SHIPREPAIR
& CONVERSION TECHNOLOGY

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Paints & coatings

Ecofix reduces rudder repair costs

In response to the growing trend for thruster and rudder manufacturers to finish their products with self-cleaning protective hard coatings, Antwerp-headquartered Subsea Industries has introduced a filler coating for use with its Ecoshield hard coat system.

Ecofix, specifically formulated to provide shiprepairers and Original Equipment Manufacturers (OEMs) with a cost-effective solution for the repair of corroded or pitted steel surfaces, is claimed to return the thruster or rudder to its original state prior to touching up the repaired area with Ecoshield. Boud Van Rompay, executive director of Subsea Industries, says: "Ecofix has been developed to repair most pitting or corrosion damage on rudders, stabiliser fins, thrusters and other underwater gear. It's as tough as the steel itself."

Subsea Industries' Ecofix is a cost-effective solution for the repair of corroded or pitted steel surfaces

Subsea considers Ecofix to be an effective alternative to metal facing or very expensive fillers. As it uses the same basic resin as Ecoshield, the coating can be applied just one hour after applying the filler.
www.hydrex.be

Tools

Freeze sealing for pipe repair work

Freeze sealing pipes during repair or maintenance in the marine sector is an increasingly popular alternative to 'hot-tapping' and eliminates the need to shut or drain down a system. Freeze sealing works by creating an ice plug either upstream of the repair site or on either side of an area where a pipe system needs to be maintained.

The Pipestoppers Division at Huntingdon Fusion Techniques (HFT) is now marketing to the marine sector its Qwik-Freezer portable CO_2 pipe freezing system, which covers pipe diameters from 3/8in - 8in

The Quick-Freezer system being applied

(9 - 200mm). According to HFT, Qwik-Freeze is very quick and easy to use, requires almost no set-up time and is the only CO_2 pipe freezing system capable of freezing up to 8in pipes. It is well suited to a wide range of water-carrying pipework where valves need to be changed on a vessel during voyage or while drydock maintenance is taking place.

A specially designed flexible jacket is wrapped around the pipe at the point where the freeze is required. A nozzle in the jacket is then coupled to a cylinder of liquid CO2 by means of a high-pressure hose.

When the CO_2 is injected into the space between the jacket and the pipe at a temperature of -78°C, the pipe's contents freeze and a secure 'ice plug' is formed that seals the pipe. The 'ice plug' only forms in the section of the pipe covered by the jacket, so the resulting rise in pressure is very small and there is no damage to the pipe. The technique can be used safely on iron, lead, stainless steel, carbon steel, copper, brass and plastic pipe.

By not having to drain systems of liquids to make repairs, the savings made are able to justify the relatively low cost of the Qwik-Freezer system, HFT states.
www.huntingdonfusion.com

Tools

Multi-process welding system from ESAB

ESAB has launched the Rebel EMP 215ic, a 120V-230V welding system that offers multi-process arc performance, location flexibility, lightweight portability and an improved operator interface. It also features a smart MIG function that enables users to begin MIG welding with an extremely stable arc just by setting metal thickness and wire diameter. Unlike competitive units, there is no need to enter information for shielding gas mix, ESAB states.

The Rebel has two operating modes, Basic and Advanced, which can make welding easy for beginners and lets those with more experience

Ecospeed coating withstands demanding ice conditions

A hull coating applied to a con-ro vessel was found to be in pristine condition after sailing in ice for five years

When the 194m long con-ro vessel *Oceanex Sanderling* drydocked at Gibdock in Gibraltar in April this year its underwater hull coating was still in excellent condition. The ship had been sailing between Halifax and St. John's in Canada with Ecospeed on its hull since 2011, often in icy conditions. Despite this, only a few touch-ups were needed on the areas that had been coated with Ecospeed five years earlier.

Christopher Verhoeven, spokesman for Subsea Industries (the Belgian company that markets the coating) says: "Ecospeed is guaranteed for 10 years, and has a life expectancy of 25 years, and will therefore protect vessels against cavitation and corrosion damage for the remainder of their service life without the need for a full repainting during future drydockings. This is a very important benefit for the owner of this vessel who needed to have [their] vessels repainted every year with the previous coating."

Bad weather and expensive drydock costs in Canada made drydocking in the Mediterranean area the most feasible option for this yearly task. However, this cumbersome undertaking is no longer necessary with the one time Ecospeed application that was carried out.

Another advantage of Ecospeed to both shipowner and shipyard is ease and flexibility of application. The entire system is applied in two homogeneous coats and the overcoating time can be as short as three or four hours. Therefore Ecospeed can easily be adapted to a shipyard's schedule or to unpredictable weather conditions.

Further maintenance of the underwater hull is easy, whether in-water or dry, the company claims. "This is due to the extremely tough surface which can be cleaned of even the heaviest fouling. In-water maintenance procedures can be repeated wherever and whenever needed during the vessel's lifespan without causing damage or deterioration in the quality of the coating's surface," says Verhoeven.

The Ecospeed-coated hull of *Oceanex Sanderling* on docking in Gibraltar earlier this year

In fact, each cleaning improves the coating's surface characteristics, reducing fuel use with a corresponding reduction of the carbon footprint. "It is therefore no surprise that in 2011 the owner of *Oceanex Sanderling* quickly saw the advantages of Ecospeed and decided to take the plunge and switch from the traditional coating he had been using. Five years later his choice has proven to be the right one and he will continue to enjoy the benefits of Ecospeed for many years to come," adds Verhoeven.

Subsea Industries also markets Ecoshield, a coating system for rudders and propellers. In recent months applications have been carried out in China, Trinidad, Romania, Portugal and the United States on different types of ships. Among the vessels treated for nine different owners, were several container vessels, car carriers, a bulker, a dredger and an oceanographic research vessel. The coating can be used to protect vessels that have been in service for some time and are already facing cavitation and corrosion damage. Such was the case with the rudders coated over the last months.

Ecoshield's properties make it easy to adapt the application schedule to the rest of the activities at the shipyard or drydock in a way which does not interfere with them, Subsea points out. Overcoating time can be as short as three hours, which means that for smaller surfaces such as rudders or bow thrusters the two coats required can usually be applied in a single day. ***SRCT***