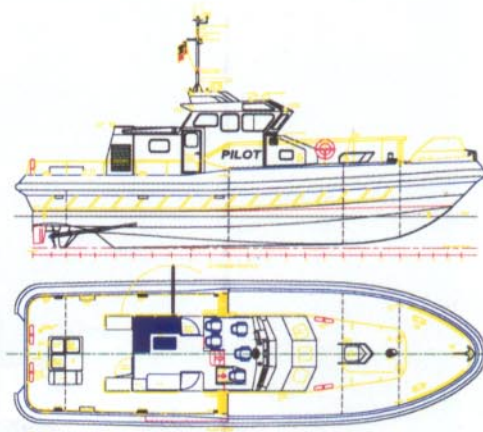




'ROBERT HASTIE'



MILFORD HAVEN'S NEW MUSTANG-BUILT PILOT VESSEL

Mustang Marine (Wales) has recently completed a 19 metre pilot vessel designed by Camarc for Milford Haven Port Authority (MHPA) to provide fast and efficient running at transfer speeds of up to 18 knots, combined with excellent sea keeping.

The hull design is an advanced double chine hull, developed in conjunction with UK towing tank facilities since 1983. This basic hull design has been used on a number of vessels including 16 metre and 18 metre steel pilot and patrol/boarding vessels.

Careful attention has been paid to weight control, to produce a robust and seakindly craft fit for the demanding role of pilot transfer. In view of the operation requirements, weight refinement is not taken to the minimum limits allowed by classification rules, but is carefully considered to combine robust construction with efficient operation.

The requirement for speed is twofold. It is required to meet ever-increasing transfer speeds and to provide the port with a faster patrol vessel for safety considerations. However the requirement for speed is considered secondary to the need to operate in a hostile environment.

The vessel is designed to have a minimum service life of 15 years. The vessel meets the MCA Code of Practice for Small Work boats and Pilot boats and is to be issued with a Pilot Boat Certificate.

MHPA operate in a compulsory pilotage area up to 20 nautical miles from a safe haven. The craft is very heavily used in bad weather under very severe conditions and it is the owner's expectation that the structure will be subjected to 1,000 vessel impacts per annum. Typically the vessel will operate in swells up to five metre significant wave height.

The duty cycle is expected to be an average of 3,000 hours per year. Slow speed cruising will account for between 25-50 per cent of the operating hours and the remainder will be at service speed.

The structure is designed and built to the requirements of Lloyds Register of

Shipping (LRS) Special Service Craft (SSC) Rules on a "report 10 basis". The vessel is not subject to Lloyds survey. The vessel has been inspected by the MCA for compliance with the Work boat Code of Practice to obtain a Pilot Boat Certificate (PB1).

The gunwhale panel is designed to accept the Dutch "Popsafe" fender system. The fender comprises a 280mm outside diameter polyethylene pipe with 140mm polyethylene closed cell foam packing to absorb the impact loading. The pipe is retained in the gunwhale panel by a stainless steel wire rope.

The main engines are MTU 12V 183 TE72 diesels rated at 610kW at 2,100rpm each. They are coupled to Twin Disc MG 5203 gearboxes with a reduction ratio of 2.03:1.

The main exhaust is a wet system, run from a steel riser bend on the engine directly into a stainless steel mixer box. The cooling water is injected at the mixer box. A silicon rubber bellows is fitted to connect the mixer box to the exhaust line, to ensure the vibration transferred is as little as possible. In line Halyard HIL0018 GRP silencers are connected to the hull outlets and mixer box by reinforced marine diesel exhaust hose.

The steering system is a Kobelt Wagner power hydraulic type, which will revert to hand control in the event of power failure. A 400mm wheel is fitted at the helm position. A joystick type control is fitted alongside the wheel.

The vessel is fitted with a comprehensive integrated Furuno electronics package supplied and installed by Dyfed Electronics.

The wheelhouse is constructed in aluminium and mounted on resilient mounts to ensure the vibration and noise transferred is as little as possible. The crew seating is supplied by Spillard Safety Systems, and are fitted with four point seat belt systems.

The wheelhouse has a rear saloon with a chart table and a bench settee and table. Storage is provided by way of a heated wet locker, complemented by cupboards in the chart table and bins under the seating.

The wheelhouse windows have been designed to give the coxswain maximum

unrestricted vision fore and aft while boarding pilots. The windows are supplied by Seaglaze Marine Windows, and the front windows are fitted with Hepworth 50N pantograph marine wipers.

Crew accommodation provided below deck comprises a simple galley and mess room together with sanitary facilities and storage. The joinery was carried out by Milford Haven Ship Repairers working in close association with the yard.

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'Robert Hastie' SPECIFICATIONS

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| Classification: | MCA (PB1) |
| Type of vessel: | Pilot boat |
| Owner: | Milford Haven Port Authority |
| Designer: | Camarc Design |
| Builder: | Mustang Marine |
| Construction material: | Steel hull, aluminium superstructure |
| Length overall: | 19.75 metres |
| Length, moulded: | 18.65 metres |
| Length, waterline: | 17.00 metres |
| Beam, overall: | 6.00 metres |
| Beam, moulded: | 5.25 metres |
| Draught: | 1.46 metres |
| Main engines: | 2 x MTU 12V 183 TE72; 610kW at 2,100rpm each |
| Gearboxes: | 2 x Twin Disc MG 5203; 2.03:1 |
| Propellers: | 2 x Teignbridge fixed pitch; 5 bladed |
| Maximum speed: | 19.6 knots |
| Speed, cruising: | 18 knots |
| Electronics supply and installation: | Dyfed Electronics |
| Seating: | Spillard Safety Systems |
| Windows: | Seaglaze Marine Windows |

