Efficiency at the Forefront in the New Operational "Norm"

Claes Skat-Rørdam, Fouling Control Marketing Manager at Hempel, discusses the importance of operational efficiency in challenging times.

The shipping industry is in the doldrums, freight rates are low and volatile, and most sectors are facing significant overcapacity, with shippers chasing a finite amount of cargo. This seems to be the new operational "norm" and as a result, ship operators are being forced to seek efficiencies wherever they can to save time and cost while being mindful of their environmental footprint as international regulations increase.

The current market has led to many ships lying idle for increasingly longer periods of time and this affects their ability to maintain a clean hull. As every good operator knows – a clean and smooth hull reduces friction between the ship and the sea, improving the movement of the ship in the water.

The trend for slow steaming is somewhat continuing, despite the lower oil price, which significantly affects the antifoulings that rely on the relatively fast movement of the vessel through the water to help remove biological organisms. The accumulation of biofouling on a ship's hull creates added drag which, in turn, increases fuel consumption and the release of harmful emissions into the atmosphere. Reducing biofouling is probably the easiest and cheapest activity that a ship operator can undertake to save both fuel consumption and minimize the vessel's CO2 emissions.

When searching for efficiencies an operator cannot rely on one single energy saving initiative but needs to implement a mix of design, technical and operational factors such as hull form, engine type, intelligent weather routing and enhanced crew training. But the choice of marine coating can also impact significantly on the performance and efficiency of a vessel.

Fouling Mitigation

Mindful of this, a few years ago, Hempel launched the hull coating Hempaguard, which is designed to deliver significant fuel savings. It has shown an outstanding resistance to fouling during idle periods of up to 120 days. Hempaguard also provides shipowners with trading flexibility at slow and regular steaming speeds.

Actiguard, Hempel's patented technology behind Hempaguard, was five years in development and is based on silicone-hydrogel and biocide science. Actiguard integrates silicone-hydrogel and a full diffusion control of biocides in a single coating. The surface retention of the biocide activates the hydrogel, which then holds the fouling organisms at bay, cutting friction to a minimum, while using a minimum amount of biocide.

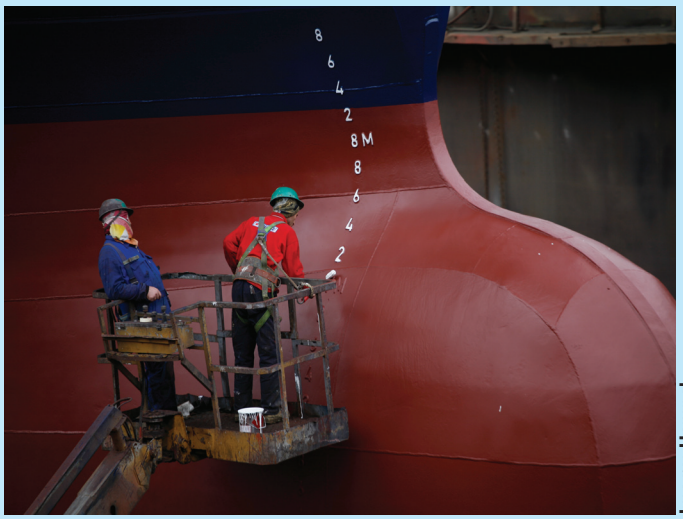

Image: Hempel

This very low level of biocide helps to ensure that the coating stays smooth after application. It also has the long-term stability and mechanical properties required of a durable solution. The result is a unique fouling defense system, which provides advantages for fleet operators globally.

Shipowners in particular are enamoured with Hempaguard, which purports to achieve a fuel saving of 6% on average compared with a conventional, low-cost antifouling product.

Further efficiencies can be gained under normal circumstances and parameters. Hempaguard requires one less coating layer, saving time and money.

The Future

Hull coatings have a significant role to play in the endless search for efficiencies and environmental protection. In 2015, Hempel went one step further and signed a corporation agreement with DNV GL enabling it to work together to bring vessel owners clear, comprehensible, comparable and verifiable analytics that track and assess hull and propeller performance.

Hempel plans to continue to invest in R&D, formulating flexible and robust coating solutions. Hempel keeps in close touch with all regulatory developments, recently taking an active role in the soon to be published ISO 19030, to ensure that any new coating meets the environmental and efficiency demands of its customers.

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