

SUBSEA

PROTECTION AND PERFORMANCE

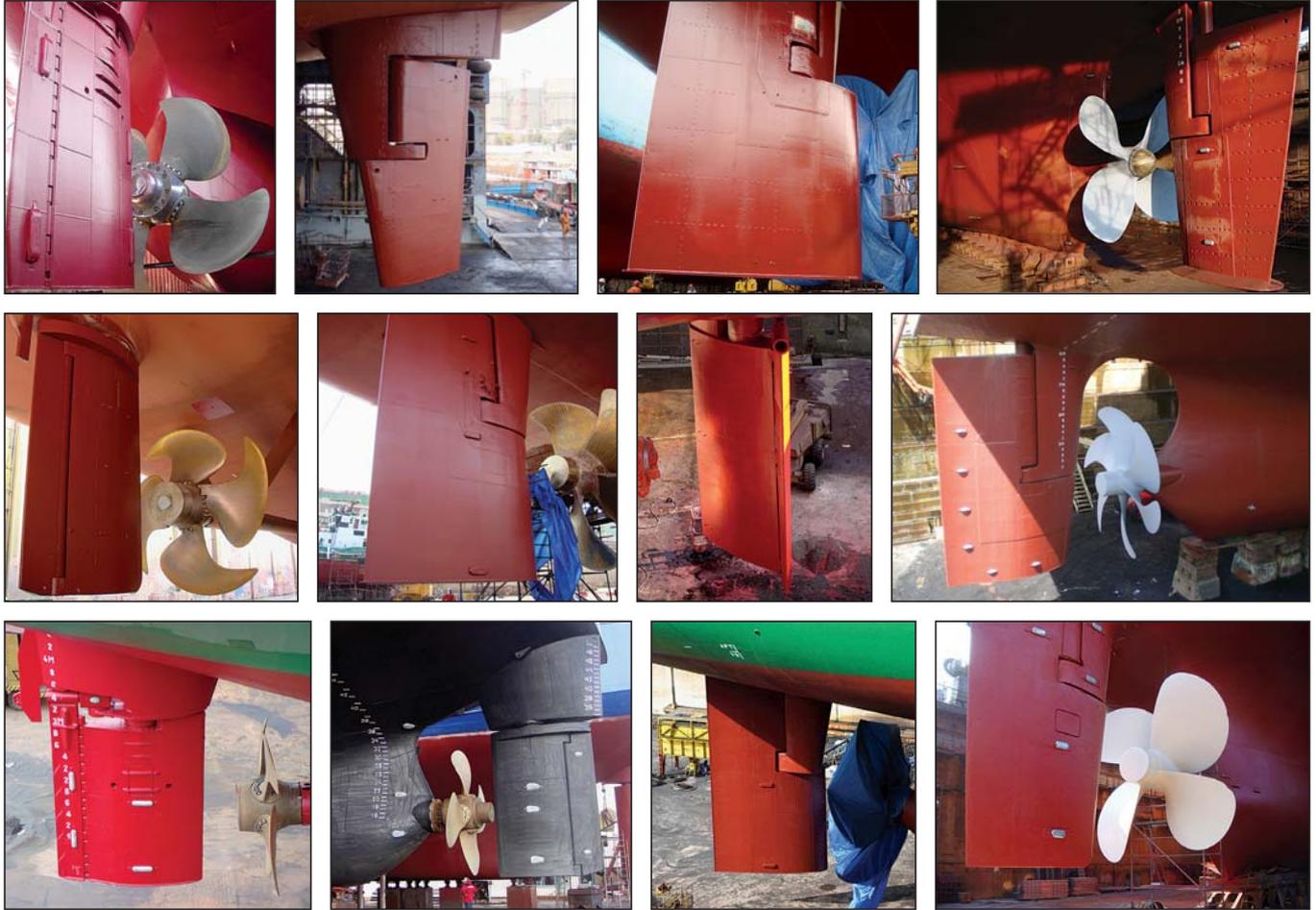
NEWS

LETTER



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The only coating that offers lasting rudder protection



Ecoshield gives a very thorough and lasting defense against cavitation and corrosion damage for a ship hull's entire service life.

The coating equally provides the rudder with an impenetrable protective layer while its flexibility enables absorption of the forces that are produced by cavitation. This prevents the damage normally caused

by this phenomenon.

Without proper protection against cavitation and the resulting erosion and corrosion damage, the financial consequences can be severe.

By removing the existing paint layers and applying Ecoshield on the rudder we can break the never ending cycle of painting, suffering damage, having

to perform extensive repairs in drydock followed by a full repainting, again and again.

With an Ecoshield application no full repaint will be needed during drydocking. Ecoshield is guaranteed for ten years. At the most, minor touch-ups will be required.

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ECOSHIELD®
THE DIAMOND STANDARD IN STEEL PROTECTION

Ecospeed application on scrubber outlet area of three newbuild vessels in China

Over the last few months the outlet of the scrubbers of three newbuild container vessels were coated with Ecospeed in Zhoushan, China. A lasting, chemically resistant coating was needed that could withstand the hazardous pollutants of the exhausts and protect the areas surrounding the outlets.

Exhaust scrubbers are systems that filter out all harmful toxins from exhaust gasses of marine diesel engines. This scrubber removes nitrogen oxides, sulfur oxides, hydrocarbons, heavy metals, carbon monoxide, soot and ashes. No pollutants are discharged into air. This minimizes the environmental footprint and impact of navigation in ports and coastal areas.



The area around the scrubber outlets after surface preparation.

Several benefits make Ecospeed the perfect choice as coating for the exterior outlets as well as the interiors of the scrubber.

1. Ecospeed is highly chemically resistant. Taking into account the nature of the process taking place inside the scrubber, this was essential for the customer.
2. Ecospeed lasts the lifetime of a vessel. No repaints will need to be scheduled during future dockings of the ship. This saves on time and money.
3. Ecospeed has been given a B1 classification by DNV GL after testing the coating's suitability as a ballast tank coating. B1 is the superior grade in a six grade classification system.
4. Ecospeed is a TBT-free, copper-free and biocide-free solution. Independent research has proven that the coating is 100% toxin-free and that there is no negative effect on the water quality or the marine environment at any point of its application or use.



Application of first of only two layers of Ecospeed.



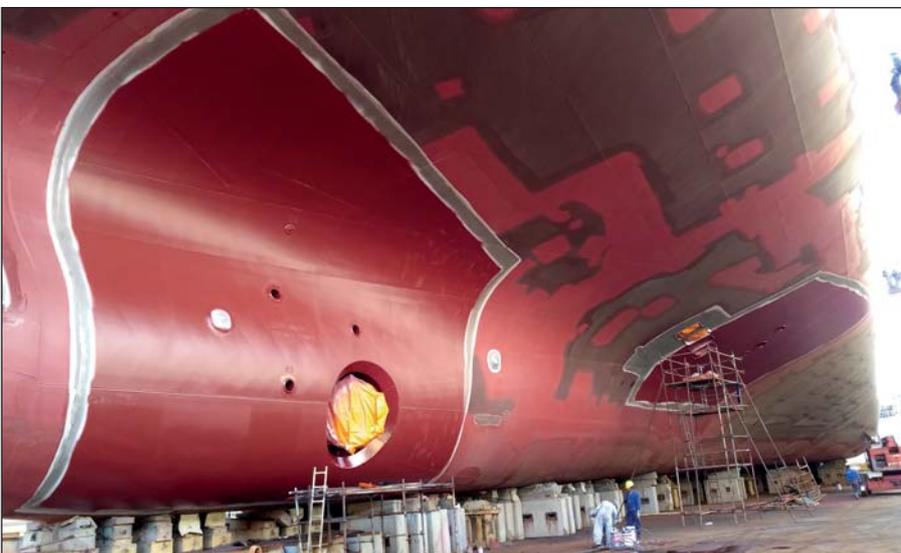
Inspection of the scrubber outlet area after application of first layer.



The second layer can be applied as soon as 3 hours after the first.



Ecospeed will protect the area around the outlets for the ship's entire lifetime.



The outlets of both scrubbers of these container vessels were given the same lasting protection.

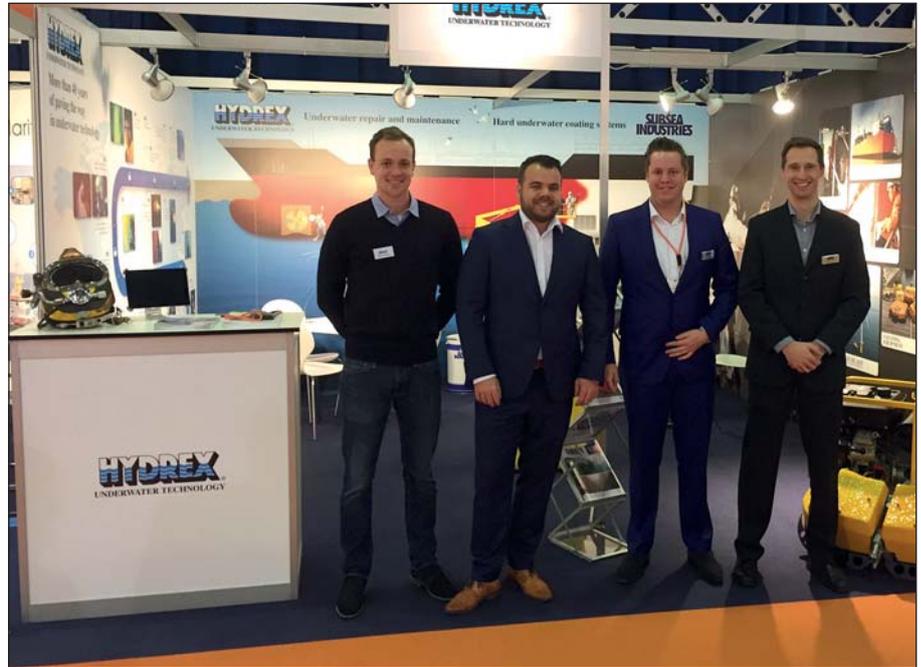
Because of the tight regulations on emissions in the shipping industry, the installation of an exhaust scrubber system becomes increasingly widespread. A durable coating to protect the inside of these scrubbers is needed. Ecospeed fits in seamlessly with the environmental idea behind the systems. ■

Subsea Industries and Hydrex at Europort 2017

The 38th Europort exhibition for maritime technology in Rotterdam was attended by almost 27.000 trade visitors from all parts of the world. The many exhibitors, including Subsea Industries and Hydrex were very satisfied with the exhibition.

A total of 1.100 exhibitors including 14 country pavilions welcomed guests, with many of the 40 side events focusing on three core themes: Big Data, The Human Factor and The Environmental Age.

The Europort 2017 agenda was enhanced by four ‘masterclasses’ offering insights into subjects that



The Hydrex and Subsea Industries team ready for another busy day at Europort.



The booth maintained a friendly, busy atmosphere throughout the four-day show.



Subsea Industries and Hydrex CEO Boud Van Rompay interviewed by a journalist from Safety4Sea/Green4Sea.

are now firmly part of the maritime lexicon. Energy Efficiency and Big Data also warranted separate masterclasses, with the latter reflecting the emergence of an industry game-changer as far as fleet management is concerned.

Elsewhere, the Royal Association of Netherlands Shipowners opened a ‘Shipowners Lounge’ and overall the Rotterdam event once more demonstrated its credentials as a vital meeting place for maritime business, positioned at the heart of a global community.

According to the closing report on the trade show, “Europort’s vital role as a hub for global maritime business was reflected in its continuing attractiveness to international visitors.”

Innovation and expansion

With a wide variety of products and techniques on display, the Hydrex/Subsea Industries booth fitted in perfectly with the innovative aspect of Europort. As part of the Dutch pavilion, it was a popular spot for visitors.

Well manned by representatives of both companies it maintained a friendly and busy atmosphere throughout the four-day show.

Many existing customers, Subsea Industries agents, technical people from all phases of shipbuilding and maintenance and many interested newcomers to Hydrex and Subsea Industries dropped by and enjoyed the friendly, comfortable but businesslike and informative atmos-

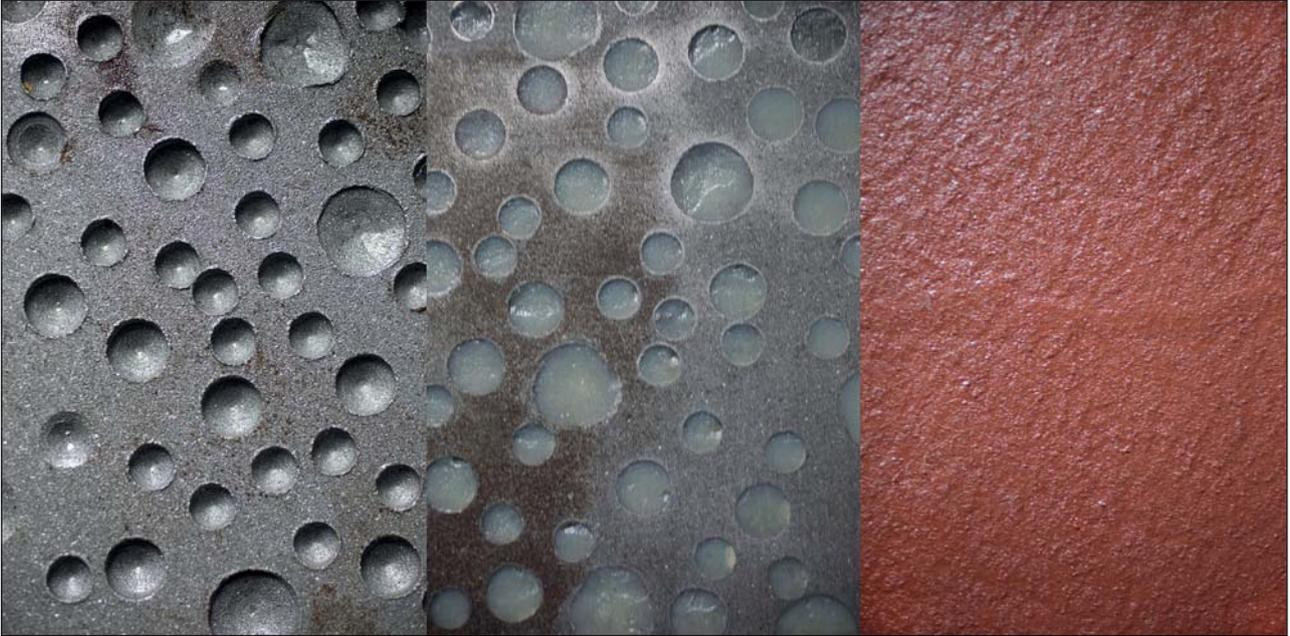
phere. Much new business was conducted.

In the background our equipment team performed flawlessly and efficiently in setting up and taking down the booth and making sure that it had everything that was needed.

Europort 2017 was a great success for us and we would like to thank all of you who visited us there. We look forward to working with you on an ongoing basis. ■

**SUBSEA
INDUSTRIES**

Corrosion damage repair made easy



Test plate showing the benefit of an Ecofix and Ecoshield combination.

Subsea Industries has launched a new product for filling and building up a corroded and pitted steel surface to its original form prior to recoating with Ecoshield. Ecofix is as tough as the steel itself, machinable, and can be used to repair most pitting or corrosion damage on rudders, stabilizer fins, thrusters and other underwater gear.

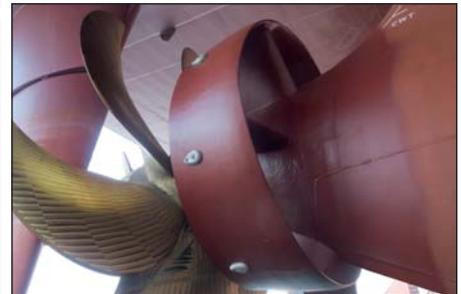
Ecofix is used in combination with Ecoshield, the ultimate rudder protection coating. When a rudder or other piece of underwater ship gear has not been properly protected, the surface will become corroded. Cavitation damage can cause severe pitting. The steel needs to be restored to its original shape with a smooth surface prior to recoating.

This is where Ecofix comes in. It is a superior, tested and proven filler. Because it uses the same basic resin as Ecoshield, the coating can be applied just one hour after the filler. The bonding and hardness are extraordinary. This is the effective alternative to metal facing or very expensive alternative fillers. And because it is part of the Eco-speed/Ecoshield family, it is fully compatible with the coating. ■

ECOFIX[®] **CORROSION REPAIR**

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SUBSEA INDUSTRIES



Subsea Industries NV, was founded in 1983 specifically to take care of the design, development and marketing of what has become an evolving line of underwater hull and propeller

cleaning equipment as well as the line of hard hull coating systems.

All products produced by Subsea Industries have the same goal in

mind: To keep the underwater part of your vessel in the best possible condition for its entire lifetime at the best possible performance.

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