

SUBSEA

PROTECTION AND PERFORMANCE



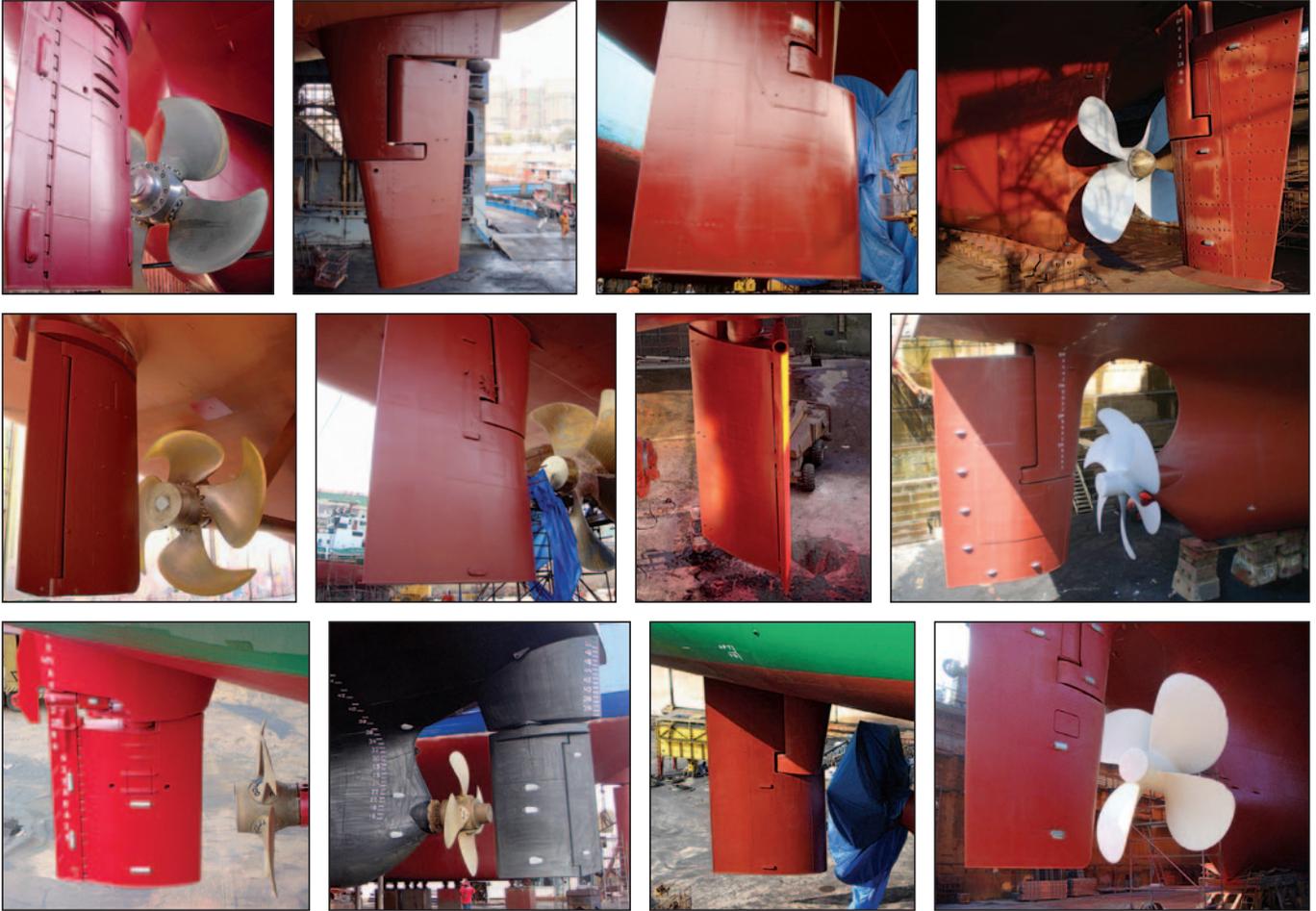
NEWS

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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. 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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Ecospeed still in excellent condition after sailing in harsh Baltic winter conditions

When the 4700dwt *Eeva VG* docked in Naantali, Finland last month, the Ecospeed coating on its hull was still in excellent condition. The ship was coated at the start of 2016. During the most recent docking only very minor touch-ups were needed, despite the severe ice conditions the ship has encountered.

Eeva VG is one of two energy efficient dry cargo carriers built in 2016 and managed by VG-Shipping. Both ships operate in the Baltic region and are designed to cause considerably less environmental impact than conventional dry cargo vessels.

When the ships were first coated Ismo Saaros, Director, Project Management, VG-Shipping, explained: “We wanted to produce the cleanest, most environmentally-efficient coasters of their class so we specified several ‘green’ solutions, including a ballast water management system, a Selective Catalytic

Reduction system for reducing NOx emissions and the Ecospeed hull coating.

“We didn’t want to use a traditional antifouling system because of the chemicals that they contain and found that the Ecospeed solution was the most effective coating system for reducing drag.”

With these vessels operating in arctic waters, the owner requires a coating capable of withstanding ice impact. Polar trading is one of the biggest challenges for coatings manufacturers, since abrasive waters scratch and scrape conventional anti-fouling paints resulting in hull recoats after just one season. Subsea Industries’ hard coatings are developed to last even in the harshest of environments.

An ice-going hull coating must also have low friction characteristics in order to be fuel efficient. But it is not enough for the hull to be smooth

and have low friction at launch. It must stay that way for the life of the vessel. Ecospeed will hold up and will not be damaged in the ice and so will remain smooth for the life of the vessel, thus saving fuel. Even if minor repairs are needed in drydock the original quality of the coating remains intact.

Conclusion

150 ice going hulls, including the newbuild research vessel *RRS Sir David Attenborough*, have been coated with our products with great and conclusive results. This shows that they can withstand the impact of ice for many years on end. ■

Contact us for more information

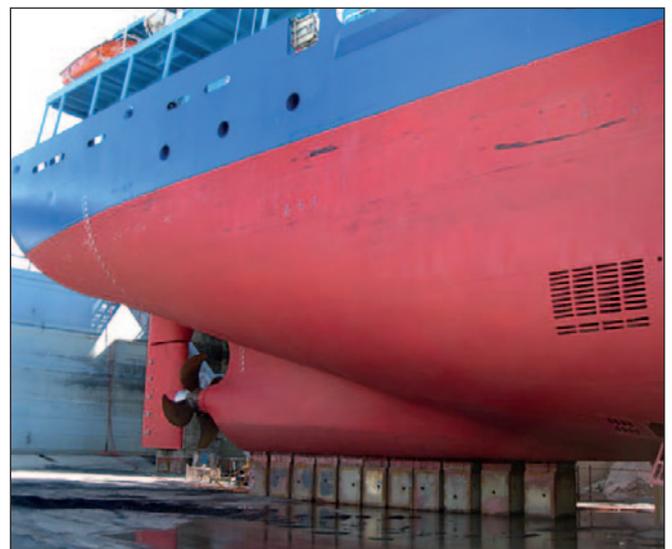
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Ecospeed coating still in excellent condition on EcoCoaster Eeva VG during docking in Finland.



Only very minor touch-ups were needed.

Ecospeed, the lasting protection and performance system for ship hulls

Ecospeed is an environmental-ly safe underwater hull coating system that provides a hull with long-term protection and improves a ship's performance. The coating is easy to apply and maintain. Ecospeed can be applied to all types of vessels, both new-build and existing vessels.

Launched in 2002, Ecospeed is our oldest coating, designed and formulated to protect ship hulls throughout their life. In this article we will focus on the benefits Ecospeed can bring ship owners.

First, we will however give you a short introduction to our other coatings. There are many reasons why choosing one or more of our products is the best option for a ship owner. Different products fit different needs.

Specialized coatings for specific situations

Ecoshield was introduced in 2013 and offers protection against those areas of the underwater ship most prone to cavitation and corrosion damage: the running gear. If required, Ecoshield can be used in combination with Ecofix. This is a tested and proven filler. Ecofix restores the surface of the rudder or other underwater gear to its original condition. Ecoshield will then permanently protect the area from corrosion and cavitation damage.

In 2014 Ecolock was introduced. The coating system is designed to protect offshore vessels for decades



Applying Ecospeed is fast and easy.

without the need for drydocking. The latest product in our range of coating systems is Ecolast. This is an ultraviolet light resistant coating

that preserves its color when this is essential, as is the case, for example, in offshore wind farms.



One of the blocks of an FSRU that was coated with Ecolock.



Fouling on Ecospeed can be removed rapidly and easy.



Fouling can be removed in drydock with high pressure tools or underwater while improving the coating.

If you would like information on any of these coatings, do not hesitate to contact us. Our team will gladly assist you.

Apply once, never worry again

Applying Ecospeed is very easy and can be done very quickly. Only two coats are required. No top coats, no primers or any other additional coats are needed. Ecospeed also has very flexible overcoating times. The second coat can already be applied three hours after the first. As a result, the application can be scheduled around other work taking place in the yard or dock.

Future dockings are also far easier to plan. Ecospeed comes with a ten-year guarantee. The coating will last the full service life of the ship without need for replacement or major repair. Only small touch-ups will be required in the case of mechanical damage to the coating. These can easily be done during a (short) routine drydock visit. They blend in perfectly with the existing coating. Because no repaint is needed, days and up to a week can be saved in drydock times during each visit, compared to other coatings.

A recent customer told us that he was able to get his ships out of drydock several days sooner with Ecospeed than with the previous coating he had been using. This brought him large savings every time. It is a story we hear again and again. You can experience the same benefits: contact us today.

Just wash it

There is currently no hull coating available which will not foul. The only way to remove this fouling is to clean it off. Ecospeed was designed

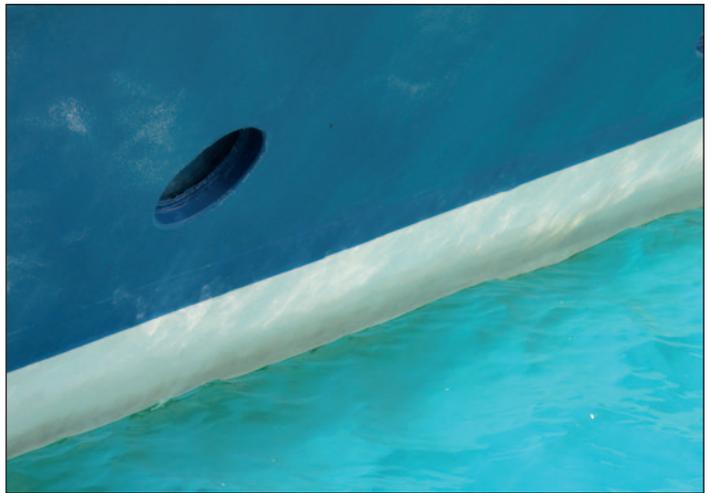


Ecospeed is 100% non-toxic.

to be cleaned without damage to the coating. This enables fast and efficient fouling control throughout a ship's entire service life.

Underwater maintenance of Ecospeed is carried out with specially designed underwater hull cleaning tools. These remove all fouling without damaging the coating. With repeated underwater hull cleaning its surface even improves.

The coating can also be cleaned in drydock with high pressure tools. Several of our customers use this method to have their vessels cleaned. These ships are taken out of



Ecospeed allows shipowners to keep the waterline of their vessel in pristine condition at all times, during the entire lifetime of the ship.



With Ecoshield we have solved the problem of cavitation damage on rudders.



The coating schedule can be adapted to that of the yard and it does not have to be the other way around.



The durability of Ecospeed makes the planning of future dockings far easier.

the water, cleaned with high pressure tools and put back in the water in a matter of hours. They have told us that this approach helped them get through the shipping crisis.

Fouling can be removed whenever needed, at any point in the coating's

lifespan. Even long stationary periods of six months or longer in tropic waters with consequent large build-up of fouling offer no problem. Ecospeed is always in a brand-new condition after cleaning.

Interested in the advantages an easi-

ly cleanable coating can bring you? Call us or e-mail us and we will give you all the information you need.

Start saving money even before you leave dock

We already mentioned the financial benefits of much shorter stays in drydock earlier, but Ecospeed can help you save money in other ways.

Our coating gives your underwater hull the best possible hydrodynamic characteristics. What is more, Ecospeed lasts. Therefore, the performance of the ship does not degrade either. Large fuel savings are the result. This brings you huge financial benefits over the lifetime of the ship.

One major cruise line has been quoted as saying that they are saving 40% on fuel costs with Ecospeed. Another cruise ship found that they gained four knots over sea trials speed when they replaced their hull coating with Ecospeed.

If you drop us a line, we can tell you how Ecospeed can benefit you. We will look at your specific situation and give you all the data you need. This will allow you to make an informed decision on the next underwater hull coating for your ship. As the examples in the second article in this magazine prove, you will not have to worry about your hull coating ever again if you choose Ecospeed. ■

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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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