

Pair of VWTs for Italian operator

Astilleros Armon has delivered two 70-tonne bollard pull Voith tractors, *Wolf* and *Turm*, to the Italian operator Ocean srl, based in Trieste. The order maintains a longstanding relationship between operator and builder which goes back to 1997 and is ongoing – a third, but different tug is currently in build as part of the same order.

Protected by fendering from the Spanish company, Nor Rubber, and paint by Hempel, the two new all-steel vessels measure 34.50m x 11.60m with a moulded draft of 3.90m.

Designed by the firm of naval architects frequently used by Armon, CintranaVal-Defcar, to achieve a bollard pull of 70 tonnes and a free-running speed of 14 knots, both tugs are powered by a pair of MaK 8M25 diesels. These each develop 2640kW at 750 rev/min and turn type 32B5/250-2 Voith Schneider cycloidal propulsors set forward in traditional Voith water tractor fashion.

A pair of Caterpillar 3406 driven generator sets, each of 306kVA, provide the main electricity supply whilst a Cat 3056 driven set supplies 105kVA for harbour/emergency use. As one would expect, there are a host of engine room pumps supplied by the Spanish manufacturer Ascue.

The main engines also power the FiFi1 classed fire-fighting system via Kumera-Norgear step-up gearboxes. The pumps feed two Kvaerner-Jason



wheelhouse roof mounted monitors, each of 1,200m³/hr, plus a 300m³/hr self-drenching system. There is a silent/control room at the rear of the engine room, with an observation window and forward is a generous and well-equipped workshop.

The living quarters on main deck comprise six en-suite cabins, described as accommodating 1 + 1 persons but most of the additional berths are of the pull down 'Pullman' type and would only be

used in special circumstances – the normal ship's complement is eight. These crew cabins are all located forward of the all-stainless steel galley to port and the particularly attractive mess room to starboard. In addition, there is a washroom and toilet compartment within easy access from the aft deck.

The captain and chief engineer have large suites on the forecastle deck with a bedroom partitioned off from the office and lounge

area. These both have private toilet and shower facilities. A curved staircase leads up to the rear of the wheelhouse which has two parallel island consoles either side of the helmsman's chair on tracks.

Doors on both sides lead, via just a couple of steps, down to the walk-round bridge deck. It is interesting to note that the exhausts, which are of minimum profile, are

Below left: The attractive mess. Below: Everything-to-hand.



TUG DELIVERIES

set away from the wheelhouse structure, approximately in line with the aft window. Cleverly, they are set one behind the other at an angle of 45 degrees from the helm position thus minimising any obstruction to good all-round visibility. The wheelhouse is glazed from floor to ceiling.

Hatlapa provided the bulk of the deck machinery items. These include a main towing winch on the aft deck with two drums in waterfall configuration. The upper drum

carries 1,200m of 52mm steel wire whilst the lower drum is divided into two parts – each holds 300m of 52mm wire. Control is effected from a panel in the wheelhouse and from a portable unit.

Also on the aft deck are two tugger winches, each with a drum holding 120m of 26mm wire, a Karmoy fork and towing pin system (of 300-ton SWL), a Palfinger crane and a 75-ton Industrias Ferri towing hook. This latter unit has a slewing base

anchored to the deck with both pneumatic and emergency manual triggering.

Located on the forward deck is a Hatlapa towing winch which is fitted with two cable drums and a pair of 450mm diameter warping ends.

The aft deck staple can be raised and lowered by means of an hydraulic cylinder so that the aft deck may be kept clear of obstruction when not in use. This can be hidden beneath a timber

topped panel to match the rest of the deck.

Classed by Bureau Veritas for unrestricted navigation, **Wolf** and **Turm** have tank capacities to hold 214m³ of fuel oil, 17m³ of lube oil and 46m³ of fresh water. In addition each can accommodate 42m³ of recovered oil, 19m³ of foam and 30m³ of ballast water.

Below left: The silent room (with observation window).

Below: The chief's suite.