

New silicone coatings promise smoother operations

Substantial savings, improved performance and an enhanced environmental profile are among the benefits claimed by manufacturers of the latest generation of hull coatings

For tanker owners, hull condition has a key significance as it directly impacts on vessel speed. Operators able to quote higher speeds during charter contract negotiation are likely to command better rates.

For maximum efficiency, hulls need to be as smooth as possible. If hull roughness is allowed to increase, more power is required to push the vessel through the water, which translates in an increased fuel requirement/bill and increased emissions. Ships unable to increase power to compensate for increased roughness can lose speed, resulting in slower transit times or even late arrivals.

A particular hazard for tankers in this regard is the static periods where a vessel is awaiting a charter or waiting to discharge/load cargo. At these points the underwater hull is especially vulnerable to barnacle and weed build up, which will provide resistance when the vessel restarts moving.

Silicone based coating technology has been around for a number of years and works on a



Ecospeed glassflake-based coating is being applied to the chemical tanker *Vedrey Barfodh*



Fluoropolymer-based *Intersleek 900* antifouling delivers 40 per cent higher foul release properties than its predecessor, *Intersleek 700*

foul release basis by providing a very smooth and slippery, low friction surface, onto which fouling organisms have difficulty attaching. Those that do attach, have limited traction, and can usually be easily removed.

International Paint says that its latest generation of foul release technology – *Intersleek 900* – builds on the success of its *Intersleek 700* range to bring its proven benefits to all ships with service speeds above 10 knots, such as tankers.

Compared with *Intersleek 700*, *Intersleek 900* is said to be 25 per cent smoother and provides 38 per cent better coefficient of friction; has up to 80 per cent better static fouling resistance; 40 per cent better foul release properties; 50 per cent reduction in slime; 100 per cent better hold-up; 35 per cent higher gloss; 60 per cent reduction in overspray; and 60 per cent better abrasion resistance.

Additional hydrogen bonding is said to dramatically increase the hold-up and sag resistance of the coating, doing away with the need for double applications and yard reworking. Meanwhile, the absence of biocides brings cost advantages at the next drydocking on treatment and disposal costs of wash water and blasting abrasive

Formally launched last year, *Intersleek 900*, it is claimed by the company, could save a VLCC over 4,500 tonnes of fuel, reduce carbon dioxide emissions of over 14,000 tonnes and recoup US\$1.2

million over a five year period.

In that time the product has notched up some impressive references, including application on tankers in the James Fisher, OSG and Vela fleets.

James Fisher (today James Fisher Everard) is one of the largest European operators of tankers, and its fleet undertakes more than 2,000 voyages per month. In 2004, the company trialled *Intersleek 700* on propellers. Following successful in service performance, they decided to upgrade and coat the entire underwater hull of four vessels with *Intersleek 900*.

The first to be coated was the 3,627 dwt *Galway Fisher*, drydocking at A&P Falmouth in June 2007, followed by the 14,122 dwt *Pembroke Fisher* and the 3,627 dwt *Solent Fisher* in August. Application on the 4,765 dwt *Thames Fisher* completed the quartet in September. These vessels typically operate at a speed of 12-15 knots. The application on each ship involved a full blasting of the vertical sides and application of *Intersleek 900*. James Fisher is now planning to coat further vessels with *Intersleek 900* in the near future.

In common with James Fisher, OSG decided to trial *Intersleek 900* on the 442,500 dwt V-Plus class *TI Africa*, following successful inservice trials with *Intersleek 700*. Vela meanwhile had the 317,000 dwt *Leo Star* and sister ship *Pisces Star* coated at the Bahrain