

The end of cavitation damage on running gear

In the last few months a large number of vessels belonging to seven different owners received Ecoshield protection for their rudders, bow thruster (tunnels) and nozzles. The applications were carried out on a wide range of ships including several container vessels, ferries, oil tankers and a navy vessel. The running gear of these ships will be protected against cavitation and corrosion damage for the rest of their service lives.

A constantly growing number of shipowners have Ecoshield applied on the rudders and other running gear of their fleet. This coating is the only systems that ensures lasting protection against corrosion and erosion damage for running gear.

Rudders, thrusters, nozzles and other underwater running gear are



Damage like this (and much worse) occurs when running gear is not properly protected.



Application of the first of two Ecoshield layers on a rudder.

exceptionally prone to corrosion and cavitation damage. Cavitation is caused by the spinning of propeller blades. If running gear is not given the proper protection against this the damage can be severe.

This leads to expensive and time-consuming repairs in drydock at the least or malfunctioning of the running gear at worst. A rudder has been found missing in its entirety on more than a few occasions, unfortunately. This will have substantial financial consequences for a shipowner.



Only three hours wait is required before the second layer.



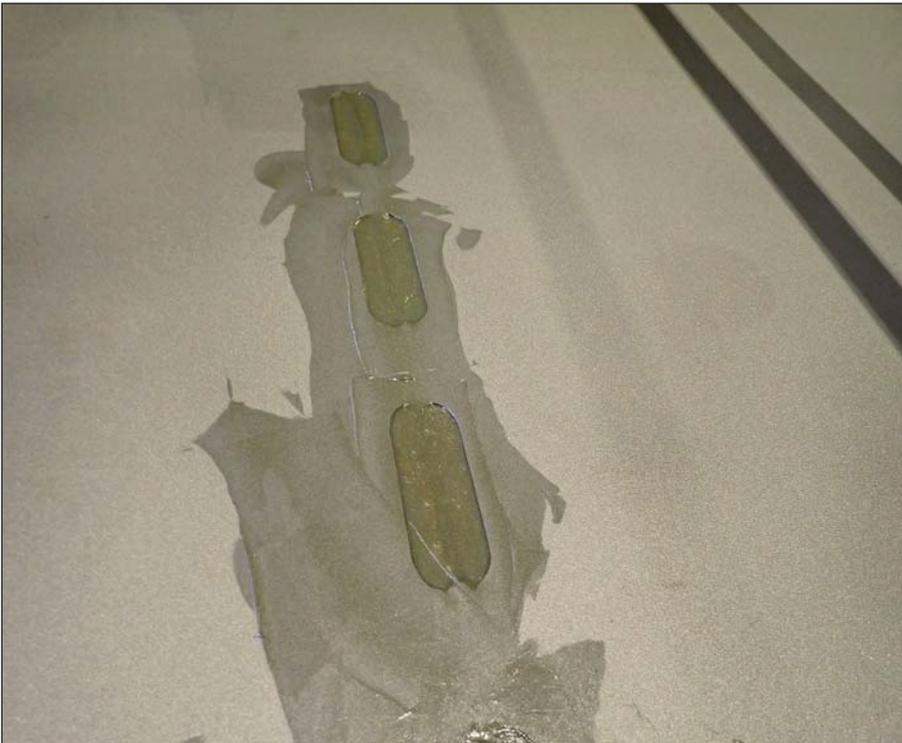
No repaint will be needed during future dockings.

A lasting solution is available

Ecoshield was designed to protect all running gear for the lifetime of the vessel. This coating system is

applied only once. No repaint will be needed during future dry-docking. Only small touch-ups to repair mechanical damage will be required.

Applying Ecoshield is a fast and easy to learn process. As a result an application is very flexible and can easily be scheduled around the planning of the yard. Only two layers are required. The minimum overcoating time between these layers is only three hours. This means that most running gear can be coated in a single day.



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

Newbuild ships benefit the most from Ecoshield. Applying the coating during building means a vessel's running gear will be protected from the moment the ship leaves the shipyard until the end of its service life. A shipowner will not have to worry about repainting during any of the scheduled dockings.

An existing ship can also be protected with Ecoshield. If for instance a rudder has already suffered corrosion damage, the coating can prevent any further damage from occurring. In such case Ecoshield can be



The areas covered during the block phase can be coated after installation without any effect on Ecoshield's quality. They blend in perfectly.



All running gear can be safeguarded from cavitation damage.



No cavitation or corrosion damage will affect running gear protected by Ecoshield.

used in combination with another product in the Subsea Industries family: Ecofix.

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.

From one rudder to an entire fleet's running gear

Since the original application, over 500 rudders have been coated on a wide variety of ships: cruise ships, cargo vessels, container carriers, ro-ro cargo ships, cable layers, dredgers, crude oil tankers, research vessels, ice-going ships and ice-breakers, tugboats, reefers, passenger ferries, bulkers, navy vessels and others. These applications were performed in shipyards across the globe.



Two layers, one application, no worries during future drydockings.

Shipowners that started with a single rudder as a test have since then ordered the same protection for the running gear of their entire fleet. Several have included the coating in the newbuild specs to make sure cavitation and corrosion cannot touch the steel of their ship's running gear. Even after years of service these owners are experiencing zero cavitation damage and failure.

Do you want the certainty that your ship's running gear is protected for its entire lifetime? Call us today. ■

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Corrosion damage 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.

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.



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