

Rope company has a handle on abrasion

Maritime ropes supplier, Lankhorst Ropes has developed an innovative, abrasion resistant coating for its Lankoforce ropes, with the goal to simultaneously improve abrasion resistance and make the rope easier to handle.

The Challenger coating is an alternative to the protective jacket normally used to safeguard the rope during handling. Lankoforce is a 12-strand braided rope, made of Dyneema yarn. Comparable in strength to that of conventional steel-wire rope, yet weighing up to seven times less, Lankoforce is an excellent alternative to heavy and cumbersome steel-wire ropes in situations requiring manual handling of the rope. Until now, the Lankoforce rope construction

included a non load-bearing protective jacket to reduce the effects of abrasion. While this is effective in protecting the rope, in the event the jacket becomes damaged, the rope has to be taken out-of-service and repaired.

The Lankhorst-developed Challenger rope coating is designed to replace the Lankoforce's protective jacket along the body of the rope, while retaining a jacket for the high-wear, splice eye.

The low-friction coating is applied to the rope during production and has been shown in trials to significantly reduce the effects of abrasion. Moreover, the absence of the jacket means the Lankoforce rope requires less maintenance, is simpler to inspect, and even easier to handle.



▲ Lankoforce Challenger rope coating.

Hans-Pieter Baaij, manager, Maritime Division, Lankhorst Ropes, said: "The Lankoforce Challenger coated rope is an important development in our drive to introduce technical improvements that have clear business benefits in rope performance and handling."

Gauging thickness

ITM Products Ltd, a supplier of thickness-measuring equipment, has launched its new coatings thickness gauge, the FNF-01.

The coatings inspection of a vessel has become more important with the SOLAS (*Safety of Life at Sea*) requirements and the introduction of the *Coatings Technical File* for vessels.

The FNF-01 can be used straight from the box without calibration for most applications. Other features include automatic substrate detection to read on both ferrous and non-ferrous coated surfaces, a rotatable screen orientation for viewing figures the right way up when operating the gauge upside down and switchable readings between mils and microns.

The FNF-01 has a strong casing and is supplied with four calibration foils and in a hard carry-case, these aspects make FNF-01 a cost-effective coating thickness gauge.

Ions are the answer to halt breeding

Cathelco has designed special box cooler antifouling systems for two Rio Tinto tugs used to berth iron ore-carrying vessels in the port of Dampier, Australia.

Pilbara Vulcan and *Pilbara Neptune* both experienced problems with bio-fouling which caused their box coolers to overheat. In response to this, the box coolers were extended and deliberately left with uncoated surfaces to improve heat transfer.

Stephen Ellis, project development manager, Cathelco, said: "Rio Tinto approached Cathelco to provide a solution to the fouling problem, but as the box coolers were uncoated and electrically isolated from the seachests they also wanted to be sure that the antifouling system would not cause corrosion problems in the future."

On each of the tugs, the Cathelco system will protect nine box coolers against mussel and barnacle growth, which can impair the efficiency of the heat transfer process. The order for the equipment was won by Marine Plant Systems, Cathelco's well-established agent in Australia.

Copper anodes, fed with an electric

current from a control panel, are mounted horizontally beneath the box coolers to create an even distribution of ions when the system is in operation. The ions create an environment where barnacles and mussel larvae do not settle or breed and are passed harmlessly to discharge.

Garry Churm, from Cathelco's technical department, said: "The client wanted to eliminate the risk of 'stray currents' which could have a corrosive effect on the seachest. To minimise this risk, we designed special perforated cathode plates which cover the anode to provide an effective earth return."

In addition, Cathelco designed a corrosion monitoring system to measure the difference in voltage between the box coolers and the seachests to check that there is electrical isolation. In the event of a failure in the isolation an alarm is registered on the control panel. Tugs and other vessels working in-shore with frequent periods alongside are particularly vulnerable to bio-fouling in their seawater pipework systems. In tropical waters where barnacles and mussels breed more prolifically, the problem is intensified.

Rapid application and results for light coating

Mascoat's coatings have been used on Dann Marine Towing's new tug Chesapeake Coast.

Dann Marine based in Chesapeake City, Maryland, required a product that would reduce condensation and radiant heat gain without adding excess weight to the build. Dann Marine shipyard personnel applied Mascoat Marine-DTM to *Chesapeake Coast* via Graco air-less spray equipment at 2mm.

The coating's rapid application method enabled installation to be completed in less than a week and the results were instant.

When the vessel was launched, the towage company reported that Mascoat Marine-DTM worked as expected and the results were pleasing. Due to those results, the coating

was then used on tugboat *Discovery Coast*.

Recently, Dann Marine Towing also contacted Mascoat about using its further coatings on refit *Ivory Coast*. The vessel was at the DMT Headquarters in Maryland, where it was undergoing repairs for fire damage. Dann Marine applied sound coating in the engine room, as well as in a number of the accommodation spaces in the vessel. The Mascoat Sound Control-dB is a one-part, low-volatile organic compounds (VOC) sound-damping coating, applied via air-less sprayer. Both of the Mascoat Coatings were applied to *Ivory Coast* in one week using only a two-man crew.

► **Chesapeake Coast** under way after launch.

