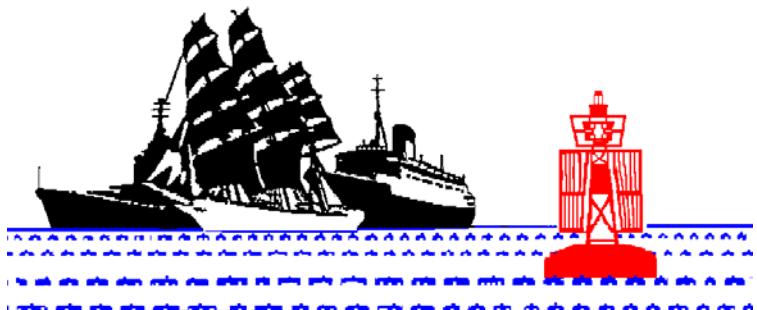


Black Jack

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OOCL Nagoya photographed by Andy McAlpine swinging in the upper swinging ground on her maiden call at Southampton.

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Editor

Editorial Assistant Michael Page
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Black Jack is the quarterly newsletter for the Southampton Branch of the World Ship Society.
Four editions available for £5 inclusive of postage.

Branch Meetings

Venue:

Main Lecture Theatre
Southampton Oceanography Centre

Waterfront Campus
European Way
Eastern Docks
Southampton

All meetings commence 19.15 and the meeting room is to be vacated by 21.30.

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Full details for all committee members can be found on the Southampton WSS website at www.sotonwss.org.uk

2010 Branch Meeting Programme

January 12th

Operation Pedestal – John Lillywhite

February 9th

Jadrolinija – Jimmy Poole

March 9th

Liberty Ships – David Aris

April 13th

Sailing on Indian and African Coasts – Chris McFarlane

May 11th

The Building of a Queen – Alistair Greener

June 8th

The Changing Face of the 1960's Royal Navy- Bill Lawes

July 13th

A Lifetime at Sea –Mike King and Reg Pretty

August 10th

Members Image Gallery

September 14th

Slides from the Dave West Collection – Paul Gosling

October 12th

Southampton Shipping of 1950 – Branch Production

November 9th

AGM – plus supporting programme

December 14th

Lindsay's Adventures on eBay – Mick Lindsay

All contributions to BJ either by post, email, floppy disk or CD are most welcome. Any article with a connection to the Solent area would be much appreciated. The BJ Editor could reproduce magazine or newspaper articles but preference is given to articles ‘by the branch – for the branch’. Any member who would prefer to receive the Branch Magazine Black Jack by email please contact the Editor. Colour printing costs are relatively high so all recent Black Jacks can be viewed all in full colour via the Branch website in pdf format. www.sotonwss.org.uk

Ship Visits

Ship visits though rare these days often become available at short notice and more recently during the week due to the nature of shipping these days. Those wishing to participate should ensure their details are held by the Visits Organiser and kept up to date. All members participating in visits organised by the branch do so entirely at their own risk and be aware that ships and dock areas may have trip and other safety hazards and advised to use personal protective equipment when appropriate. All participants must accompany the ‘guide’ at all times unless instructed otherwise and follow any instructions from the party leader.

Coastal Forces Craft of World War 2 - Part Two by Bill Lawes

Coastal Forces Craft of World War 2

VOSPER This company was founded by Hubert Edward Vosper at the Camber Dock in Portsmouth. The first ship was built there in 1880. The founder retired in 1919. In the 1930s Vosper's was joined by Fred Cooper, ex British Power Boat Co. and Peter Du Cann who managed the company until its merger with Thornycroft in 1965. In March 1941 the Camber Yard was bombed, so the Portchester Yard, which had been bought in 1938 was extended. As stated above, following the trials between BPB's PV70 and Vosper's MTB 102, the Admiralty decided in favour of the latter. Vosper therefore started on the design of a MTB for Naval service. This evolved into the 70 ft type which became the mainstay of MTBs during the war. These vessels displaced 40 tons and were armed with two 21in. Torpedo Tubes plus two .5in guns and two .303 in. guns. Later a 20mm Oerlikon gun was mounted forward to give the boats increased fire power. The torpedo tubes were mounted on the deck more or less alongside the bridge, but angled outwards by about 10°, the bow of the boats had a slightly raised forecastle with a curved cutout sections to allow the torpedoes to be fired ahead. The MTBs were powered by three engines, but this was one of the initial problems. MTB 102 had been fitted with Italian engines, but when these were no longer available, alternatives had to be found. A variety of engines were tried, but none was really suitable. Eventually the Packard engines were used. With some of the early craft problems were found when they were motoring slowly. The boats lost all power and sometimes the engines exploded. This problem was traced to propeller blades that had been badly constructed, so much more stringent controls were introduced.

When these problems had been overcome the Vosper design was very successful. This type of MTB was not only built in the Portsmouth Yards but Vosper also used another site at Wivenhoe in Essex and a number of other Boat Builders also constructed these boats. Sixty Four craft of the Vosper type were also built in America and shipped across the Atlantic. Most of these saw service in the Mediterranean, but a few were sent out to India. In 1943 the basic hull was enlarged so that the overall length was 73 ft and the bow shape altered so that it deflected the bow wave more effectively. The raised forecastle was removed so that the boats were flush decked. To give some idea of the quality of this design, between 1939 and 1944 the military load carried by these boats increased by nearly 70%, but the performance of the boats hardly changed. A total of about 120 Vosper MTBs were built during WW2.

THORNYCROFT As stated earlier, during the First World War, Thornycroft produced the stepped hull CMB. In 1932 their expertise was used to build "Miss England" which set a World Record of 119.81 kts on Loch Lomond, so it was logical that their Hampton Yard would also become involved in the construction of Coastal Forces Craft for the Second World War.

In 1938 they built five MTBs for the Navy that displaced 14 tons, had an overall length of 55ft and carried an armament of 2 -18in torpedo tubes and two .303 guns. Two Thornycroft engines gave them a speed of 40kts. In 1940 a further 12 similar boats were built. A number of these MTBs were sunk in the Mediterranean in 1941. Another larger design was also constructed in 1940. These boats displaced 50 tons, were 74 ft in length and armed with 2 - 21in torpedo tubes, two .5in. and two .303 in. guns. The same engines as in the previous class, produced about 30kts. None of these craft were as successful as some of their competitors, mainly because of their lower powered engines. By 1944 the larger boats had been converted for target towing uses.

In 1940 Thornycroft built MTBs 104-107. Two of these boats were the hard chine type, the other pair were built with a stepped hydroplane hull. The idea was to compare the performance of both types to prove which was the better hull form. Unfortunately lack of suitable engines meant that the results were inconclusive. MTB 344 was another experimental stepped hydroplane 60ft boat built in 1942, again powered by 2 Thornycroft engines to give her a speed of 40 kts. Originally she mounted 2 - 18in torpedo tubes, but these were removed so that an 18ft Commando dory could be fixed to a launching ramp at the stern. The boat was then used for under-cover operations, sometimes very cold and wet for the Commandos, as there was no cabin space for them.

Although the Thornycroft Coastal Forces craft were not as successful as some, the Company pioneered the building of wooden minesweepers prior to the start of the war, and during it they built a considerable number Fairmile Motor Launches.

J.S.WHITE This Isle of Wight Company built a number of MTBs during the war years. Initially the boats were of the Vosper design, but later they used their own design which in appearance was very similar to the later Vosper craft. Prior to this, at the end of 1936 White's started the construction of the experimental MTB 101. This craft was to test the concept of the hydrofoil. The first stage of this process was an 18ft dinghy fitted with hydrofoils fore and aft. During trials, a speed of 33kts was obtained from a power output of 130 hp. At this speed the hull of the boat was raised about 6in. clear of the water surface. Following more trials and discussions the Admiralty agreed to the construction of MTB 101. Her hull was constructed of Aluminium, but shaped like the CMBs stepped hull form, the hydrofoils were of a similar structure to those used on the dinghy, but with extra support. Power was provided by 3 Isotta Fraschini engines each of 1000hp. In early trials with a displacement of 23 tons the boat achieved just over 41kts and the hull was lifted 16 inches above the water.

Later however when the displacement rose to 28tons the speed fell to 34kts and the hull was only lifted 7 inches from the water. As a result of these trials the Admiralty decided that the hydrofoil would not be suitable for service.

CAMPER & NICHOLSON During the War this company used two boatyards. One at Gosport, the other at Northam. They built only a few MGBs , Numbers 501 to 509, to their own design which were similar in size to the Fairmile D boats. They displaced 95 tons, were powered by Davey Paxman diesel engines of 3000hp which gave them a speed of about 30 kts. These boats were of the "round bilge" type but were very well constructed and considered to be the "best of the best". These vessels were initially ordered by Turkey, but were requisitioned at the start of the war. Because of the need to collect small cargoes of engineering equipment such as ball-bearings from Sweden, some of these MGBs were converted and disguised as much as possible to look like small coasters to run the blockade through the Kattegat. MGB 504 became- "Hopewell" ; 505- "Nonsuch" ; 506- "Gay Viking" ; 507- "Gay Corsair" ; 508 - "Master Standfast" . Later MGBs 511 to 518 were a development of the earlier craft. These were designed with what was really a small action station with all the important areas of the vessel, chart room, radio & radar offices etc. enclosed in a protective plating. These boats were armed with two 6pdr guns, one twin Oerlikon; 2 single Oerlikons and four 18in Torpedo Tubes.

FAIRMILE The Fairmile Marine Co. was set up by Captain Noel Macklin shortly before the war started. It was named after a pub. in a Surrey village. The idea of the company was that it would design craft that could be mass-produced using marine-ply. Furniture factories would produce standard sections which would then be assembled by boat builders. Fairmile went on to design four types of craft. The first was the "A" type ML. This was a hard chine hull with a length of 110ft and displacement of 57 tons. The first of these craft was built by Woodnutt at Bembridge. These MLs were not particularly successful and only a few were built. The survivors were converted to minelayers by 1942. The following Type "B" MLs were of the round bilge type. These turned out to an ubiquitous design. In total 388 of them were built in this country and a further 264 in the Dominions, many of the latter served in foreign areas. These craft had a length of 112ft and displaced 67tons. Originally it was planned that they would be powered by three engines like the Type "A", but a shortage of engines led to them only have two, but this in turn meant that 50% more boats could be built. In average each of these boats took 7 months to build. A few Type "B" MLs still survive as coastal pleasure craft. In 1940 there was a need for MGBs so the "A" design was modified to so that the existing jigs could be utilised to construct gun boats. This resulted in the "C" Type. The hull was the same, but more powerful engines were fitted. An armament of two single 2pdrs and two twin .5in guns were carried. 24 of these craft were built and proved to be quite successful. The final Fairmile design was the "D" this was a craft that could be armed as either an MGB or MTB. Overall length was 115 ft, but the displacement varied between 90 tons and 105 tons depending on the armament. The hull was of the hard chine type and they were fitted with four Packard engines, speed depended partly on the load and varied between 27 and 31 kts. A total of 288 boats of this type were built, the average building time was 11 months. Generally the class was successful, some of these boats operated in the North Sea and off the Norwegian Coast. Some structural weaknesses were found in these conditions.

Two types of Coastal Craft remain to be described:-

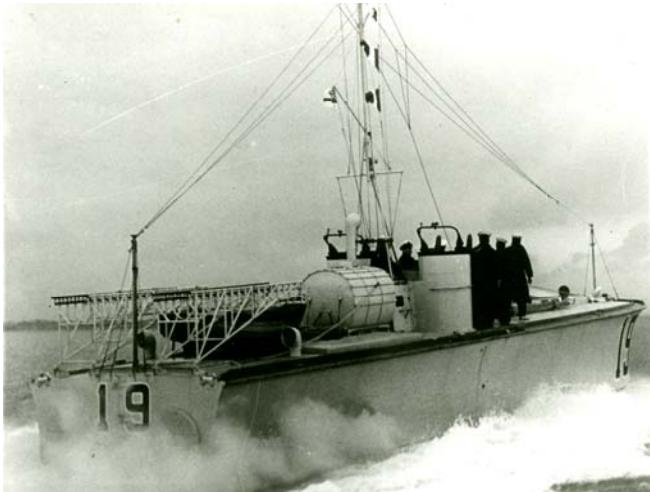
Harbour Defence Motor Launches (HDM) It was realised at the start of the war that small launches would be needed for the protection of harbours and estuaries against submarines. It was stipulated that they should not exceed 72ft in length so that they could be shipped abroad. They were of the round bilge type and fitted with twin rudders to ensure a good turning circle. Their displacement was about 54 tons and they were powered by two diesel engines to give them a speed of 12 kts. In spite of their small size they were very good sea boats. Later in the war they made long sea voyages to reach their operating area. This saved space on ships that would otherwise have been used to transport them. In addition to service in home waters, they also served in the Mediterranean, off the west coast of Africa and off Iceland , A total of 300 were built in Britain, 56 in the Dominions and 74 under lease-lend. Orders for these craft were placed with well-equipped yacht builders who were not involved in the Fairmile scheme, among the local builders of these boats were; Berthon Boat at Lymington; J. Bolson at Poole and D.Hillyard at Southampton. One HDM is still present in our area, HMS Medusa (ML 1387). She was built in 1942 by R A Newman at Poole. She is now owned by the Medusa Trust and is one of the Core Collection of Historic Ships.

Steam Gun boats :- In 1940 the Admiralty made a requirement for a class of larger and therefore more sea worthy MTBs to counter the German E-Boats. The only answer at that stage was to build the hull from steel, and as no lightweight powerful internal combustion engines were available, the boats would have to have steam turbines. What seemed to be a good idea soon produced problems. The power / weight ratio was difficult to solve and resulted in reduced armament, it also meant that only a single item of each piece of ancillary machinery could be fitted. These problems made the boats very vulnerable to machine gun fire. In 1943 to overcome this defect $\frac{3}{4}$ in. armour was added to the sides of the machinery spaces and extra armament was fitted, these measures raised the full load displacement from 220 tons to 260 tons with the corresponding loss of speed from 35 to 30 kts.

Two geared turbines were installed, each of which produced 8000 shp. Initially the programme called for 60 such vessels, but this was then reduced to just 9 Steam Gun Boats, but two building at Thornycroft's Yard at Woolston were cancelled after the works were damaged by bombs, so in the end only seven of these craft were built. At one stage during the war the Steam Gun Boat Flotilla was commanded by Peter Scott, who at that time was a Lt. Cmdr. in the RNVR. Because of their increased displacement he could argue that they were large enough to be given names. When this was granted, his boat (SGB 9), was named, for obvious reasons "Grey Goose", the rest of the boats were given animal or bird names beginning with the word "Grey". The boats played an important part in the Dieppe Raid in 1942, but by 1943 these craft were re-classed as fast minesweepers.

After the war all of these coastal forces craft quickly disappeared as the Navy no longer had the need for them. Two did, however, find a new challenge; "Grey Goose" and Camper & Nicholson's MGB 509 (renumbered 2009) were used as test beds for the early marine gas turbine trials.

Hopefully the article has given some idea of the important part local ship and boat builders played in this vital part of the war at sea between 1939 and 1945.



MTB 19 - British Power Boats - Identical to MTB01. The stern shows the arrangement for launching the torpedoes.



MTB 30 - Vosper 70ft design. 2-21in torpedo tubes, twin 0.5 in guns aft of bridge and single .303 abreast of bridge. This is an early boat powered by Isotta Fraschini engines



MGB 116 - British Power Boats 71ft 6in MGB. Fitted with power operated 2pdr forward, twin 20mm Oerlikon aft and twin .303 abreast of bridge.



"Gay Corsair" built by Camper and Nicholson as MGB 507, converted as a blockade runner.



The 4 masted steel barque **Herzogin Cecile** was built by Rickmers AG at Bremerhaven for the account of Norddeutscher Lloyd of Bremen, and was launched on 22nd April 1902. This vessel was named after the Duchess Cecile of Mecklenburg, who was later to become the Crown Princess of Germany. With steamships gradually taking over all the trading routes around the world, it is wondered why this vessel was built, and the reason is that with a cargo capacity of 4200 dwt, and provided with ample poop deck accommodation for a large number of cadets, she was ideally suited for training cadets and giving them cargo handling experience.

The Germans were at the forefront of successfully managing commercial sailing vessels, and this ship was probably the best of them all.

She established herself on the nitrate run from Chile to Germany, being well suited for the two roundings of Cape Horn that this round trip included.

In July 1914 the Herzogin Cecile was unfortunately on the coast of Chile when hostilities were declared, so she was interned for the duration of the war with the remnants of her crew. After the war she taken over by the Chilean Navy and in late 1920 sailed for European water's with 3900 tons of nitrate. At Falmouth she was sent to Ostend where the nitrate was discharged, and then she was laid up with many other sailing vessels. In June 1921 she was allocated to France as a war prize, who then sold her to Gustaf Erikson of Finland's Aland Islands for £5000. He for some time had wanted this ship, and said it was the most beautiful vessel in his fleet of sailing ships.

Gustav Erikson still believed that sail had an important part to play in world trade, which was why he still had such a large fleet of them. She was refitted at Christianssand and then loaded a cargo of timber for Melbourne, sailing at the end of April 1922.

She continued to sail with a variety of cargoes under the Finnish flag became the star of his fleet. But he strongly believed in pushing his ships and masters as hard as possible, and this maybe has contributed to her luck running out in 1936.

Whether due to bad luck or careless navigation, whilst making her way from Falmouth to Ipswich (her discharging port), she hit Ham Stone and holed herself during the early hours of the morning of 25th April 1936 in fog. She ran aground at Sewer Mill Cove near Bolt Head off the South Devon Coast. Here she proved a tourist attraction for several months, during which several attempts were made to salvage her. As a result of these, she was successfully moved to Starehole Cove at Salcombe where it became her final resting place and eventually sold for scrapping where she lay - a total loss. A sad end to a fine ship -The last of the few. The picture I have used has many happy memories for me, as at home in South East London with my Mum, Dad and Sister, it hung on the wall in our dining room, and many times I would look at it and dream.

Escort Towing in Southampton – Neil Richardson

The Requirements

Different ports all have differing sets of conditions such as channel configuration, ship types, ship sizes and speeds which must be taken into account when deciding what type of escort service and tug is most appropriate. In some situations tug escorts may not even be applicable. If properly executed, escorting can ensure that ships meet the manoeuvrability requirements laid down in IMO guidelines. Ports not having specified requirements on tug escorts can use these guidelines to lay down a minimum tug specification.

In the Port of Southampton rules are published for any fully or part laden tanker in excess of 60,000 dwt, visiting Fawley Marine Terminal (FMT) or BP Jetty Hamble (BPJ). Tankers will be escorted on inward and outward passages from/to the Nab Pilot station. In adverse weather conditions, in the vicinity of the Nab, the Escort pick up/drop off point will be at the discretion of the Master and Pilot. Vessels in excess of 60,000 dwt in ballast will be escorted out from Fawley to the Prince Consort Buoy off Cowes or in to Fawley from the West Ryde Middle Buoy. The tug will have a minimum of 60 tonne bollard pull and will be attached by a towing line to the stern of the vessel.

The number of crude vessels to visit BPJ lifting crude pumped from Poole as reduced dramatically. These days the majority of escort work is with vessels to and from FMT. The FMT station tugs are provided on long term contract by Solent Towage (wholly owned subsidiary of Ostensjo Rederi of Haugesund) to undertake these duties however at busy times to enable adequate cover at the terminal itself tugs from the Svitzer fleet in the docks have been used.

The standby tugs based at Fawley in the early years were traditional single screw tugs with an emphasis on fire fighting ability rather than manoeuvrability, Red Funnel tugs Atherfield, Culver and latterly the Gatcombe and Vecta on which the fire fighting equipment could clearly be seen. These tugs were not suitable for escort duties hence the trials by Red Funnel Towage with the Portunus towards the end of the Esso contract. Tugs with azimuthing stern drives (ASD) have since been employed by Solent Towage over the years and now tugs with the Voith Schneider propulsion are currently employed.

Indirect Towage

In the indirect mode, which is totally different to conventional towing, the tractor or omni directional tug is positioned to the rear of the vessel with both travelling at the same forward speed, usually in the 5-10 knot range. If required, the tug steers the vessel by positioning itself at the side of the vessel and at an angle of attack relative to the flow of water. This generates a hydrodynamic lift force on the submerged hull of the tug which is used to steer the assisted vessel. The tugs propulsion units are used mainly to position the tug to maximize these hydrodynamic forces. The maximum steering forces of high performance tugs may be up to twice the force provided in a bollard pull situation, but operation in the indirect mode requires a high level of skill in the part of the tug master.

It is not possible to stop a stricken laden vlcc at high speeds using braking power alone the using zigzag manoeuvres is reported to be a much more effective approach and for this the escort tug must exert adequate steering pull. When the tankers speed had been reduced sufficiently, adequate bollard pull is necessary to keep the vessel stationary in specified weather conditions.

Following tests in Norway it was demonstrated that if properly executed, escorting can ensure that ships meet the manoeuvrability requirements laid down in IMO Resolution A 751. Thus ports not having specified requirements on tug escorts can use these guidelines to lay down a minimum tug specification.

To provide dynamic stability necessary to withstand the very large towline forces which can be encountered the escort tug should have a very high initial stability and an ample and evenly distributed freeboard. A tethered tug should also be of minimum displacement and run its towing winch on tension/length control in order to limit additional dynamic forces as much as possible. Finally, good communications and prior agreement on proper procedures between the tug and the pilot and ships bridge team are essential to adequate escorting.

Escort Tugs

The FMT based escort tugs **Tenax**, **Phenix** and **Apex**, arrived for standby duties at Fawley 2006, Jan 2008 and June 2008 respectively and are all purpose designed Voith tractor tugs of 37m in length built by Astilleros Gondan S.A. of Figueras, Asturias, Spain. Fitted with two Rolls-Royce Bergen C25:33L8P main engines produce a total of 6,850 bhp to power a pair of five bladed Voith Schneider propulsion units. All three are fitted with the unique Voith 'Turbo Fin', a device incorporated in the leading edge of the skeg designed to increase the amount of lift when operating in the escort (indirect) towing mode. The tugs have a static bollard pull of 67 tons and a maximum free running speed of 15 knots. Maximum steering forces, while operating in the indirect (escort) towing mode at 10 knots are 150 tons and a similar figure for maximum braking force.

The highly developed and unusual hull design incorporates a bulbous bow, sponsons and bilge keels and is optimised to operate effectively while moving ahead or astern and achieve very high steering forces when operating in the escort (indirect) towing mode.

The towing equipment installed includes a hydraulically towing winch with two large split drums on a common shaft with a maximum line pull of 200 tons and a 300 ton brake holding capacity. Each drum is fitted with a high performance Steelite man-made fibre towline of 92mm diameter and 350m in length. The winch is operated from the wheelhouse and can be used to control the length of towline and the maximum load applied automatically, during escort operations. A towing staple (fairlead) of unusual design is intended to accommodate both steel wire and a synthetic towline and aid stability in both escort and towing roles

Fire fighting equipment is fitted to meet the FiFi 1 standards and includes two Unitor monitors located at boat deck level. One monitor is capable of delivering 20,000 litres/minute and the other water/foam at the same rate. Two pumps driven by the main engines are rated at 1,500 m³ hour to supply the monitors and the mandatory self protection spray system.



Top: Culver and the **Gatcombe** illustrating traditional single screw tugs employed at FMT before the requirement escort tugs and **Below:** tractor tugs the **Portunus** chartered by Red Funnel for escort trials and the **Tito Neri** one of the first tugs provided under the Solent Towage contract. Details photographs of the ASD tugs **Thrax** and **Silex** and the current tugs can be found in previous BJ editions.



Seaclear

Southampton Marine Services Ltd, based at Hythe Marine Park in Hythe, last year completed building a 16m multi-cat type workboat for and on behalf of Cowes Harbour Commissioners.

The 16.5m LOA, 6m beam harbour maintenance vessel **Seaclear** is powered by two Doosan L136TI marine engines with a combined power of 640bhp. Propulsion is via twin 800mm diameter propellers driving through fixed nozzles. Electrical power is provided by a Doosan L136 engine driving a 15Kva generator, with the addition a custom twin hydraulic pump system.

Seaclear will be primarily used for harbour maintenance duties as well as the maintenance of moorings and buoys in and around the Isle of Wight. It is thus equipped with a 10 ton winch and a 10t/m hydraulic crane. The vessel's twin hydraulic system allows the winch and crane to be used at the same time, making for a very versatile workboat.