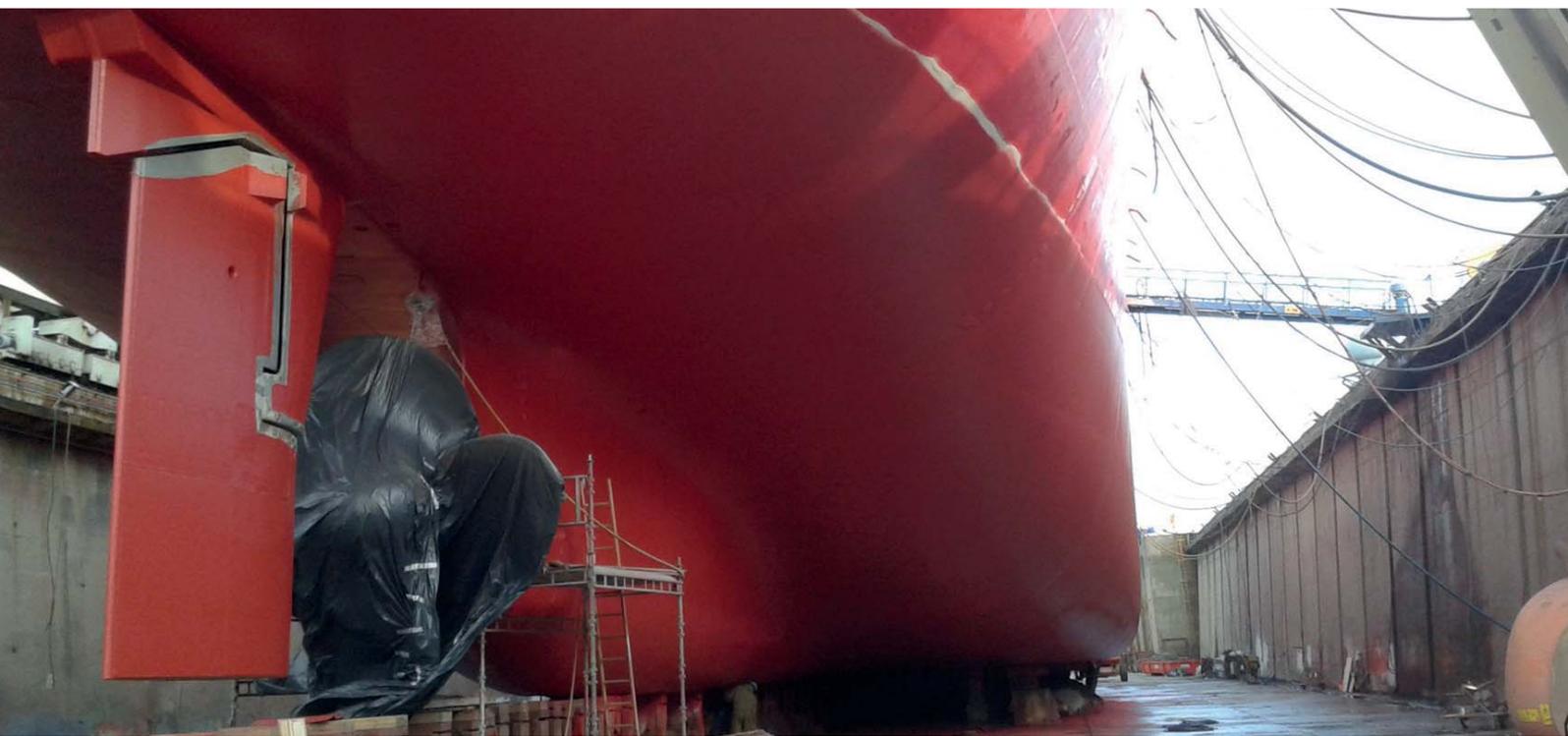


# SUBSEA

PROTECTION AND PERFORMANCE

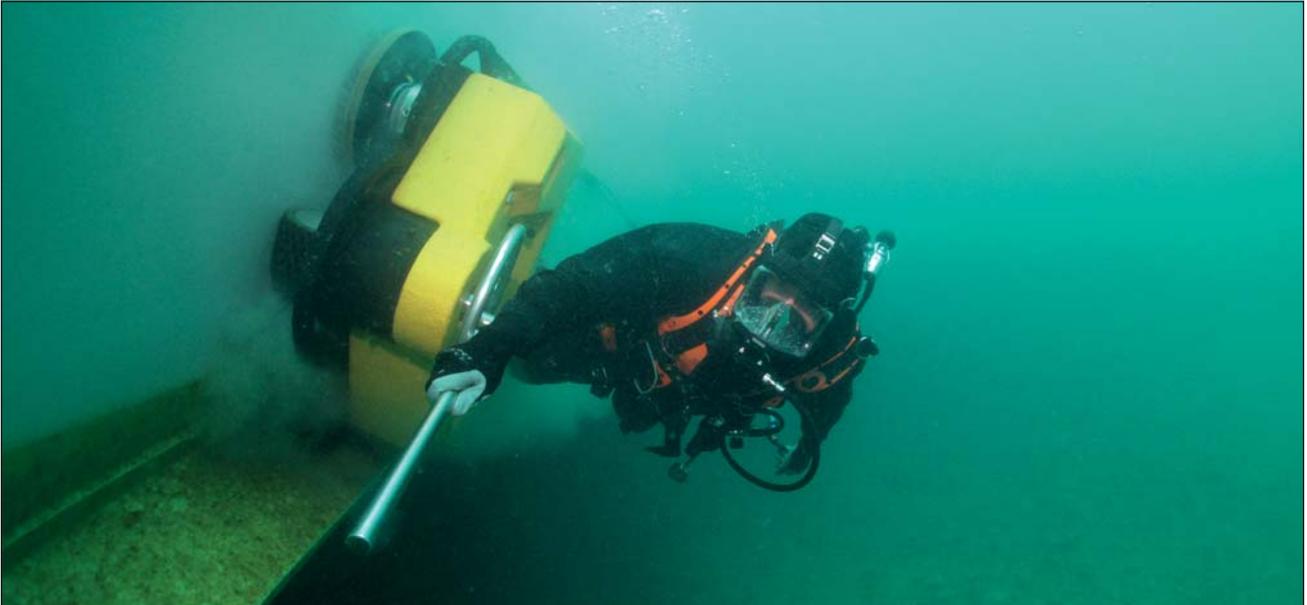


Magazine



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# The washable coating



**S**hip 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

## Editorial



**H**ere at Subsea Industries we have a very clear goal: Clean rivers, seas and oceans. This has been so since I founded the company in 1983. Back then it was called Subsea Cleaning Systems and we offered a line of underwater cleaning equipment to the market. Since then we have expanded our portfolio greatly, first with Ecospeed and later with our other non-toxic coating systems.

The last ten years have seen an increased awareness of some of the environmental problems we are faced with. This is a good tendency, but unfortunately this has not extended to the situation below the water line. The amount of marine pollution in waterways all around the world has regrettably kept growing.

This might make our goal seem like an impossible one, but the opposite is true: it has only strengthened our beliefs that we have to do all we can to create a cleaner underwater environment.

A handwritten signature in black ink, appearing to read 'BVR', with a long horizontal line extending to the right.

Subsea Industries NV  
Boud Van Rompay  
Founder

# Why Ecospeed will save you money and trouble for the entire lifespan of your fleet



*Applying Ecospeed is fast and easy.*

**A**n underwater ship hull coating needs to be easy to apply, it needs to stay on your ship for many years and it needs to save you money. Ecospeed ticks all these boxes. Choosing Ecospeed will be the last decision you ever have to make concerning your underwater hull coating.

Ecospeed was launched in 2002 and is our oldest coating. It is used to protect ship hulls. 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 our products is the best

option for a ship owner. Depending on your situation, a different product will fit your 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.



*One of the blocks of an FPSO that was coated with Ecolock.*

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

If you want 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 fast. The coating only requires two layers. No top coats, no primers or any other additional layers are needed. Ecospeed also has very flexible overcoating times. The second layer 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.

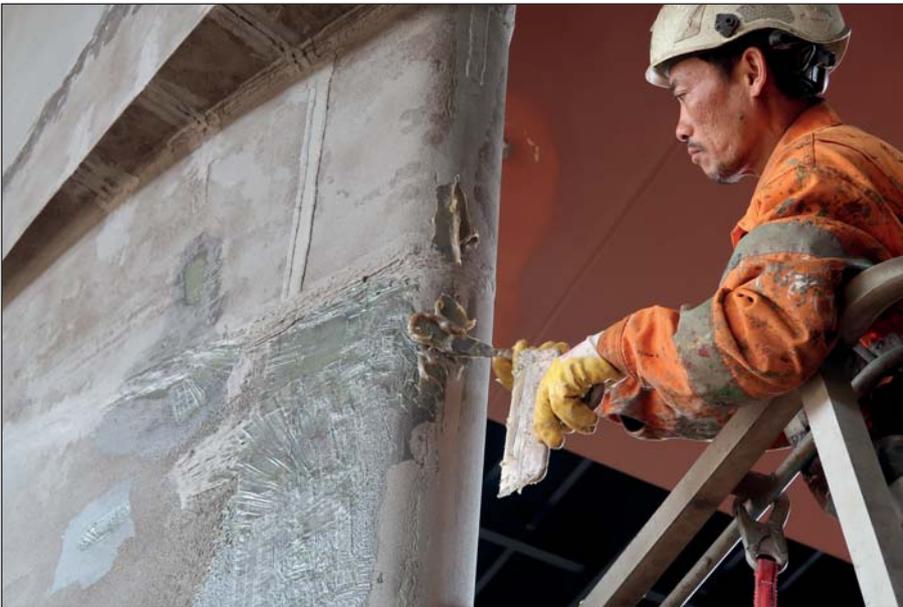
Future dockings are also far easier to plan. Ecospeed comes with a ten

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. 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.

One of our customers said that he was able to get his ships out of drydock several days sooner with Ecospeed. This brought him large savings every time. You can expe-



*Recently one of the ro-ro ships of DFDS was given an Ecospeed treatment.*



*Ecofix can be used to restore damaged rudders prior to applying Ecoshield.*

needed, at any point in the coating's lifespan. Even long stationary periods of six months or longer in tropic waters offer no problem. Ecospeed is always in a brand-new condition after cleaning.

Interested in the advantages an easy washable 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

perience the same benefits: contact us today.

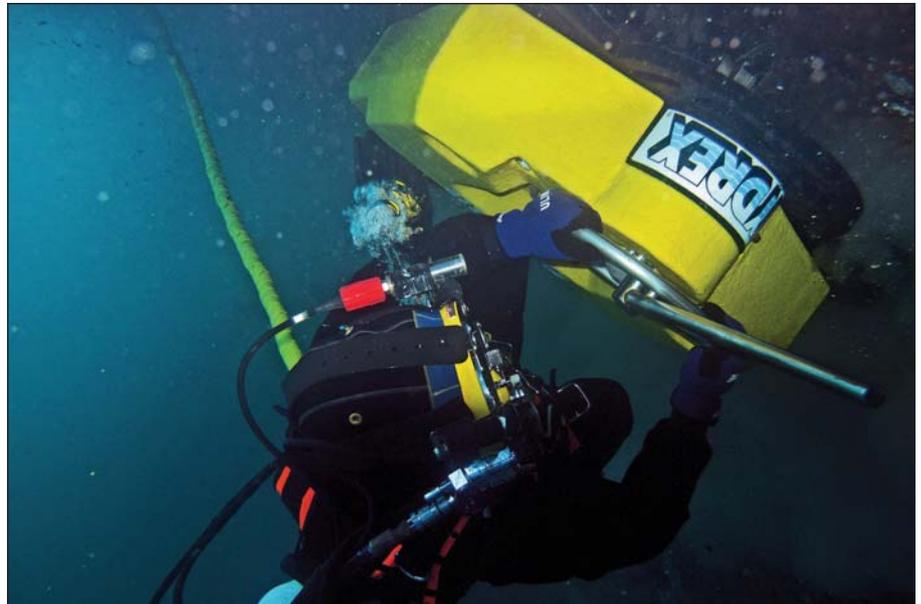
**Just wash it**

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 to be washed without being damaged. 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 the water, cleaned with high pressure tools and put back in the water in a matter of hours. They said that this approach helped them get through the shipping crisis.

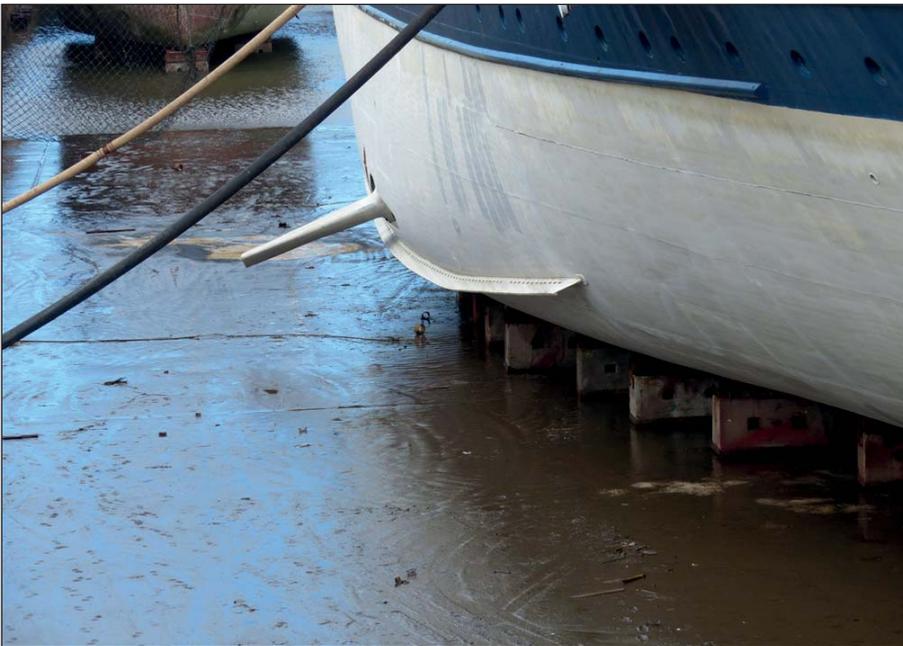
Fouling can be removed whenever



*Ecospeed was designed to be cleaned whenever needed.*



*The coating can be quickly washed in drydock with high pressure tools.*



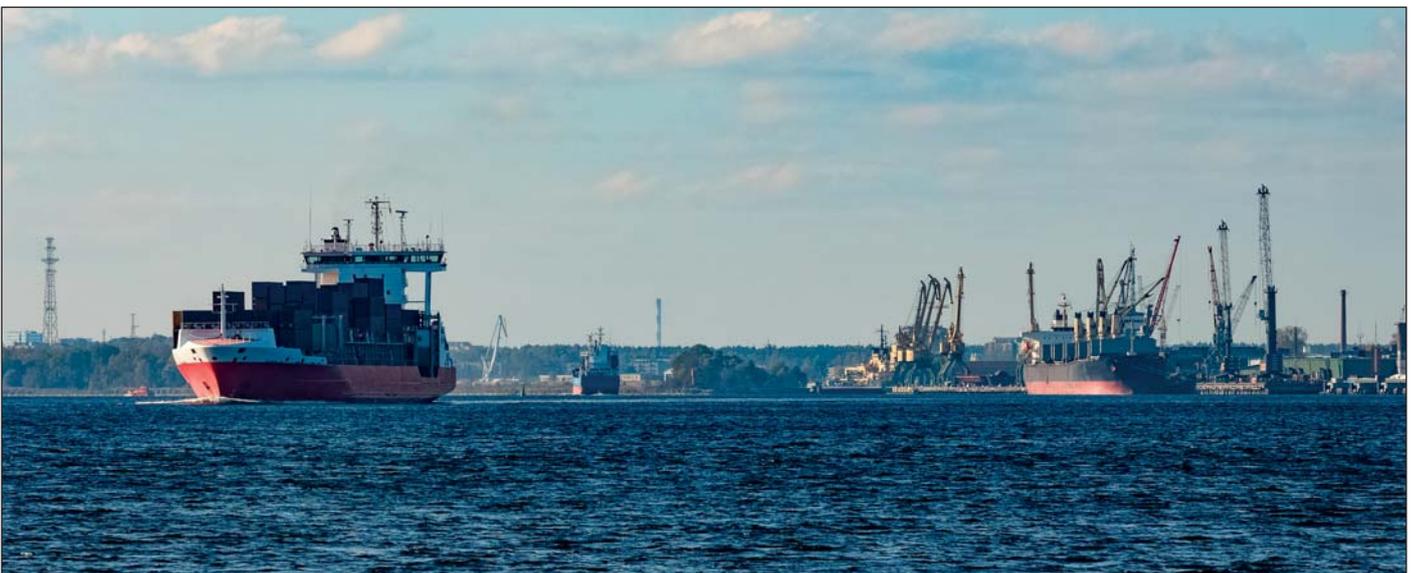
*Ecospeed still intact eight years after application on cruise vessel.*

benefits from leaving drydock days 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 profits 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 4 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 this ever again if you choose Ecospeed. ■



*An underwater ship hull coating needs to be easy to apply, it needs to stay on your ship for many years and it needs to save you money. ©New SIGHT Photography.*

# No repaint needed after 10 years sailing in ice

**T**he number one consideration in a hull coating for ice-going vessels and icebreakers is the ability of the coating to protect the hull in the harshest marine environment there is.

Experience has shown that Ecospeed stays on the hull longer and resists the ice far better than the most generally used specialized ice coatings. Ecospeed remains bonded to the ship's plates even as they flex and bend under ice pressure and impact.

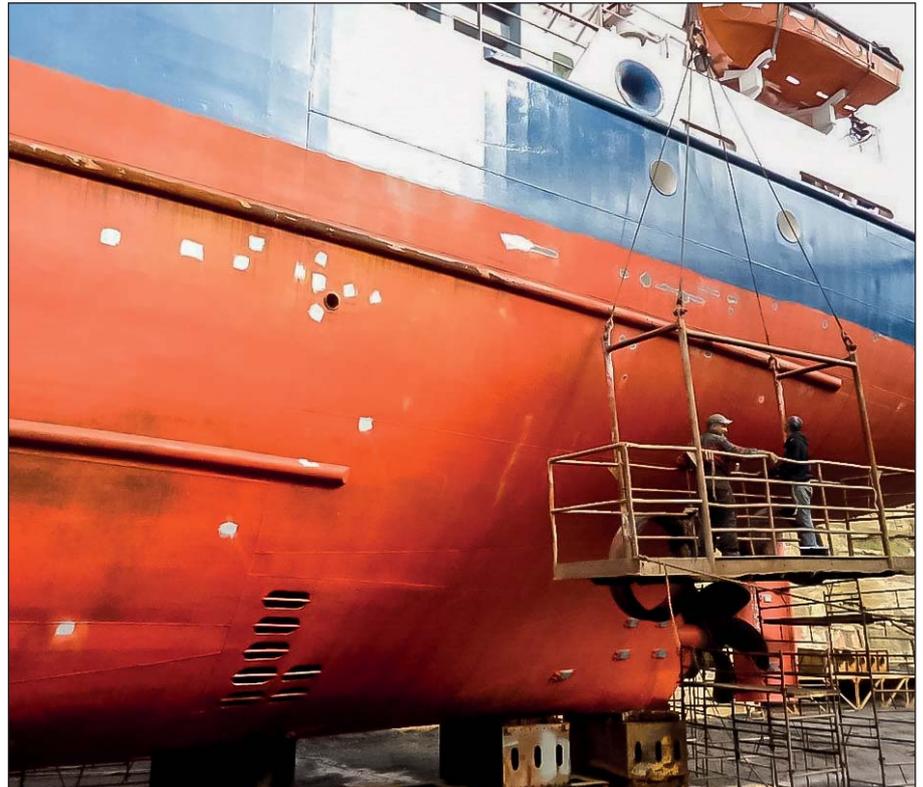
Ecospeed has been recognized by Lloyd's Register as an abrasion resistant ice coating for ships. Its correct use on the ice belt specifically permits a reduction of the ice belt's steel plating by up to 1mm.

## Low friction, fuel economy

An ice-going hull coating must 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.

## Ease of application

Applying Ecospeed is a simple process which can be carried out using the usual spray equipment without tenting and heating. Only two coats of 500µm each are required. Minimum overcoat time is a few hours and there is no maximum, making it



*Five years after Ecospeed has been applied, this hull is still smooth and the coating intact, requiring only minimal touch-ups in drydock despite trading in icy waters and no coating repair since application.*

easy to fit into your drydock or new build schedule.

## Some cases in point

### Ecospeed decision validated by *Ernest Shackleton*

British Antarctic Survey's decision to apply the Ecospeed hard coating to the hull of its new polar research ship RRS *Sir David Attenborough* has been validated after the most recent drydocking of sister vessel RRS *Ernest Shackleton*.

The 80m long vessel is a logistics vessel used to transport cargo, fuel and passengers. The ship has basic scientific capability and undertakes research work in the Antarctic. She was initially coated with Ecospeed in 2009 and when she drydocked

this summer the hull was found to be in almost perfect condition.

BAS Superintendent Andrew Webb, said: "Shackleton's hull condition is the best I have seen after typical ice year operations." In eight seasons operating RRS *Ernest Shackleton* with Ecospeed coating, BAS had to touch-up Ecospeed only in areas of mechanical damage and carry out minor repairs around the bow, the most susceptible area to ice impact. This year they needed to repair even less surface area than expected, despite the vessel encountering heavy Antarctic ice.

Based on their experience with the *Ernest Shackleton* and sister vessel RRS *James Clark Ross* (coated in 2015), BAS selected Ecospeed for the newbuild RRS *Sir*



*Only a small patch had to be touched-up during the recent docking.*



*In eight seasons operating RRS Ernest Shackleton with Ecospeed coating, only those areas most susceptible to ice impact needed minor touch-ups.*

*David Attenborough.* The 15,000gt ship is scheduled for operational duties in 2019 and was officially launched in July. It will be one of the most advanced polar research vessels in the world.

### **Canadian operators opt for full protection**

Ecospeed has been applied to nine vessels owned by Groupe Océan. *Océan Taiga*, North America's most powerful ice-going tug was the most recent.

Groupe Océan's first experience with this coating on the *Ocean Raymond Lemay* was deemed a huge success. When the vessel's hull was water-jet cleaned after more than 60 months in service, the hull coating showed no sign of paint degradation.

With many vessels operating in icy areas, such as the Great Lakes,



*Groupe Océan's vessels operate in ecologically sensitive areas, so they needed a hull coating system that protects both the vessel and the marine environment and is impervious to ice impact.*

Alaska and the North West passage, Ecospeed is becoming the hull coating of choice meeting stringent environmental rules and regulations.

### **Coating intact after sailing in ice for five years**

When the 194-meter ro-ro vessel *Oceanex Sanderling* drydocked in Gibraltar, the coating on her under-

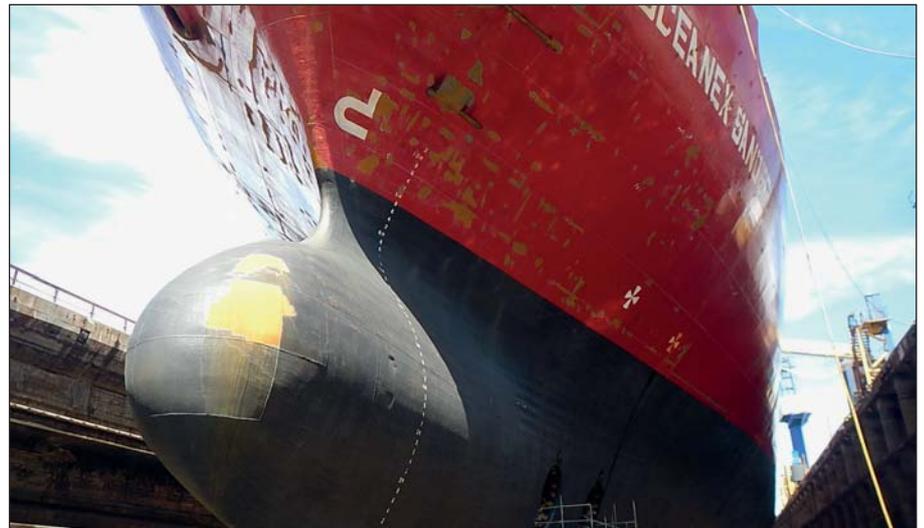


*Ice-going tug Ocean Raymond Lemay after application.*

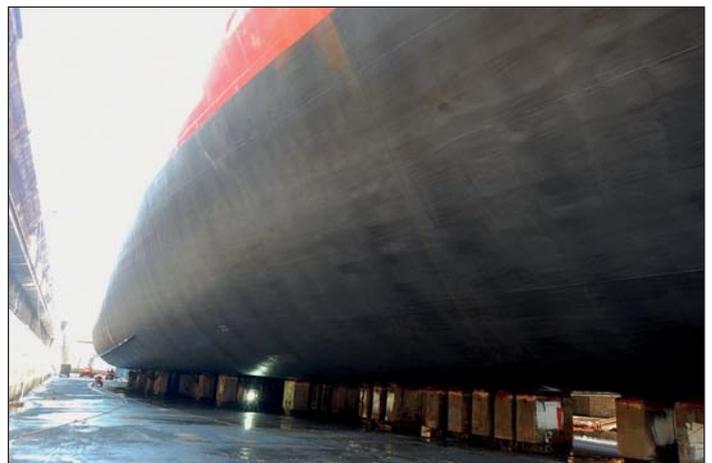
water hull was still in excellent condition. The ship has been sailing between Halifax and St. John's in Canada with Ecospeed on her hull since 2011, often in ice conditions. Despite this, only a few touch-ups were needed.

Ecospeed is guaranteed for 10 years and has a life expectancy of 25 years. This is a very important benefit for the owner of this vessel who needed to have his vessels repainted every year with the previous coating. Bad weather and expensive drydock costs in Canada made the Mediterranean area the most feasible option for this yearly task. This cumbersome undertaking

will no longer be necessary with a one-time Ecospeed application.



*Only small touch-ups are needed to those areas of the underwater hull most prone to mechanical damage.*



*Ecospeed condition after application in 2011 (left) and after sailing in icy waters for five years (right).*

It is therefore no surprise that in 2011 the owner of m/v *Oceanex Sanderling* quickly saw the advantages of Ecospeed and decided to take the plunge and switch from the traditional coating he had been using. Five years later his choice has proven to be the right one and he will continue to enjoy the benefits of Ecospeed for many years to come.

### **Ecospeed pays dividends for InterScan**

Hamburg-based shipowner InterScan Schiffahrt controls a fleet of 23 vessels. Many of them operate in the Baltic Sea and seas in the far north. As a result they had to schedule frequent repairs to the underwater coating of their ice-going vessels.

## Before Ecospeed



*General cargo ship, before Ecospeed, one season trading in Baltic ice.*

## After Ecospeed



*Same ship, same conditions, two years after Ecospeed applied, no repaint.*



*Same ship, same conditions, five years after Ecospeed applied, no repaint.*

Time out of service every one or two years cost the owner dearly, until they discovered Ecospeed.

In 2005, Interscan's superintendent engineer Alexander Fedorcov heard about Ecospeed and suggested the hard coating to the company's Head of Chartering, Michael Tensing. He decided to apply it to the 3000dwt general cargo ship *Patriot* during the vessel's next scheduled drydocking.

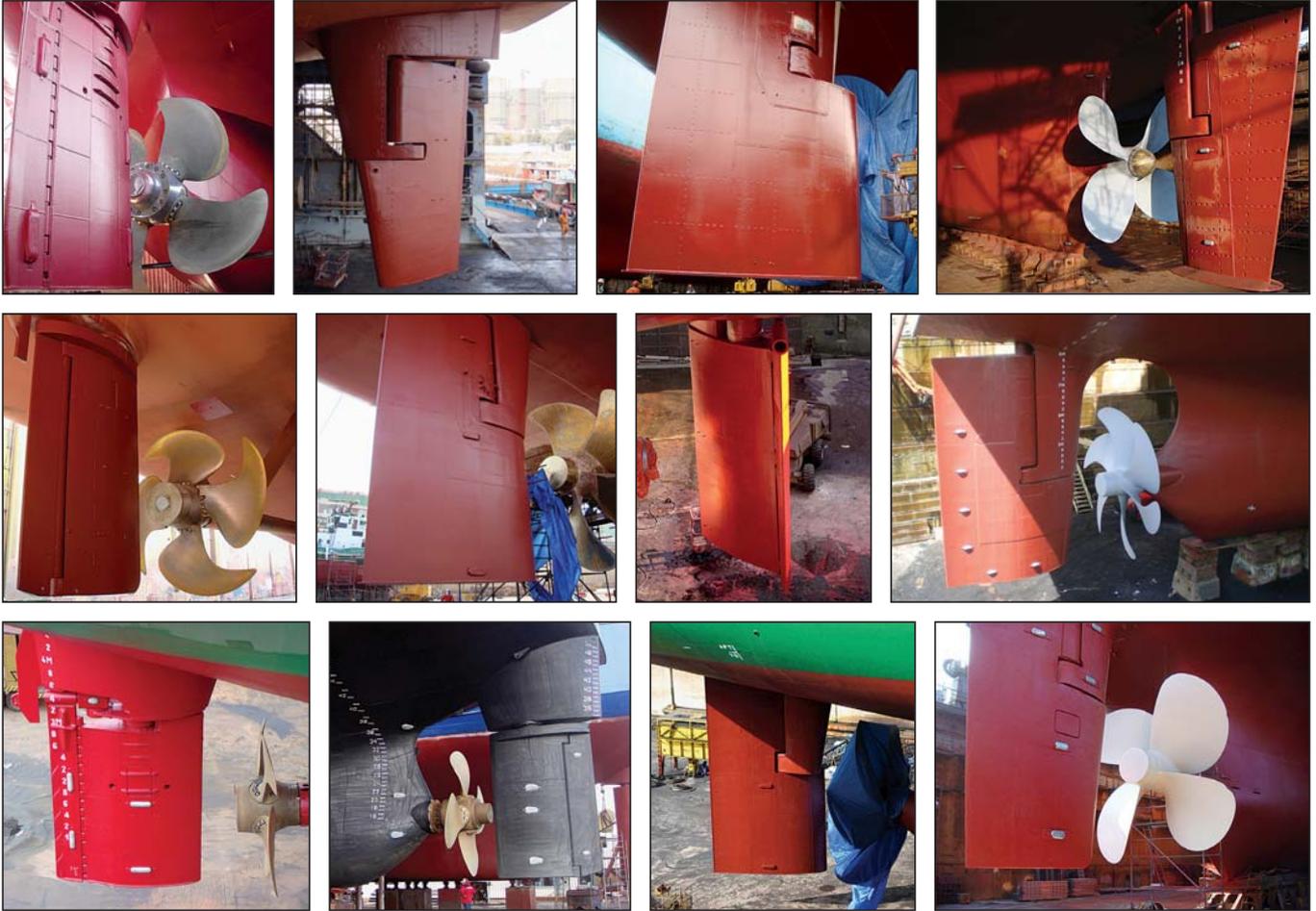
"*Patriot* was coated ten years ago and has traded in ice every year since then; but the coating has lasted perfectly well. Before Ecospeed we used normal epoxy coatings which would last for, perhaps, one to two winters. Now we need to pay no attention to the coating and there is no need for extra drydockings," said Tensing in a 2015 interview.

He added: "After 10 years of trading on the same routes, the *Patriot's* Ecospeed coating is still going strong. We are very impressed with it and now have the coating on seven vessels; six coasters and one MPP. It's performed very well for us."

**Contact us for more information or an estimate for Ecospeed for your ice-going ships. ■**

**ECOSPEED®**  
SHIP HULL PERFORMANCE TECHNOLOGY

# LASTING PROTECTION



**E**coshield 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.

Subsea Industries NV  
Phone: + 32 3 213 5318  
Fax: + 32 3 213 5321  
info@subind.net  
www.subind.net

**ECOSHIELD®**  
THE DIAMOND STANDARD IN STEEL PROTECTION

# SUBSEA INDUSTRIES



**S**ubsea 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.

**[www.subind.net](http://www.subind.net)**



Subsea Industries NV

Phone: + 32 3 213 5318

Fax: + 32 3 213 5321

[info@subind.net](mailto:info@subind.net)