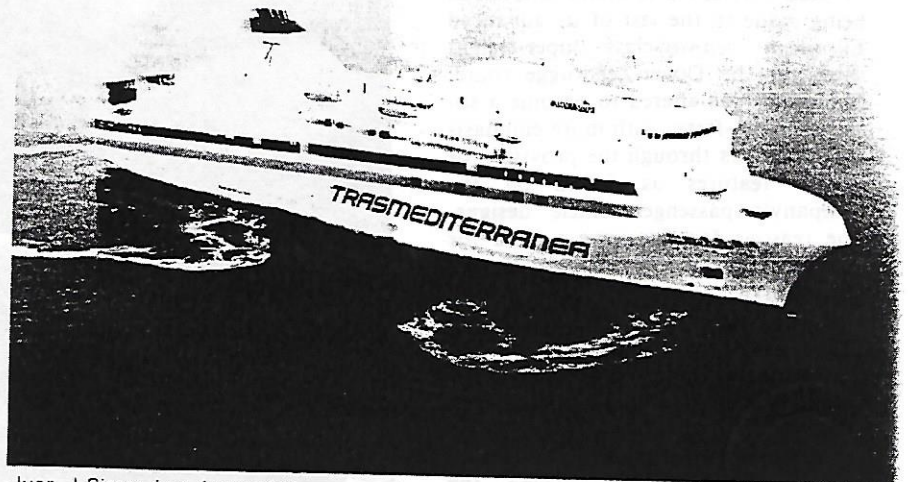
With an overall length of 151.10m and a breadth of 26.00m, the new ferry can accommodate a total of 150 cars and 92 trailers of 16m length. She complies with the latest SOLAS stability regulations, having narrow double sideskins in the main vehicle deck and substantial void spaces enclosed by longitudinal bulkheads in the lower garage space. A partial centreline casing is fitted in the three upper vehicle levels.

A total of 1,680m of trailer space is available, in the main deck (730m), cargo hold (200m) and an upper trailer

deck (750m); above the latter level is further space (1,700m²) for private cars. Access to the main deck is over a twin door/ramp at the stern, with a ramp and visor at the bow; once inside the ship, vehicles have a choice of descending to the lower hold on a 17.5m x 3.0m lift, or ascending to the upper trailer deck over a 42.00m long tilting ramp or up a fixed ramp strengthened for cars only. A further fixed ramp provides access from the upper deck to the car garage on deck 6 above. Free height throughout the cargo spaces is 4.5m, except in the upper car deck where the height is 2.1m. The complete access equipment package was designed by MacGregor-Navire.

A pair of Interling air-activated tanks with a heeling moment of 1,500 tonne metres control ship movement during loading and discharge. Tank capacity is 150m³ and the effect is 750 tonne metre/min. Seakeeping is improved by a pair of 11m² fin stabilisers, and independent Becker flapped rudders with twin 550kW bow thrusters provide excellent manoeuvrability.

Water-based fire extinguishing systems cover much of the ship, based on three 100m³/h pumps. All accommoda-



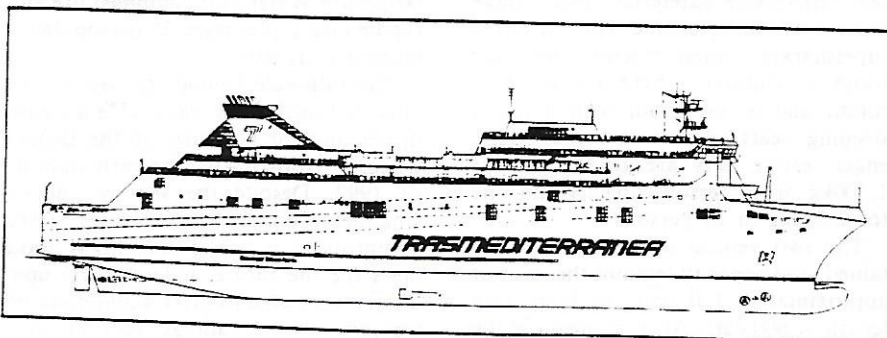
Juan J Sister is a ferry of the currently popular type with emphasis on freight but with facilities for 400 overnight passengers.

PRINCIPAL PARTICULARS JUAN J SISTER


| | |
|---|--|
| Length, oa | 151.10m |
| Length, bp | 131.30m |
| Breadth, moulded | 26.00m |
| Deadweight | 5,500dwt |
| Gross | 22,400gt |
| Passengers | 400(+ 150) |
| Passenger cabins | 139 |
| Officers and crew cabins | 58 |
| Cars | 150 |
| Trailers | 92 x 16m |
| Main engines | 4 x Wärtsilä Vasa 8R32E |
| Output, mcr | 4 x 3,150kW at 765rev/min |
| Speed, service at 8,400kW engine output | 18 knots |
| Heavy fuel | 492m ³ |
| Diesel oil | 152m ³ |
| Fresh water | 483m ³ |
| Classification | Bureau Veritas |
| | 1 3/3 + Deep Sea, Passenger Ferry, F, AUT-PORT |
| Flag | Spain |

tion and cabin areas are covered by an automatic sprinkler system, with a drencher arrangement in the vehicle decks (except the lower hold, which is fitted with a CO₂ system). A centralised CO₂ system also serves the machinery spaces, with a separate system in the galley exhaust duct.

Four rigidly mounted Wärtsilä Vasa 8R32E engines each developing 3,150kW at 765rev/min provide a service speed of 18 knots at a machinery output of 8,400kW. The engines are coupled in pairs to gearboxes fitted with built-in clutches and thence to high-skew cp propellers of 4.5m diameter with stainless steel blades; these turn at 139rev/min. There are no shaft-driven alternators, and all electrical supplies come from three 1,965kW units driven by Wärtsilä 6R22/26 engines. A micro-processor-based monitoring and control system with six VDU screens, five keyboards and three printers is fitted to suit unmanned conditions and this includes a power management arrangement.



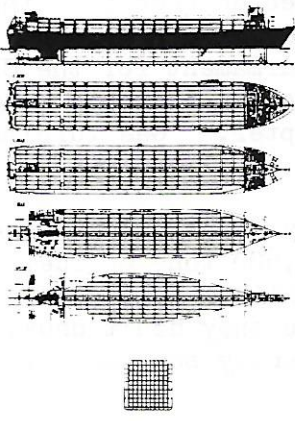
SIGNIFICANT SHIPS OF 1992



ATLANTIC LADY: a novel hatchcoverless container ship

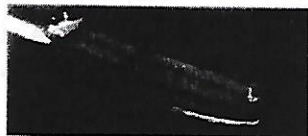
[Detailed technical specifications and descriptions of the ship's features, including its hatchcoverless design and container capacity.]

ATLANTIC LADY



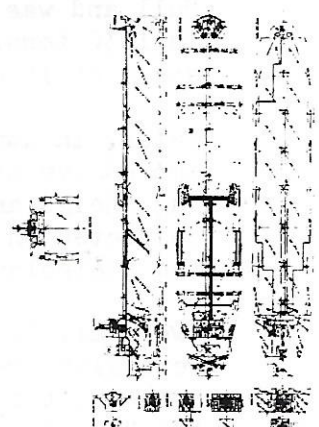
SIGNIFICANT SHIPS OF 1992 presents some of the very best in today's ship design and construction, giving technical details of 48 selected merchant ships of all classes and types (approximately 100m length and above) which were completed by shipyards around the world during 1992. Readers will find in SIGNIFICANT SHIPS OF 1992 such vessels as ATLANTIC LADY (hatchcoverless container ship),


CHEVRON ATLANTIC (double-hull crude oil tanker), CRYSTAL PRIDE (innovative refrigerated cargo ship), HANJIN OSAKA (fast container ship), JFJ DE NUL (large multipurpose dredger), MARINOR (chemical/china clay tanker), PACIFIC ENDEAVOR (new-design bulk carrier), and RADISSON DIAMOND (SWATH cruise liner). Many other important designs are also included.



GOLAR STIRLING: new era double-sided VLCC

[Detailed technical specifications and descriptions of the ship's double-sided design and capacity.]

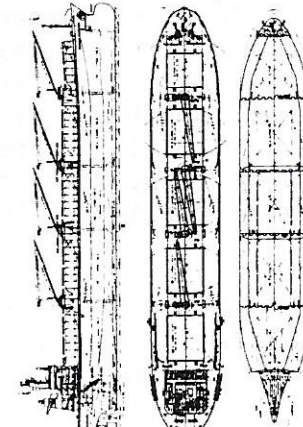




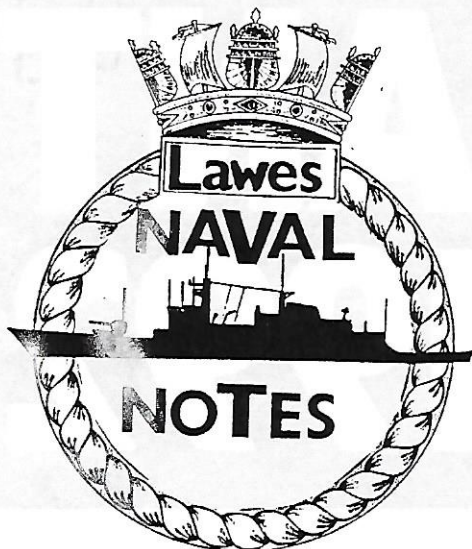
PACIFIC ENDEAVOR: new bulk carrier design from Oshima

[Detailed technical specifications and descriptions of the ship's design and capacity.]

PACIFIC ENDEAVOR



Copies can be obtained at a cost of £15.00 (£12.00 to members of RINA). For further information or to order your copy please contact RINA, 10 Upper Belgrave Street, London SW1X 8BQ, Tel: (71) 235 4622 Fax: (71) 245 6959.



At the time of the previous edition of Black Jack I complained to the Editor that it was difficult writing a Naval Notes article now that so few naval vessels visit Southampton. Just to prove me wrong, August saw a surprise influx of naval ships.

The 175th Anniversary of the British Sailor's Society brought in H.M.Y. "BRITANNIA", H.M.S. YORK, R.F.A. Black Rover and R.M.A.S. Rollicker.

The York, a "stretch" type 42 Destroyer acted as escort to the Royal Yacht. She was completed in 1985 by Swan Hunter. With a full load displacement of 4775 tons she has the standard armament for the Class with a "Sea Dart" S.A.M. missile system, a single 4.5 inch D.P. gun, two Vulcan Phalanx C.I.W.S. and a Lynx helicopter. Gas turbines produce a speed of about 30 knots.

The "Black Rover" was also built by Swan Hunter and entered service in 1974. She can carry a cargo of 6,600 tons of fuel plus water, stores and provisions. Although fitted with a helicopter deck this class does not have a hanger. Therefore they don't usually carry the aircraft. "Black Rover" has recently been employed at Portland assisting with training.

R.M.A.S. "Rollicker" is a sea going tug designed for long distance towing with a 50 ton bollard pull. She was built by C. D. Holmes at Hull and was accepted into service in 1973. Her full load displacement is 1630 tons. Diesels are 4500 h.p. total and give her a maximum speed of 15 knots.

Later, in August, a group of seven German Auxiliary Vessels made an impressive sight in the docks. The group consisted of the Salvage Tug "Helgoland" of 1558 tons built by Schichau at Bremerhaven and completed in 1966. In addition to her towing and salvage uses the "Helgoland" can also act as a mine layer.

Two small (2174 tons) replenishment tankers of the type 403 Class were also present. These were the "Westensee" and "Tegernsee" both built by Lindenwerft at Kiel in 1967. A third tanker was the "Rhon" who entered service in 1977. She was built by Kroger at Rendsburg as the Merchant ship "Okene" but was purchased during construction and converted for naval use. She can carry fuel and water for underway replenishment. The three largest vessels "Glucksburg", "Freiburg" and "Westerwald" are variations on the type 701 replenishment ships. "Glucksburg" (type 701c) entered service in 1968. She displaces 3700 tons and was built by Flensburger S.Y. During the late 70's she was lengthened by 11.5 metres to increase her storage capacity. In addition to fuel, ammunition, fresh water and refrigerated stores, she also carries up to 30,000 spare parts for patrol boats.

The "Freiburg" (type 701e) built by Blohm and Voss at Hamburg started her career in 1968. Between 1981 - 84 she was converted to support the type 122 (Bremen Class) frigates. She is equipped

with a helicopter deck for vertical replenishment. Amongst the equipment she carries are spare Harpoon missiles for the frigates.

The "Westerwald" is an ammunition ship of the 760 type, although intended for a different function, the design was based on that of the 701 type. She entered service in 1967 having been built by Orenstein and Koppel at Lubeck. Her full load displacement is 4014 tons. All of these last three ships are powered by Maybach diesels of 5600 h.p. to give them a speed of 17 knots.

The reduction in the number of naval movements in and out of Southampton means it is often difficult to compile these notes. If any members have ideas for articles on Naval matters and let me, or our Editor know of them I will attempt to produce something for Black Jack.

SOUTHAMPTON'S RHEINTAINER SERVICE

Following my first report of this service via information gleaned from local shipping agents, there have been changes in the charter market of the vessels used from the outset of this Europe-Irish Service.

RHEIN LIFFEY - (Original plan was Ex."ANGLIA")

This vessel is now: (Ex."INKA DEDE" 1992 - 5,0006 G.T.)

RHEIN LEE - (Ex. "RHEIN TRADER" as previously noted)

RHEIN LAGAN - (Originally Ex. "RHEIN PILOT")
(This vessel has now been sold to China)

This vessel is now: (Ex."KARAT" 1978 - Ex."MAGNOLIA" 1978)

(Ex."KARAT" 1978 - 1983)

(Ex."ILE DE FRANCE" 1983 - 93)

(1978 -999 G.T. of HANS ECKOFF - Antigua Flag.

Steve Dore

More Kvaerner contracts help keep morale up

FEW signs of any uplift in the level of shipbuilding contracts have been evident in recent weeks. Japanese government statistics for April (calculated differently from those of the Japan Ship Exporters' Association, which had not been received at the time of writing) reveal only eight vessels contracted, totalling 171,800gt. They comprised six bulk carriers, one refrigerated cargo ship and a container carrier; none were pure export orders. These figures are 70.2% lower than those for March and show that orders in the first month of the new Japanese fiscal year have fallen by 66% compared with the same period last year.

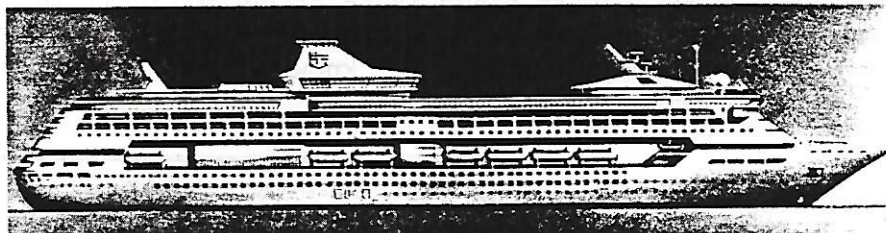
Nonetheless, we can report that activity at last month's Cruise and Ferry '93 exhibition and conference, held in London, was quite high; this is probably a reflection of the buoyant state of the cruise liner industry and the relatively happy state of ferry builders — two sectors that are maintaining European yards at the present time. Indeed, during May, Chandris Celebrity Cruises took up its option for a second liner at Meyer Werft — two months earlier than originally planned. A further option for a third vessel still stands. Some details of these particular liners appeared in our May issue, page E241.

The other sector that made headlines just as we closed for press last month was Abu Dhabi National Oil's (ADNOC) contract at Kvaerner Masa-Yards for four 135,000m³ (68,500dwt) LNG tankers, to be built at the Turku New Yard for delivery in 1996 and 1997. These ships will have four Kvaerner Moss Rosenberg spherical tanks of 40.44m diameter, which will be assembled at the shipyard using an efficient new technique developed by the shipbuilder during the last four years.

Aluminium tank shell segments will



Above. An artist's impression of the four new 135,000m³ LNG tankers order by the Abu Dhabi National Oil Co from the Turku New Yard of Kvaerner Masa; the contract is the largest in the builder's history. A special feature will be the new method of fabricating the four Kvaerner Moss Rosenberg spherical cargo tanks.



Above. An artist's impression of the pair of new cruise liners ordered at Chantiers de l'Atlantique by Royal Caribbean Cruise Line. An important departure for this owner is the specification of a diesel-electric power plant, to be based on five Wärtsilä 12-cylinder Vasa 46-type engines with a total output of 10,860kW.

be formed of large multi-plated high-energy MIG-welded flat panels. Following cutting by NC-controlled water-injected plasma-arc machinery, the panels will be heat-die-formed to an exact spherical curvature. By using this method, up to 55% of welding can be performed on flat panels, claims the yard. A 29,600kW steam turbine plant will drive a 8.6m diameter fp propeller to give each tanker a service speed of 19.5 knots. The ships will be classed with Lloyd's Register.

EEIG UNITAS — Three European-based classification societies, Germanischer Lloyd, Registro Italiano Navale and Bureau Veritas have set up a European Economic Interest Grouping (EEIG), in order to enhance co-operation, especially in areas of R&D, rules, quality assurance procedures, surveyor training, and representation optimisation.

RUSSIA AGREEMENT FOR KVAERNER — A co-operation agreement with the Russian Sever shipyard at Severodvinsk, near Archangel, has been signed by the Scandinavian shipbuilding and engineering group Kvaerner. This is designed to help the yard to convert from naval to civilian production.

DIESEL-ELECTRIC RCCL LINERS — The two new cruise liners ordered recently by Royal Caribbean Cruise Line (RCCL) from Chantiers de l'Atlantique will follow the latest trend in having diesel-electric propulsion plants. Each vessel will feature five resiliently

mounted Wärtsilä Vasa 12R46 engines developing a total of 10,860kW.

INTERNATIONAL MARITIME GROUP — We have been asked to point out that the International Maritime Group is a completely independent holding company of which Burness, Corlett & Partners is a fully autonomous trading subsidiary, and not as described in our April issue, page E157.

● The International Maritime Group has recently set up what is believed to be the UK's first specialist maritime management consultancy. This is Maritime Corporate, based in Newcastle upon Tyne.

PEOPLE

GORDON THOMPSON has been appointed consultant/observer to examine and appraise the overall auditing system and procedures run by the International Association of Classification Societies (IACS).

J VISKINGE JENSEN, formerly technical director, has been appointed managing director of the Danish shipbuilder Danyard, at Frederikshavn.

A new vice-president in the central management for shipbuilding has been appointed at the Kvaerner group. He is **KARE RYGG JOHNSEN**, formerly of Kvaerner Mandal.

LES STEPHENSON has been appointed managing director of P&O European Ferries (Dover) Ltd, in addition to his post as deputy managing director of P&O European Ferries Ltd.

CAD/CAM

FORAN V30 LICENCES — The first licences for Senermar's new Foran V30 CAD/CAM system (*The Naval Architect April 1993*, page E159) have been signed with the Madrid office of Astilleros Espanoles, and will also be used by the group's Sestao, Puerto Real, and Seville yards. Two yards in the INI group have also acquired licences: Juliana Constructora Gijonesa and Hijos de J Barreras. All the above companies will use the general design subsystem. Union Naval de Levante has signed a licence for the whole V30 suite.

MATHEMATICAL SOFTWARE — A new mathematical software package MAPLE V, release two for Windows, has been launched by Clecom Ltd, of Birmingham, UK. This is a comprehensive system for performing symbolic and numeric calculations for science and engineering work.