

Say farewell forever to cavitation damage on running gear

Corrosion damage very repair made ✓ easy



Subsea Industries has a 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 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 very expensive fillers. And because it is part of the Ecospeed/Ecoshield family, it is fully compatible with our coatings.

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ECOFIX[®] 
CORROSION REPAIR

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In the last few months more than twenty ships received Ecoshield protection for their rudders, bow thrusters (and tunnels), Becker Twisted Fins, and scrubber outlet areas. These parts of these ships will be protected against cavitation and corrosion damage for the rest of their service lives without the need for recoating.

The ships belonged to a number of different owners. Some of them were new customers, others returning ones. The returning customers had seen firsthand that Ecoshield solved the cavitation erosion problem on the rudders of other ships and



Application of Ecoshield is simple if the correct procedure is followed.



Ecoshield is applied in only two, identical layers.



Ecoshield application is scheduled around other work on the vessel without interfering with it.



Many customers have reported that they do not need to use cathodic protection on rudders coated with Ecoshield.



Severe pitting on rudder as a result of cavitation. Ecoshield can prevent this from happening again.

wanted the same protection for the rest of their fleet. The new ones saw the excellent results obtained by other owners and chose Ecoshield to prevent corrosion and cavitation damage from reoccurring on their own ships.

Groundbreaking protection

In the last couple of years, Subsea Industries' sister company Hydrex has noted a substantial increase in the number of enquiries for underwater rudder repairs. This clearly shows the need for a cost-saving and lasting solution. A great deal of effort goes into the design and manufacturing of rudders because they are such an important part of a vessel. If a rudder is not given the proper protection against cavitation and the resulting erosion and corrosion damage, there can be major financial consequences for the owner.

Ecoshield puts an end to this. By blasting the rudder or other running gear back to bare steel and applying our coating, 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. Ecoshield provides a very thorough and lasting protection for a ship's entire service life. No repaint beyond minor touch-ups of mechanical damage will be required during future drydockings.

The Ecofix and Ecoshield combination

If a rudder has already suffered corrosion damage, Ecoshield can prevent any further damage from occurring. In such case the coating can be used in combination with another product in the Subsea Industries family: Ecofix.



Ecofix is a filler which is compatible with Ecoshield and used to repair pitted surfaces prior to Ecoshield application. Simple, fast, and low cost.

Ecofix is a superior, tested and proven filler that restores the steel to its original shape with a smooth surface prior to recoating. Because it uses the same basic resin, Ecoshield can be applied just one hour after the filler.

Slot welds can also be filled with Ecofix on a newbuild rudder prior to Ecoshield application.

Ecofix can replace much more costly and time-consuming hot work in most cases.

Easy and flexible application

With time at a premium in drydock, the speed of application of Ecoshield is a further advantage. Ecoshield's flexibility makes 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. Overcoating

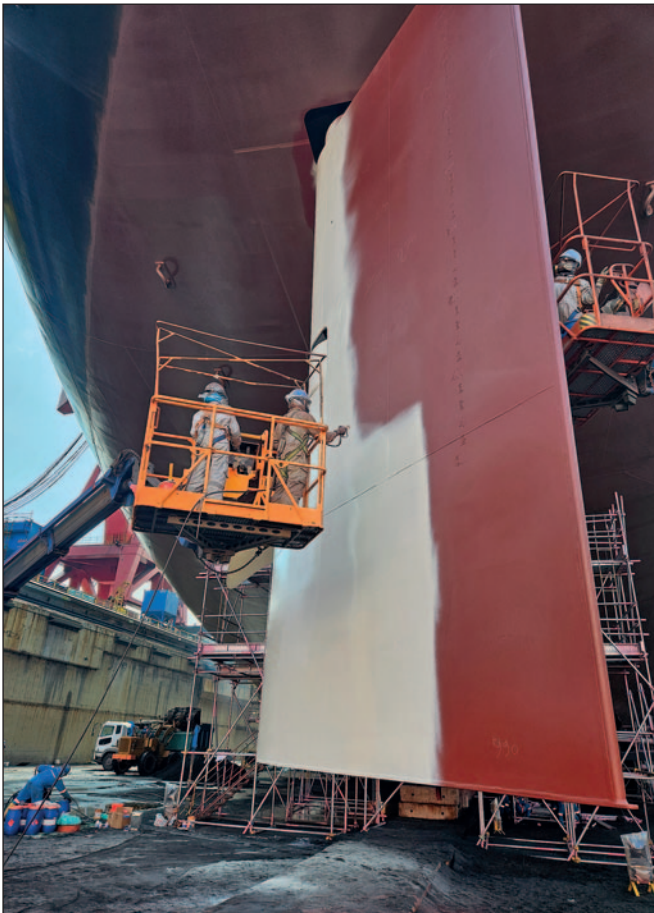


All running gear, such as thrusters and thruster tunnels, can be protected with Ecoshield.

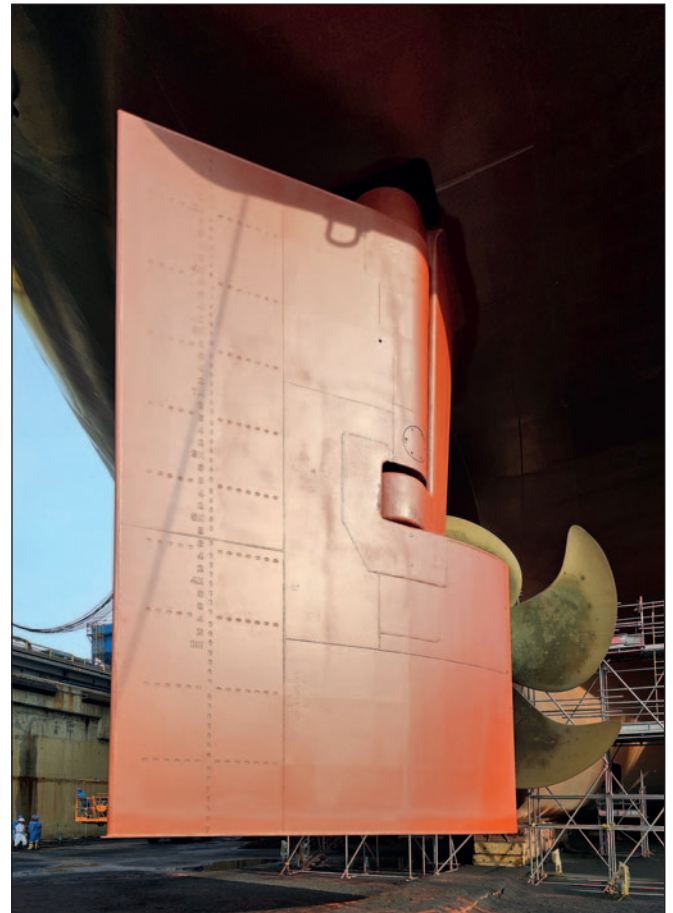
time can be as short as three hours. With the right planning, grit blasting, filling with Ecofix if needed, and application of the two required layers of Ecoshield can be performed in just one day.

Suitable for all running gear

Besides offering rudder protection, Ecoshield is also suitable for thrusters, azimuth thrusters, Azipods®, thruster nozzles, thruster tunnels and



Application of second Ecoshield layer.



No repaint will be needed during future dockings.



Both Ecoshield layers can be applied very fast, with only three hours in between.

other underwater ship gear which needs special protection from corrosion. The extra strength coating protects these areas for the service life of the ship. There is no need for recoating or major repair.

Results speak for themselves

Evidence of the success of the coating is the number of companies that began by coating one rudder experimentally and have ordered

Ecoshield for the running gear on other ships after seeing the results in service. Most have plans to convert their entire fleet. Shipowners who have previously applied Ecoshield to rudders on ships in service are specifying the coating for the rudders and other underwater gear on their newbuilds.

Ecoshield comes with a ten-year guarantee. It is the only coating known to fully protect a rudder from all cavitation damage. ■



ECOLOCK® ultra long-lasting protection for offshore hulls



Ecolock is designed to protect offshore vessels for decades without the need for drydocking. Increasingly, offshore units such as FPSOs, FSOs, FLRSUs and others used for offshore oil and gas exploration, drilling, storage and transport need to stay out of drydock for 15, 25 even 40 years.

The challenge has been to protect the underwater hull from corrosion and to provide a cleanable surface so that the biofouling that accumulates can be removed successfully and safely for UWILD and to reduce weight. Ecolock is the answer to that challenge.

Ecolock is an extremely tough and durable coating designed to remain

in excellent condition for 15 - 25 years without drydocking, repair or replacement. Ecolock can be cleaned underwater as often as needed to meet the UWILD and weight requirements of FPSOs, drill ships and other offshore vessels. Ecolock is the result of continual R&D on offshore hull coatings since the 1990s.

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SUBSEA

PROTECTION AND PERFORMANCE



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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