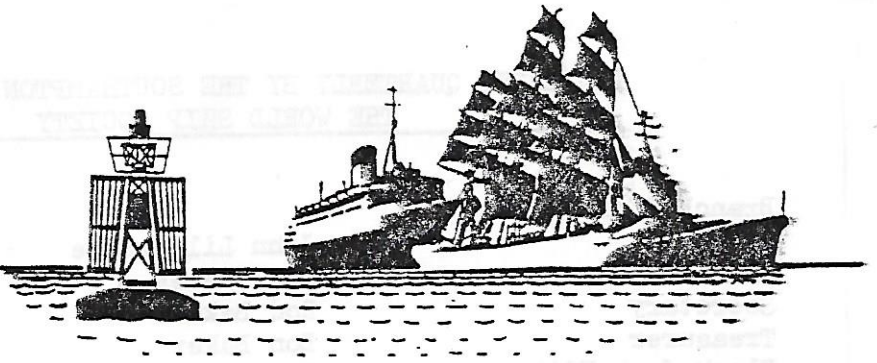


# BLACK JACK

QUARTERLY MAGAZINE  
SOUTHAMPTON BRANCH  
WORLD SHIP SOCIETY



AUTUMN 1994

№ 90

## THE CHEERING LADY IN WHITE

I AM enclosing the menu card from the 47th annual reunion of the 136th Field Regiment Royal Artillery Old Comrades' Association, which may be of interest to some older readers of *Wave-length*.

The front of the menu (pictured below) bears a reproduction of a drawing by the celebrated Yorkshire-born Australian artist, Frank Pash, who served with the 136th Field Regiment during World War Two and sailed to India en route for Burma aboard HM Troopship, *Mooltan*.

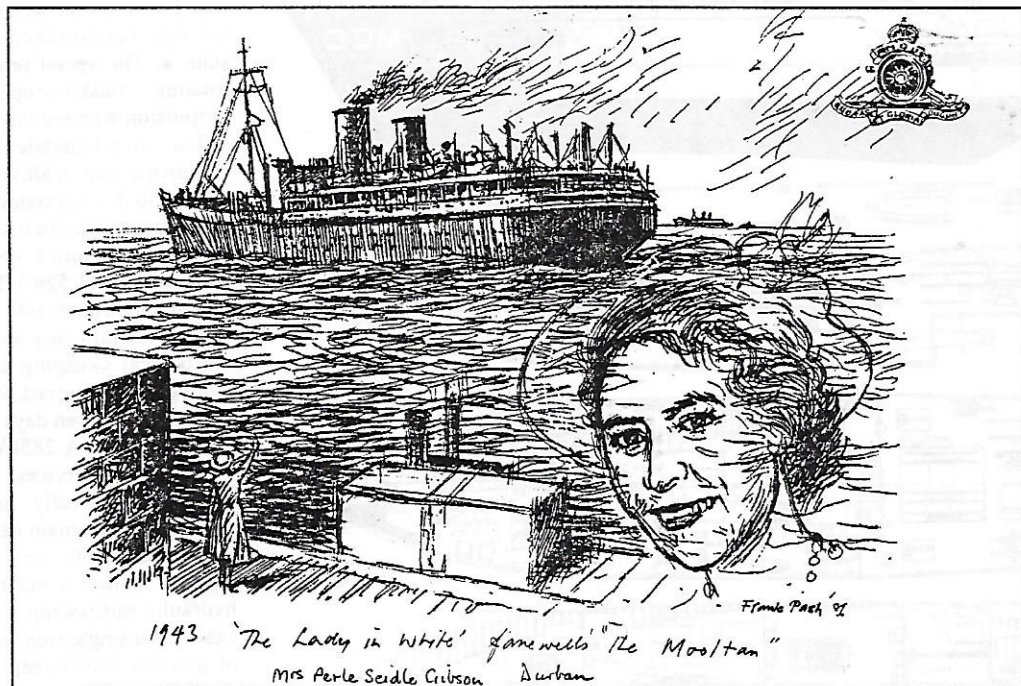


The 'Lady in White', Perle Seidle Gibson used to stand on the end of the pier at Durban and sing to the troops as they arrived and left the port. She is best remembered for her rendition of 'Land of

Hope and Glory' and although she did not use a microphone she was clearly heard above all the hustle and bustle around her. In the background is *Mooltan* herself, converted in 1939 to an armed merchant cruiser and then converted again in 1941, this time to a troopship.

John Mouldsdales  
Liverpool

*Ed: P&O Pensioner, John Mouldsdales worked for P&O Roadways for 48 years, retiring in 1982. He is Secretary and Treasurer of the 136th Field Regiment RA Old Comrades Association.*



1943 'The Lady in White' farewells 'The Mooltan'  
Mrs Perle Seidle Gibson Durban



Branch Officials:-

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		Locks Heath (0489 582300)
Reprographics	Mike Lindsay	(694558)
Press & Publicity	Doug Toogood	(0703 470142)

## PBI's coastal mine countermeasures vessel

BASED upon its experience with the MCM *Avenger* construction programme, Peterson Builders Inc (PBI) of Sturgeon Bay, Wisconsin, has developed a design for a coastal mine countermeasures vessel designated the MCC-1. This is, like the *Avenger* class, a wooden hulled vessel. The MCC is a modernised variant of the Inshore Minesweeping Ship which was designed by the US Navy under rigid specifications and built by PBI.

PBI has delivered nine 64m MCM *Avenger* class vessels to date while three

others have been built by Marinette Marine, Wisconsin. The last of the class, MCM-14 *Chief* has recently been launched by PBI and will be delivered this year. These vessels have wooden hulls and

superstructures. Oak, Douglas fir and Alaskan cedar are used in hull construction with a thin coat of glass fibre outside.

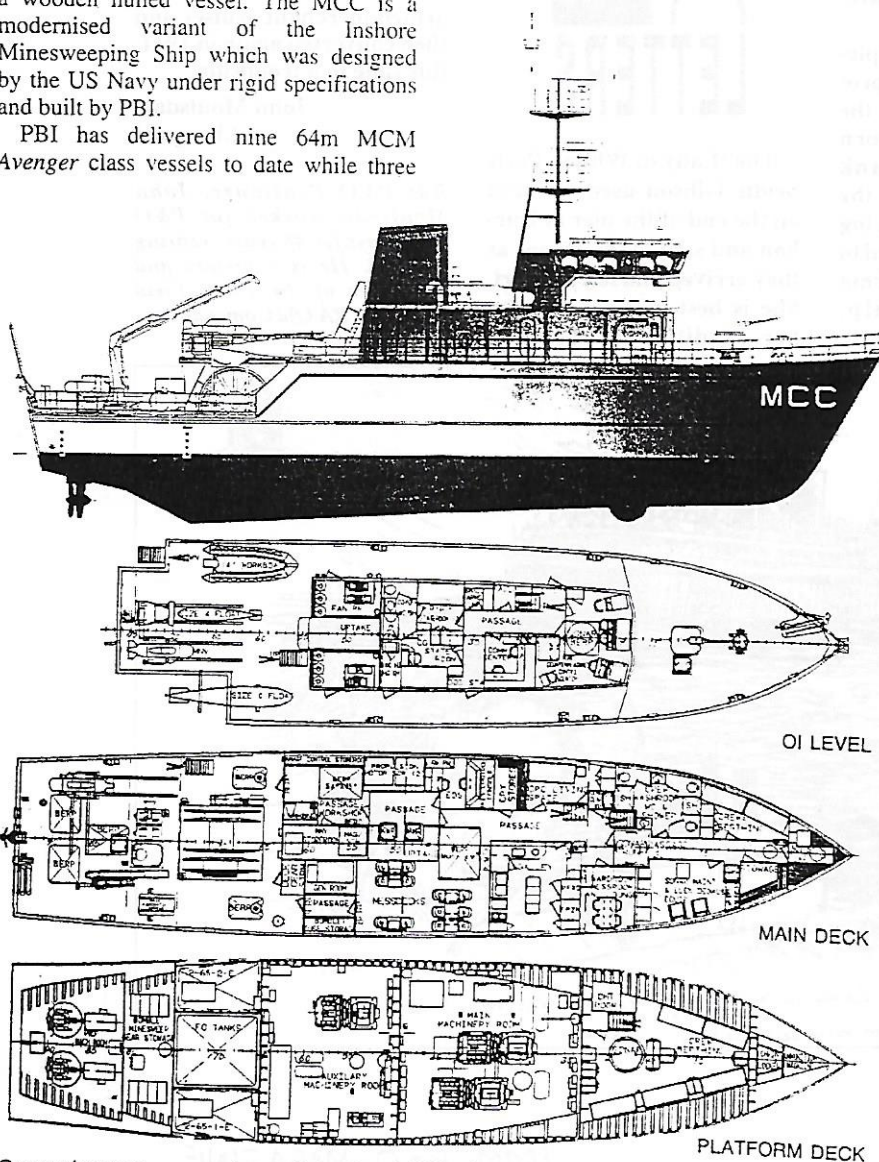
With a length of 38m (126ft), breadth of 8m, draught of 3.4m and displacement of 335 tonnes, the new MCC is designed to be a strong sea friendly ship permanently fitted with a modern minehunting system, but offering also mechanical, acoustic or magnetic sweeping capabilities. The vessel will use hull mounted sonar for detection and classification and a tethered submersible for neutralisation. Additional capabilities for patrol, surveillance, firefighting and hydrographic survey can be included.

The MCC is offered as an affordable alternative to larger more costly single role MCMVs. The wooden hull is based on a trawler series considered suitable for normal cruising and weapons firing in up to sea state 4 and mine countermeasures in sea state 3. The vessel is equipped with twin rotating rudder-propellers to provide propulsion with high manoeuvrability.

The diesel-electric propulsion system comprises two 600kW diesel generators, with ac to dc conversion through solid state rectifiers, driving two 600hp dc propulsion motors which turn four-bladed rudder propellers of 5ft (1.52m) diameter. These can be rotated through 360°. Varying speeds of 5 knots for influence sweeping, 8 knots for mechanical sweeping and 12 knots maximum can be achieved. Range at 10 knots is 1500nm and seven days fuel and provisions can be carried. A 285kW generator is provided for ship services.

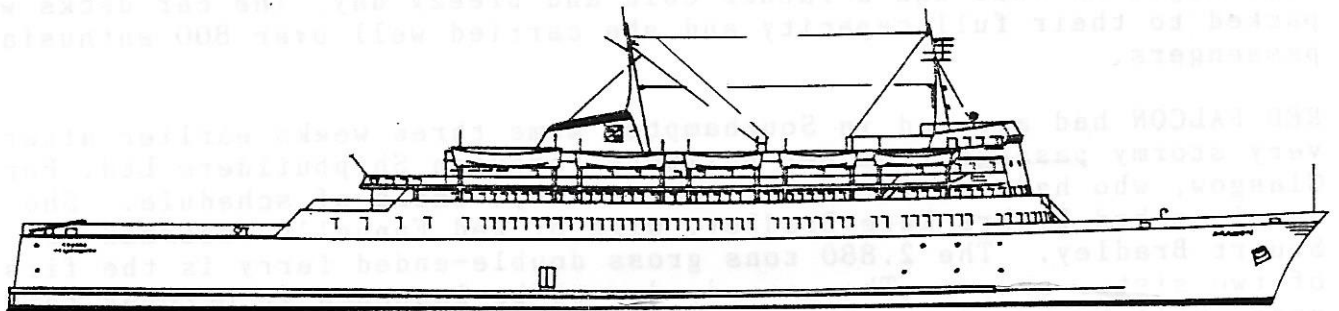
An hydraulically powered crane is installed on the main deck aft for handling the submersible or minesweep float. Options include a magnetic cable reel, an hydraulic minesweep winch with 800m of cable for a single side wire sweep, or 533m of acoustic minesweep cable operating in high or low frequency modes. A 1000 gal/min firefighting system with a range of 50m could alternatively, be installed.

Optional armament can include a remote controlled rapid fire cannon, air defence missiles or machine guns. Ⓢ



General arrangement plans of the 38m MCC mine countermeasures vessel.





DRAGON

- 27.1.1967 Launched by Ateliers et Chantiers de Bretagne, Nantes  
Yard No 16108
- 6.1967 Completed by Dubigeon-Normandie SA, Nantes  
Yard No 824  
for General Steam Navigation Co, London  
registered at Southampton Official No 333697

6141 gross tons - 2732 net - 2100 dwt  
 length o.a. 441ft 8ins (134.65m)  
 beam 71ft 9ins (21.87m) draught 15ft 9 $\frac{3}{4}$ ins (4.827m)  
 2 x 12 cylinder 4SC SA Pielstick Vee oil engines  
~~twin-screws 9467 bhp~~ service speed 19 knots  
 850 passengers 300 cars 60 trailers

\* Normandy Ferries service Southampton to Le Havre with sistership LEOPARD (built 1968) owned by SAGA, Paris

- 1971 P&O Short Sea Shipping Ltd, managers
- 1973 to Southern Ferries Ltd
- 1975 P&O Ferries, managers
- 1976 to P&O Normandy Ferries
- 1984 service transferred to Portsmouth
- 1/85 Channel ferry services sold to European Ferries Plc
- 1986 renamed IONIC FERRY
- 1/87 P&O acquired European Ferries Group
- 12/87 to P&O European Ferries (Felixstowe) Ltd  
operating Cairnryan - Larne
- 1993 sold to Marlines, Cyprus renamed VISCOUNTESS M joining sister  
COUNTRESS M (ex LEOPARD) on Italy - Greece service

\* Normandy Ferries' funnel badge depicted the dragon from the arms of Wessex and the leopard, the heraldic symbol of the Dukes of Normandy

## RED FUNNEL'S NEW SUPER FERRY - 'RED FALCON'

March 25th 1994 was a momentous occasion in the history of maritime Southampton. The maiden voyage of Red Funnel's latest passenger car-ferry the RED FALCON. My wife and I were privileged to make the maiden voyage in this latest high-tec vessel amidst all the razzamataz of the Medina Marching Band the RED FALCON set sail on her first commercial crossing from Southampton to East Cowes. Dressed overall she looked a fine sight on what was a rather cold and breezy day. The car decks were packed to their full capacity and she carried well over 800 enthusiastic passengers.

RED FALCON had arrived in Southampton some three weeks earlier after a very stormy passage from her builders Ferguson Shipbuilders Ltd. Port Glasgow, who had delivered her several days ahead of schedule. She was launched by Mrs Kate Bradley, wife of Red Funnel's chairman Mr Stuart Bradley. The 2.880 tons gross double-ended ferry is the first of two sister ships: The second, due to be launched in October this year, will be named the RED OSPREY. The two ships were built at a cost of 8 million pounds each and will boost Red Funnel's share of the Isle of Wight passenger/freight market. The new ships are much higher-sided and beamier than their predecessors. They incorporate the well-proven Voith Schneider propulsion system. The propellor units at each end of the hull are driven by Stork Wartsila 240 series 4 stroke engines, giving a speed of 13 knots. 14 knots were attained on the trials. There are also 3 Gardner diesel driven generators on board giving an output of 160 kws at 1500 rpm. Vosper Thornycroft supplied and fitted the machinery space alarm monitoring system which will give warnings on over 160 different functions. A CO2 system protects the engine room spaces against fire.

We made a visit to the bridge courtesy of her Master Captain Ken Edwards who is Red Funnel's senior Master. The Captain introduced us to other members of the crew and the Managing Director Mr Alistair Whyte. The wheelhouse is of a hexagon shape with extended bridge wings to the full width of the ship.

The passenger accommodation is of a very high standard with the use of American white ash much in evidence. Passengers enter the vessel by way of a spacious foyer complete with a reception and purser's office. The opposite bulkhead comprises an interesting display of the bridge wheel of the COWES CASTLE and photographs of past vessels of Red Funnel. The buffet/restaurant has booth-style partitions and further seating around it's perimeter with good views out of the large windows. The bar/lounge is very luxurious and of a similar design, again with full-depth windows.

On the upper deck there is a vast amount of seating areas with some being covered areas. The main car deck runs the whole length of the ship and is not obstructed with a centre line casing. The height from deck to the four hoistable mezzanine car decks is 5 metres. The bow and stern doors give an opening of 5.2 metres.

Ferguson Shipbuilders has a history going back to 1902. As well the RED OSPREY the shipyard has an order for a 99 metre passenger car ferry for Caledonian MacBrayne.

I am grateful to the Chief Executive of Ferguson Shipbuilders Ltd., Mr Bill Scott, for supplying me with information and photographs of the RED FALCON. My thanks also go to Red Funnel for their co-operation.

Doug Toggood.



Yard No 606 MV "RED FALCON"  
Twin Voith Vehicle Passenger Ferry for Red Funnel Group

Main Dimensions

Length Overall	35.0	Metres
Length B.P.	30.0	Metres
Breadth Mld.	17.5	Metres
Depth Mid	4.5	Metres
Load Draught	2.75	Metres
Deadweight	680	Tonnes

Design Features

Speed	13.0	Knots
Cargo Capacity	560	Tonnes

Vessel double ended, allowing travel in either direction. Bow and stern doors enabling vehicles to drive on and off without turning.

Main Machinery

Main Engines	2-Stork Wartsila 8fhd 240
MCR (Each Engine)	1195 KW @778 RPM
Propellers	2-Voith 26G 11/185

Electrical System

Three 160KW Diesel Alternators  
415/240 Volts 3 Phase 50Hz

Classification

Lloyd's	Approval
Department of Transport	Class IV

Tank Capacities

Gas Oil	140	Tonnes
Fresh Water	43	Tonnes
Water Ballast	270	Tonnes

Tonnage

Gross Registered	2881
Net Tonnage	864

Accommodation

Crew	15
Passengers Class IV	895

Other Features

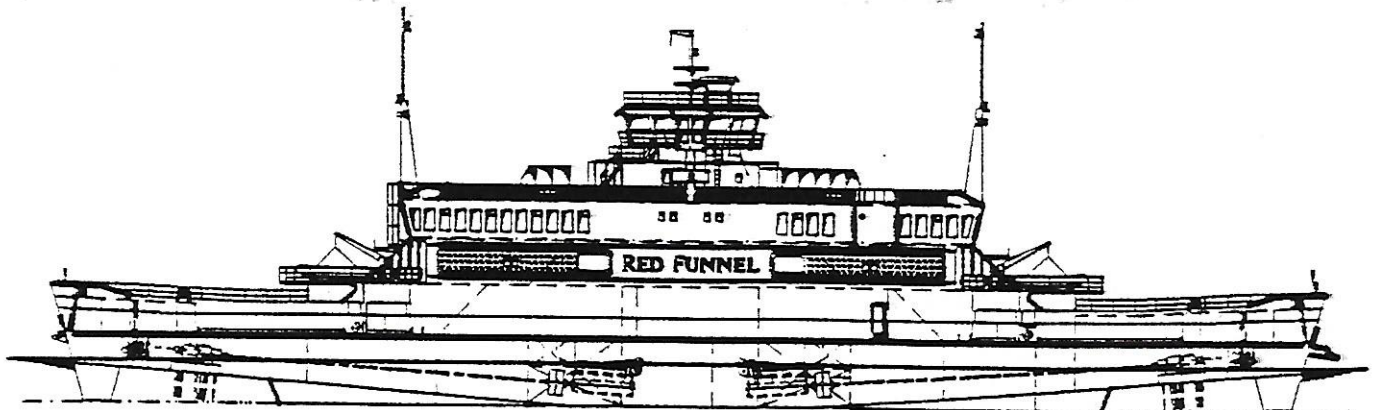
Hydraulically operated bow and stern doors  
Hoistable Car Decks for 54 Cars



**FERGUSON**  
SHIPBUILDERS LIMITED

NEWARK WORKS  
PORT GLASGOW  
RENFREWSHIRE PA14 5NG

TELEPHONE: 0475 742300  
TELEX: 777456FBPG G  
FAX: 0475 741269



PROFILE

LIST OF EQUIPMENT AND MANUFACTURERS FOR YARD NO 606

RED FALCON

TYPE OF EQUIPMENT	MANUFACTURER	
DIESEL ENGINE TYPE 8 FHD 240	STORK WARTSILA DIESELS	
GENERATOR SET	BETA MARINE LTD	
RO-RO EQUIPMENT	MCGREGOR NAVIRE LTD	
PASSENGER/INVALID LIFT	ELLIS MCDUGALL LIFTS LIMITED	
ELECTRICAL INSTALL'N	SUNDERLAND FORGE SERV'S	
PUMPS & ANCILLARIES	HAMWORTHY PUMPS AND COMPRESSORS LIMITED	
SHAFTING	TEIGNBRIDGE PROPELLERS	
QUICK CLOSING VALVES	YOUNG & CUNNINGHAM LTD	
ENGINE CONTROL & TELEGRAPHS	RADAMEC NDC LIMITED	
PAINT MATERIALS	INTERNATIONAL PAINTS LTD	
VENTILATION & HEATING	ABB FLAKT MARINE	
MCR CONSOLE & ALARM SYSTEM	VOSPER THORNYCROFT CONTROLS	
FIRE DETECTION	THORN SECURITY	
FIREFIGHTING APPLIANCES & CO2 SYS	WORMALD ENGINEERING	ACCOMMODATION OUTFITTING
DRAUGHT GAUGE SYSTEM	C TECH SYSTEMS	NEWARK JOINERS LTD
LIFERAFTS & LAUNCHING SYSTEM	RFD LIMITED	
SPERRY SR GYRO COMPASS SYSTEM	SPERRY MARINE LTD	
BOAT DAVITS	GEMMELL & FROW	
VHF RO-RO EQUIPMENT	MARCONI MARINE	
VOITH PROPULSION UNITS	E.C. GOLDSWORTHY & CO	



# United States heads for So'ton with an extra passenger

By radio from H. A. TAYLOR, "Echo" Shipping Reporter

Aboard ss United States, mid-Channel, Tuesday afternoon.

**WE** are heading for Southampton—and the Great Welcome. We should be in the Ocean Terminal right on time this evening.

And we shall be arriving with an extra passenger.

Shortly before the Blue Ribanders left Le Havre at midday a daughter was born in the ship's hospital to Mrs. Milton J. Allen, wife of a US Public Health Service doctor in Madison, New Jersey.

### PROUD FATHER

Dr. Allen, aged 36, is on his way to Liverpool University, according to officials.

The proud father could not be located immediately this morning.

### Destroyer escort, too

The United States will be met 15 miles SSE of the Nab by two US Navy destroyers—Noa and Benham—and escorted for part of the way to Southampton.

but the purser in the ship's cabin class said that Dr. Allen had already applied for a landing card for himself, his wife and his daughter.

He seemed very happy," added the purser.

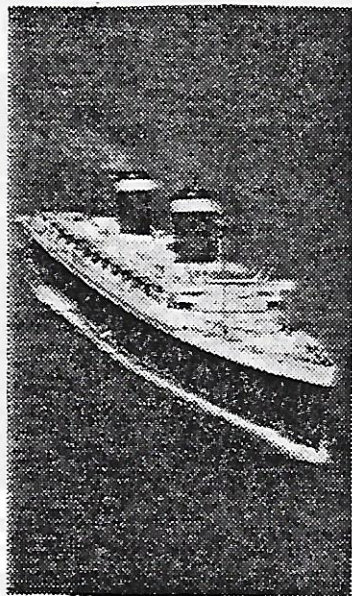
Dr. and Mrs. Allen, who immediately named their daughter Barbara Joan, are reported to be on their way to visit Mrs. Allen's parents in Liverpool.

A souvenir booklet was reserved for Barbara, who was born while a reception was being given on board to the British Government and shipping authorities.

Passengers watched another new

Atlantic liner, the French Flandre, leave for sea trials just before the United States sailed.

We left Le Havre after 17 hours in port. As the new liner sailed the band of the British aircraft carrier Indomitable, which is at Le Havre, played "Rule Britannia" while her crew lined the flight deck cheering and waving.



She's on her way to Southampton ...

## ALL READY FOR BIG WELCOME

SOUTHAMPTON'S biggest welcome for any ship since the Cunard liner Queen Mary arrived at the port in 1936 will be given to America's new luxury vessel, the United States, tonight.

Reception arrangements are unparalleled since pre-war days. Tens of thousands of people will see the liner as she passes slowly up Southampton Water to berth at the Ocean Terminal.

As she neared the British coast early this afternoon planes circled above her, and the larger pleasure steamers, loaded with sightseers and gay with bunting, sounded their sirens in salute to the Blue Riband winner.

As the United States approached the Nab Tower and the Isle of Wight, other craft joined the escort.

Thousands of people were flocking to the Weston Shore

and to Hythe as well as to other points on both sides of Southampton Water to see the ship.

### CLOSE-QUARTERS VIEW

But it is on Southampton that the world's attention will be focused tonight. It is there—as the liner, shepherded by tugs, is guided into her berth—that at least four thousand people will see her at close quarters.

Southampton's welcome to the new ship will include a fire float and a rocket display when she is

off the dock head and a shower of streamers as she comes alongside the Ocean Terminal to the music of Southampton Police Band and a chorus of ships' sirens.

Radio commentators and Pressmen will record every incident of the scene for millions of people throughout the world. Owners of pleasure craft along the South Coast have been inundated with inquiries from sightseers.

### DOUBLE TREAT

The Red Funnel Line pleasure steamer Vecta left Shanklin today full of sightseers, who had a double treat. First they saw the liner Queen Elizabeth leave Southampton; then they waited to salute the United States.

Other Red Funnel ships cruised in the approaches to Southampton to join in the welcome. The Balmoral left Southsea this afternoon packed to capacity to meet the ship off the Nab Tower, and the Bournemouth Queen left Southampton for the Solent.

### HEAVY BOOKINGS

Bookings for these trips were so heavy that the tender Paladin was also put into service and special excursion tickets were issued for the normal 3.45 pm service to Cowes.

Other towns of the south coast are also sending thousands of sightseers to see the ship. Three paddle steamers, the Emperor of India, the Monarch, and the Embassy, left Bournemouth today with almost 2,000 people on board.

They were to see the Queen Elizabeth depart, cruise round Southampton Docks and later watch the United States arrival in the Solent.

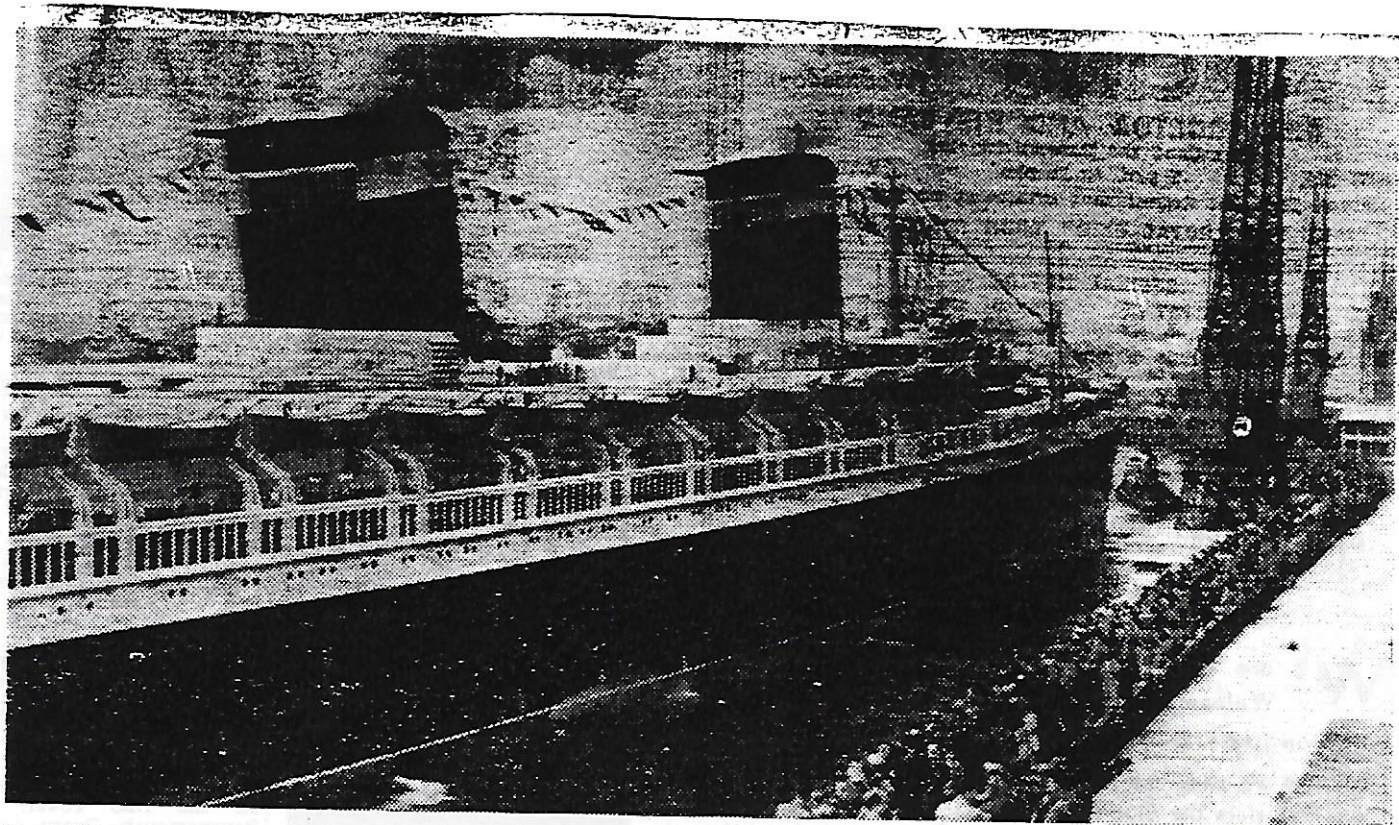
An official of the steamship company there said today: "Queues for passages today were the longest we have had since 1947, when the late King returned from South Africa in the battleship Vanguard."

*E. J. S. 2*

This was how the news was reported, on the 8th and 9th of July 1952, on the arrival of the SS United States. I make no excuse for stating that she takes number one in place, of my favourite transatlantic liners.

Doug Toogood.





40,000 on Weston Shore see new liner

## SO'TON'S WELCOME 'MOST AMAZING SIGHT' IN MASTER'S CAREER

Crowds line the balcony on the Ocean Terminal building, as the liner pulls alongside. Pictures and story in centre pages. *9/1/52* "Echo" photo.

### Southampton's amazing welcome

*Continued from Front Page*

"As all available parking places were filled with cars—there were double lines of parked cars in Archery and Swift-roads—it was necessary to remove iron railings along the Weston Parade and use meadowland for parking. Soon this was filled up, too.

"As the liner steamed up Southampton Water motorists who had gone to Netley to watch her arrival started to come back to Woolston because they couldn't find a place to park. This caused minor congestion, but it was soon overcome."

#### ON THE SHORE

Soon after the Queen Elizabeth had sailed down Southampton Water people began to assemble on the shore at Hythe for the arrival of the United States.

By the afternoon cars had steadily poured into Hythe, so that the road to Fawley was completely blocked, as also were the lanes approaching the front.

Meanwhile, the Hythe pier was thronged with spectators from end to end, and others were to be seen on roof tops of hotels, which offered an excellent vantage point.

COMMODORE HARRY MANNING, master of the United States, has told Mr. R. P. Biddle, CBE, Docks and Marine Manager, that Southampton's welcome to the United States had been the most amazing sight in his long career at sea.

Both Commodore Manning and General John Franklin, US Lines President, asked Mr. Biddle to thank the people of Southampton for a magnificent gesture, which had touched them very much.

When Mr. Biddle met Miss Margaret Truman, the President's daughter, her first remark to him was: "I shall never forget your beautiful Ocean Terminal." When

At Bramshott Hill, between Hythe and Marchwood, where a good view was obtainable of the ship as she turned into the docks, cars were parked on both side of the road, and buses had to wedge their way through with difficulty.

More than 1,200 tickets were issued to motorists on Lymington toll bridge yesterday when cars streamed through the town on their way to and from the borders of Southampton Water.

British Railways paddle steamer Freshwater, which took over 400 people from Lymington to see the arrival of the liner, could have sold out for the trip three times over.

Booking has been brisk for another excursion tomorrow afternoon to see the United States sail for the westbound Atlantic crossing.

she arrived at Southampton last year Miss Truman was shown over the Terminal by Mr. Biddle.

A limited number of permits to enter the sightseers' balcony of the Ocean Terminal to witness the sailing of the United States from Southampton, tomorrow will be issued from the Permits Office, Canute-road, between 9 am and 12 noon the same day.

### 'Commerce' welcome

The Southampton Chamber of Commerce yesterday dispatched the following telegram to Commodore Manning, master of the United States: "The Southampton Chamber of Commerce heartily congratulates the United States on her record run and warmly welcomes her to the port of Southampton." (Sgd.) Marsh-Hunn, President.

Police estimate that 40,000 people watched the United States arrive from the Weston Shore, where over 4,000 vehicles were parked.

Said a senior officer: "Woolston had never seen such a crowd before."

(CONTINUED ON PAGE 11)



Miss Margaret Truman, who arrived in the United States — "Echo" photo.



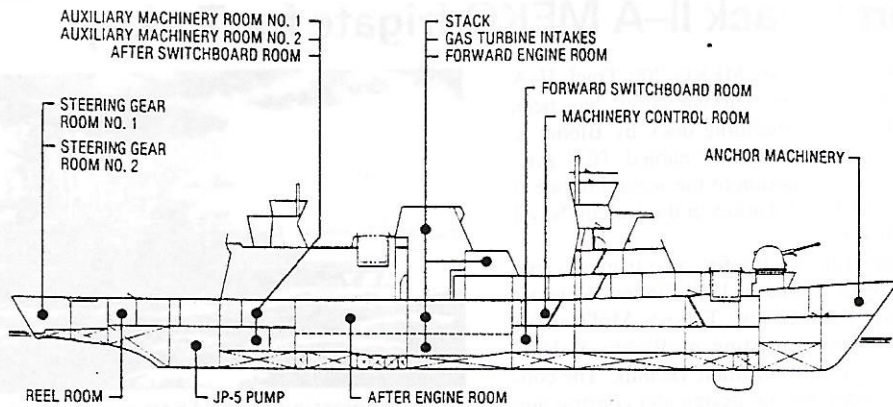
# First Israeli Sa'ar 5 corvette launched at Ingalls

THE first of three new Sa'ar 5 class corvettes for the Israeli Navy was launched at Litton's Ingalls Shipbuilding Division, Pascagoula, Mississippi on 9th February 1993 and was named *Eilat* at a ceremony attended by the Israeli Ambassador on 19th March. This was the first launching at Ingalls of a warship other than for the US Navy. The Commander-in-Chief of the Israeli Navy described INS *Eilat* as the 'first of a new generation of ships that the Israeli Navy will sail through the 1990s and into the next century'. The Sa'ars are the largest ships yet built for the Israeli Navy.

The 1,275t *Eilat* is claimed to be the world's first combatant ship designed entirely by computer aided design (CAD) techniques linked to a computer aided manufacturing (CAM) shipyard network. Ingalls performed the detailed design of the Sa'ar 5 for the Government of Israel. Production began in September 1991 using modular techniques and the keel was laid in February 1992. Upon completion of outfitting, sea trials and crew training programmes, the corvette will sail for her home port of Haifa next year. Two further Sa'ar 5 corvettes for Israel are on order from Ingalls for probable delivery over 1995/6 but an option for a fourth vessel is unlikely to be taken up.

The Sa'ar hull has 11 watertight subdivisions and a continuous main deck. The vessel is designed for low radar cross section, low IR and noise signatures and high speed. Twin masts are arranged fore and aft on the superstructure for maximum separation. The corvette is equipped with a hangar, helipad and full support facilities for a Dauphin helicopter and will have a very compact, powerful, multi-mission combat system capable of countering air, surface and sub-surface threats.

INS *Eilat* is powered by a CODOG



*Inboard profile showing the machinery spaces.*

arrangement of two MTU 12V 1163 TB82 diesels and a cross-connected GE LM-2500 gas turbine driving twin KaMeWa cp propellers to give cruising speeds over 20 knots and a boost speed in excess of 33 knots with the gas turbine driving both shafts. Special modes include the gas turbine driving one shaft and one diesel driving the other. One diesel can also drive both shafts and there is a silent mode. Range at 17 knots will be 3,500nm. Total electrical power plant capacity is 1,880kW, adequate to cover battle damage and repair scenarios. Manoeuvrability at high speed is provided by the large twin rudder design and at low speed by the reversible pitch propellers.

The integrated combat systems for the

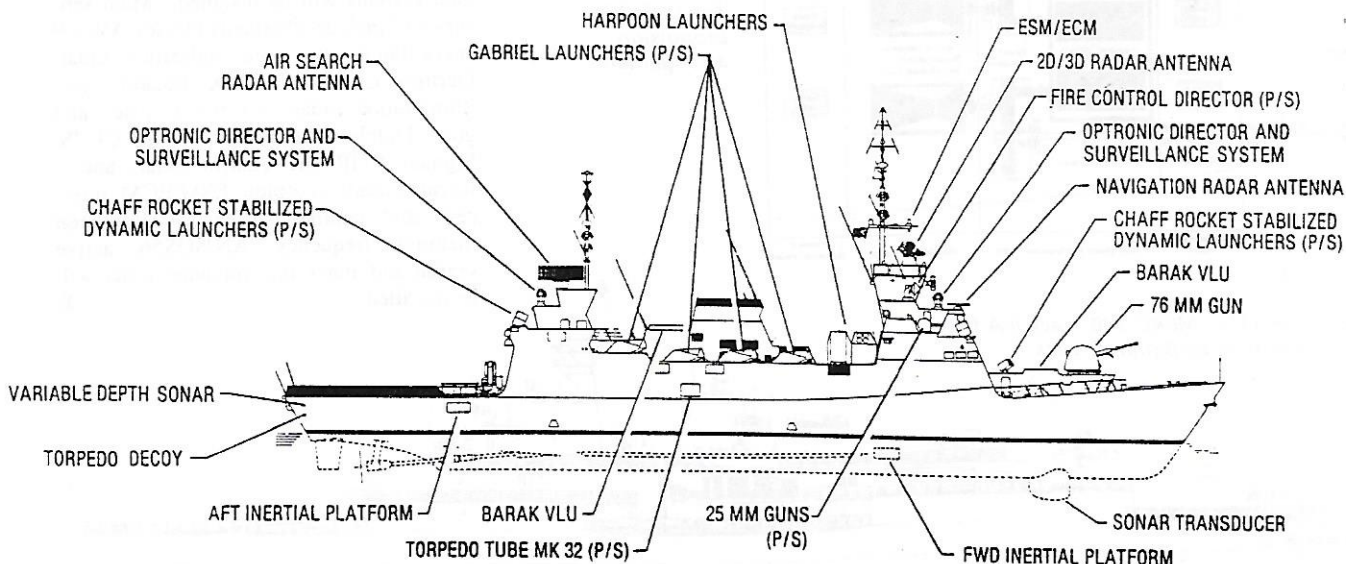
**PRINCIPAL PARTICULARS  
*EILAT***

Length overall	85.64m
Length bp	76.60m
Beam, waterline	10.39m
Beam, extreme	11.88m
Draught	3.17m
Displacement, std	1,062 tonnes
Displacement, fl	1,275 tonnes
Propulsion power	1 x 25,000shp (sustained)
Speed max	2 x 3,000bhp
Speed, cruise	33+ kts
	20+ kts

Sa'ar 5 were developed and are being provided by leading Israeli defence and US companies including Astronautics, EDO, Elbit, Elisra, ELOP, Kerfott, MBT, Norden, Rafael and Tadiran.

Weapons will include eight long range (130km) Harpoon SS missiles in two groups of four, eight medium range (36km) Gabriel Mk.2 SS missiles and new short range (10km) Israeli vertically launched Barak SAMs in two groups of 32 missiles. The ship will also be armed with an Oto-Melara compact type 76mm gun forward (range 19km) and two Sea Vulcan/Phalanx 25mm CIWS guns port and starboard (range 1km), supported by Cardion 2D and 3D search radars, Elta fire control equipment and comprehensive ESM/ECM equipment. ASW capability is provided by two sets of triple 324mm tubes for Mk.46 torpedoes, a torpedo decoy system, hull mounted sonar and a towed array.

Accommodation is provided for 64 ship's crew and ten air crew. Food stowage is adequate to supply the full complement for 24 days. Two water generators operate on heat supplied by diesel generator water-jackets to provide for all fresh water needs.



*Outboard profile showing the combat system arrangement.*



# First Track II-A MEKO frigate for Turkey

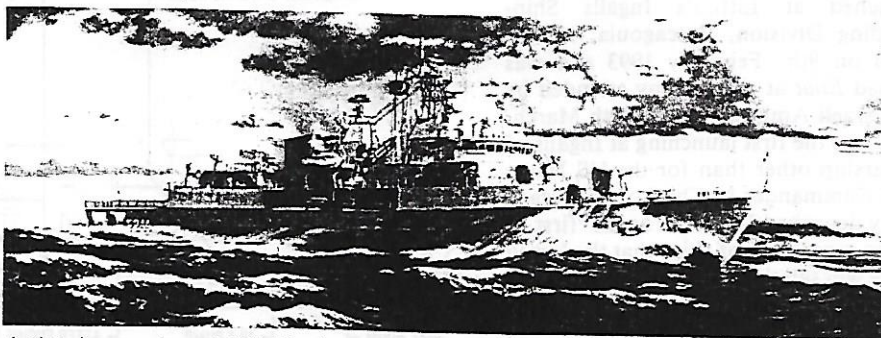
THE first of four MEKO 200 Track II-A frigates for the Turkish Navy has been floated in her building dock by Blohm & Voss at Hamburg and named TCG *Barbaros*. Construction of the second frigate is now starting in Turkey at the Gölçük Naval Shipyard.

The order for the first two frigates came into force in March 1991, under a contract signed between the Turkish MoD and a consortium consisting of Blohm & Voss and Thyssen Rhein Stahl Technik. The contract called for the design and construction of one vessel to be built at Blohm & Voss in co-operation with Howaldtswerke-Deutsche Werft (HDW) of Kiel, and the delivery of a materials package for a second to be built at Gölçük. A similar contract for the construction of two further Track II frigates at Blohm & Voss and Gölçük was placed in December 1992.

The project is supported by the Federal Republic of Germany through a special military aid programme and by the US which is supplying weapons and electronic equipment.

Four previous MEKO 200 frigates of the *Yavuz* class, constructed two each in Germany and Turkey, were commissioned into the Turkish Navy between 1987 and 1989.

The improved Track II MEKO frigates, designed by Blohm & Voss in co-operation with HDW, are larger by some 6m in length and 500 tons in displacement than the *Yavuz* class and have a CODOG propulsion system in place of CODAD with a corresponding 5-knot improvement in speed. They will have more advanced electronics and will be able to fit vertical launch Sea Sparrow missiles.



Artists impression of F-244 *Barbaros* for Turkey.

### PRINCIPAL PARTICULARS TCG BARBAROS

Length overall .....	116.72m
Length w/ .....	108.00m
Beam overall .....	14.80m
Depth .....	9.18m
Design draught .....	4.25m
Displacement .....	3,350t
Propulsion .....	CODOG
Speed, max .....	32 kts
Speed, cruising .....	22 kts
Complement .....	200

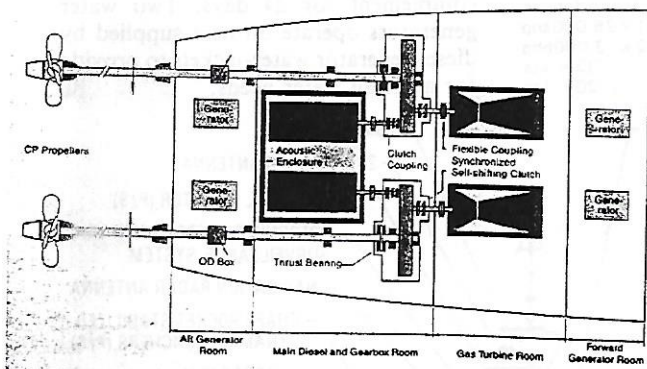
F-244 *Barbaros*, to be commissioned in Spring 1995, will have a complement of 200 men. Her CODOG propulsion system will comprise two GE LM 2500-30 gas turbines each delivering 22,370kW and two MTU 16V 1163 TB83 diesels each delivering 4,335kW to twin shafts with KaMeWacp propellers through Renk Tacke reduction gearboxes with integrated thrust bearings and SSS clutches. Her sprint speed will be 32 knots and maximum cruising speed under diesel power will be 22 knots; range at an economical 18 knots will be 4,100nm.

The propulsion plant extends over four

adjacent watertight compartments namely the forward generator, gas turbine, main diesel and aft generator rooms. Electrical power is provided by four alternators driven by 620kW MTU8V396 diesels arranged in two independent rooms and offering 100% redundancy. In order to reduce structure-borne noise and shock loads, the diesel engines and generators are arranged in acoustic enclosures and are double resiliently mounted. The propulsion plant is remote controlled from either bridge or machinery control room.

Weapon systems will include two quadruple launchers for Harpoon missiles, a Raytheon Sea Sparrow Mk.29 octuple SAM launcher (initially), a 127mm Mk45 Mod.1 gun, three Oerlikon-Contraves Sea Zenith four-barrel 25mm guns for close-in defence, two triple 324mm tubes for Honeywell Mk.46 anti-submarine torpedoes and two Hycor Mk.36 decoy launchers. This weapon fit is similar to that of the *Yavuz* class but the Track II's will all eventually be fitted with Mk.41 VLS (16-cell) launchers in place of the Sea Sparrow Mk.29. A hangar and landing platform are provided aft for an AB212 helicopter which will be equipped with Sea Skua missiles for ASW.

Full Signaal battle command and combat data systems will be installed. Main sensors will include a Siemens Plessey AWS-9 surveillance and target indication radar, Oerlikon-Contraves TMX tracking and illumination radars for the missiles and guns, Dolphin search radar for the CIWS, Signaal STIR fire control radar, and a Racal Cutlass/Scorpion ESM/ECM intercept and jammer system. A Raytheon medium frequency AN/SQS56 active search and attack hull-mounted sonar will be installed.



The CODOG propulsion arrangement.

Profile of the 117m MEKO 200 Track II-A frigate designed and built by Blohm & Voss.

