

SUBSEA

PROTECTION AND PERFORMANCE

NEWS

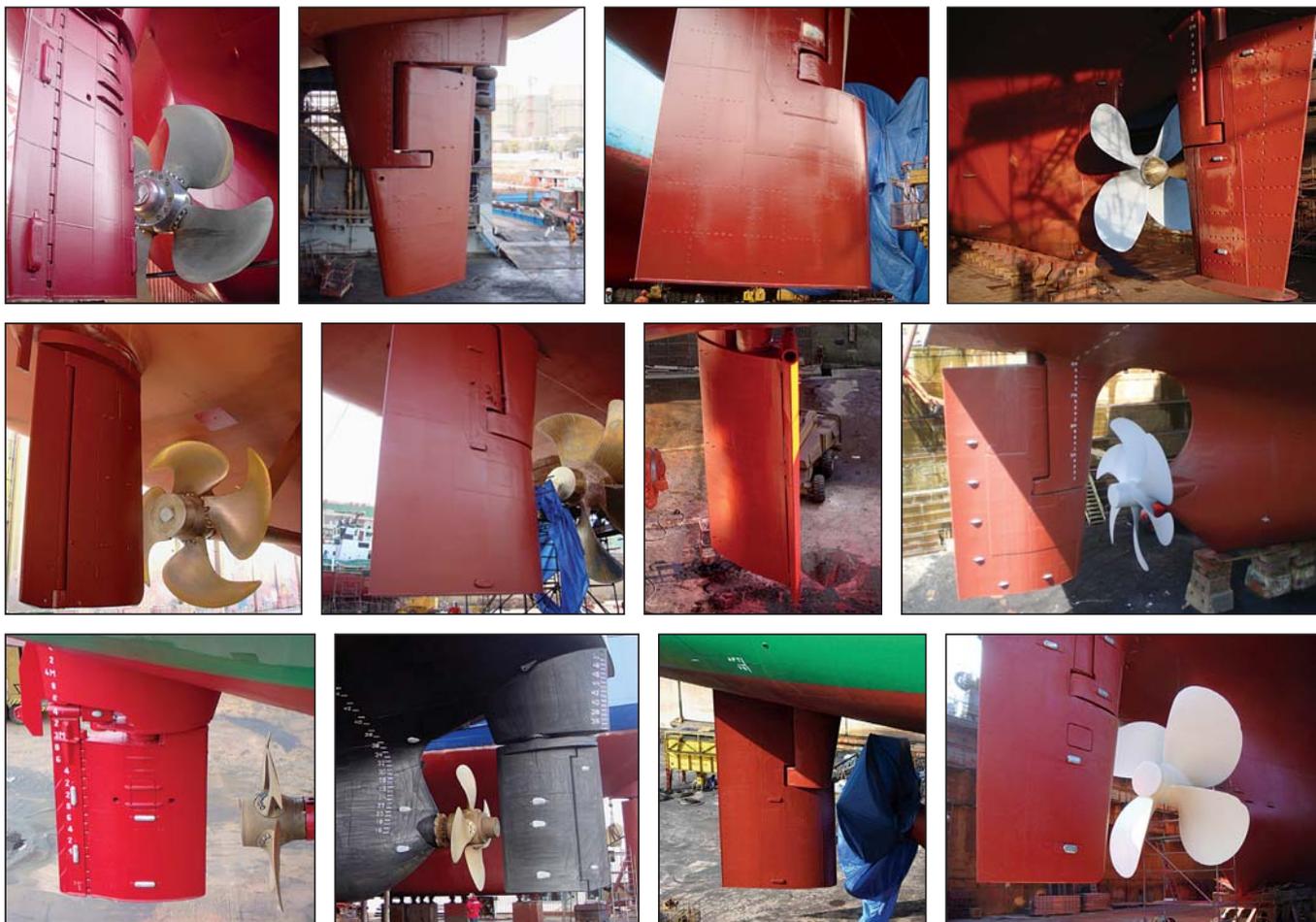
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LASTING PROTECTION



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.

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 dry-

dock followed by a full repainting, again and again.

With an Ecoshield application no repaint will be needed during dry-docking. 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

The drydock affair simplified

Drydocking is necessary, evidently, for inspection purposes, replacement of certain parts and any necessary repair. In most cases, however, the time spent in drydock is substantially lengthened as a result of the replacement or repair of the hull coatings. The solution is very simple: Choosing the right type of coating system can drastically reduce the length of the visit.

Most of the time and effort spent in drydock goes to the maintenance or replacement of the coating system. This usually consists of five or six layers with application intervals of



Ecospeed still intact eight years after application on cruise vessel.



General cargo ship five years after Ecospeed was applied, no repaint required.



Underwater hull of cruise vessel still in excellent condition after sailing with Ecospeed for ten years.

24 hours in between. The required surface preparation alone will add several days to the visit. Three to seven days extra is not unusual. Adverse weather conditions will increase this number.

A substantial reduction of time and effort in drydock can be obtained by using a hard coating system like Ecospeed. Usually drydocking an Ecospeed ship can turn into a simple wash-and-go operation. This is due to the fact that the coating will withstand almost all impacts during its time at sea. Seawater, corrosion or

marine fouling simply do not have an influence. The hull is usually in the same condition as it was when it was coated during newbuilding or the previous drydocking. The same goes for the rudder, bow thrusters and other running gear.

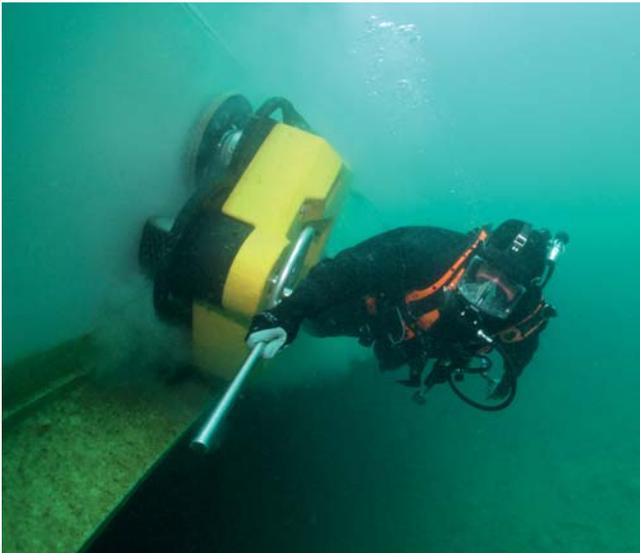
If no paintwork is required then it is obvious that the days in drydock can be more than halved. What this yields in terms of savings depends on the type and size of the ship. For a cruise ship fleet of 25 vessels this could result into 125-175 days saved per 2,5 year drydock interval. This

amounts to 500-700 days on a 10-year cycle. We have many cases in operation right now that prove this and we would be perfectly happy to discuss our technology with any interested party.



Subsea Industries NV
Boud Van Rompay
Founder

The washable coating



Ship hulls should be protected with a system that lends itself to fast, effective cleaning without risk of damage to the coating and without posing any kind of hazard to the environment. Ecospeed is this system.

There is currently no hull coating available which will not foul. The only way to remove this fouling is to clean it off. The Ecospeed coating has a glassy surface that was designed to be washed without being damaged. This enables

fast and efficient fouling control throughout a ship's entire service life, either by fast and easy underwater maintenance or high-pressure cleaning in drydock.

ECOSPEED®
SHIP HULL PERFORMANCE TECHNOLOGY

Ecofix restores corroded running gear to its original condition

Ecofix is a filler product which is used in combination with our award-winning Ecoshield hard coat system. Ecofix is specifically developed to provide ship owners and Original Equipment Manufacturers with a cost-effective solution for the repair of corroded or pitted steel surfaces.

When a rudder or other piece of underwater ship gear has not been properly protected, the surface will become severely pitted and corroded. The steel needs to be restored to its original shape with a smooth surface prior to recoating.



Application of Ecofix on corroded rudder in Portugal.



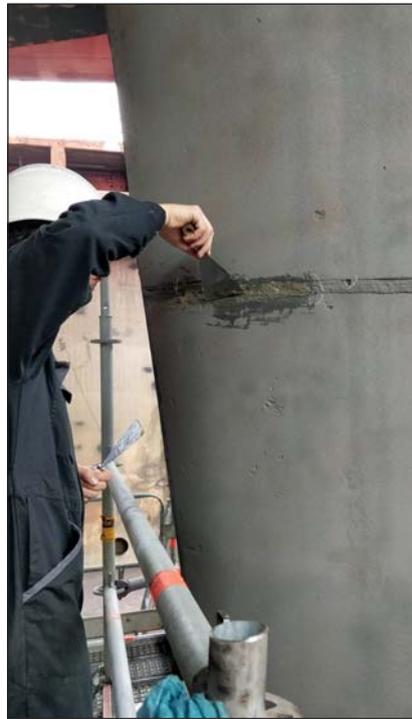
Rudder after Ecofix has been applied, ready for Ecoshield.



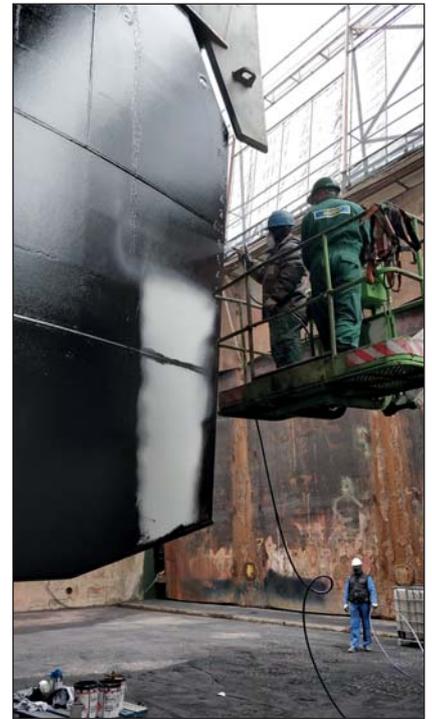
The first layer of Ecoshield could already be applied after one hour.



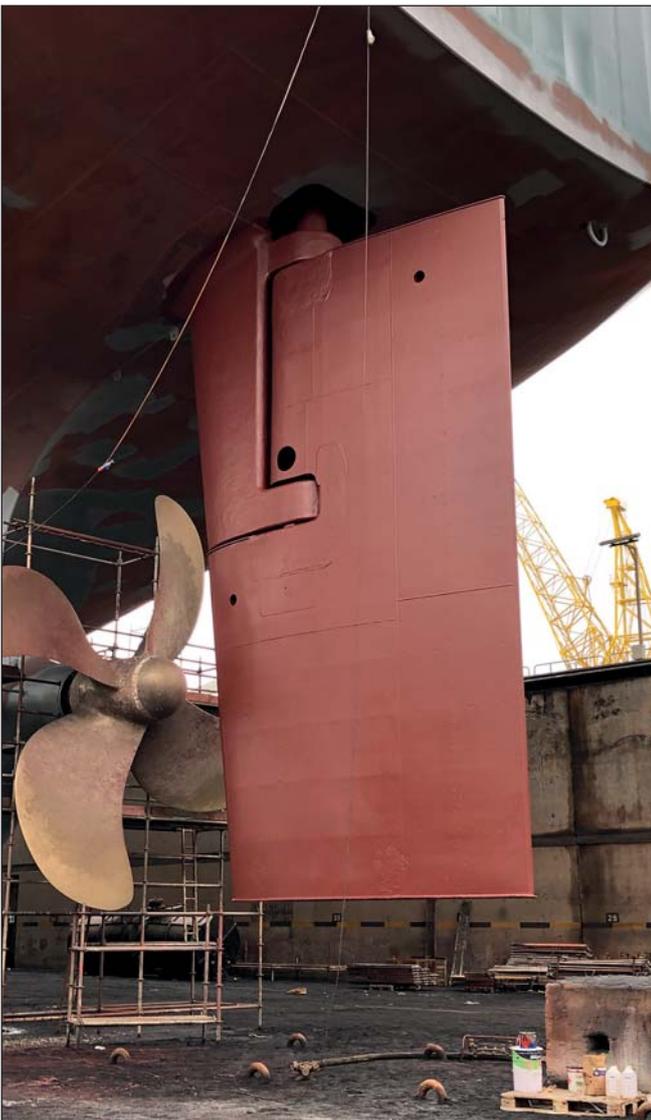
Ecofix restores the surface of the rudder back to its original condition.



Applying Ecofix on corroded rudder in Rotterdam.



Applying Ecoshield is fast and easy.



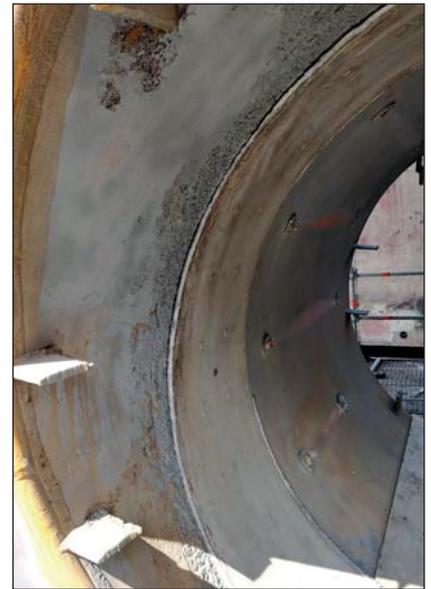
Only two layers of Ecoshield are required to fully protect a rudder.



Ecofix is fully compatible and homogeneous with our other coating systems.



No damage will appear on this rudder from now on.



Corroded thruster tunnel of container vessel in Rotterdam.



All damaged running gear can be repaired with Ecofix and protected with Ecoshield.

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. Because it is part of the Subsea Industries family, it is fully compatible and homogeneous with our other coating systems.

Rudders and thruster tunnel repaired and protected from further damage

Recently the rudder of a LPG tanker was given the full treatment in Setubal, Portugal. First Ecofix was applied to restore the surface of the damaged rudder back to its original condition. Next it was coated with Ecoshield. This will protect the rudder from ever suffering corrosion and cavitation damage again.

Ecoshield and Ecofix are also suitable for stabilizer fins, thrusters, nozzles and other underwater ship gear which needs special protection from corrosion. Now these items can also be repaired prior to recoating when other, less effective coatings have permitted corrosion and cavitation damage to occur.

For this reason the corrosion damage on the rudder as well as in the thruster tunnel of a container vessel was repaired in Rotterdam with Ecofix last month before Ecoshield was applied.

Subsea Industries offers a full package; Ecofix restores the surface of the rudder or other underwater gear and Ecoshield will protect the area from ever suffering corrosion and cavitation damage again. ■

ECOFIX[®]
CORROSION REPAIR

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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