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Subsea Industries is looking for representative agents



To support our continuous growth, we are expanding our worldwide network of Subsea Industries agents. This allows us to reach a much bigger public directly than would otherwise be possible.

Subsea Industries NV was founded in 1983 to take care of the design, development and marketing of an evolving line of underwater hull

and propeller cleaning equipment as well as a line of hard hull coating systems.

The purpose of the Ecospeed range of coatings and cleaning technology is to offer a long-lasting, non-toxic protection for all ships with a system that keeps a hull ultra-smooth and free of fouling for the service life of the vessel with minimal repair and no replacement. Instead of using chemi-

cals to kill and repel marine fouling organisms, Ecospeed uses a hard, impermeable, impenetrable coating along with manual removal of fouling at an early stage.

Contact us if you are interested in joining our network and help us build a strong relationship with our prospects and customers. We look forward to hearing from you.

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Editorial: All major issues solved

Our technology has solved all major problems relating to ship hull performance and protection. We have done this with a combination of our line of environmentally safe coating products and a profound knowledge of underwater maintenance work and tools.

1. Optimized surface friction:

By optimizing surface roughness to its upper limits without future deterioration or degradation, we solved the problem of hull friction. The coating has the same lifetime as the ship. Surface characteristics are maintained over the same period.

2. Fuel savings:

By optimizing hull surface friction and using the best surface hydrodynamic characteristics, fuel savings over the ship's lifetime are in the 20-40% range. In contrast with AF compounds that rapidly degrade, our coatings and thus the ship's performance last.

3. Corrosion:

We have reduced the corrosion problem to a zero effect. Ship hulls handled by us keep their sacrificial anodes 100% intact, even after prolonged periods of 5-10 years in the water. Corrosion is virtually absent on our hulls and anodes are no longer needed.

4. Cavitation erosion:

Cavitation erosion damage resulting in often very expensive repairs and time loss in drydock can now be avoided entirely. 500 rudders have



been protected so far with a 100% success rate over a 15-year period.

5. Anti-fouling toxic particles emissions:

Yearly 1 million tons of AF toxic chemicals and heavy metals are used and lost at sea. This extremely damaging pollution results in billions of silt and sediment remedial cost. All of this can now become a thing of the past entirely.

6. Repeated application of degraded AF coatings:

This is now an obsolete routine as our coatings last the lifetime of the ship. Peak distribution of toxic materials caused by repeated applications in drydock and thus emissions in ports and rivers has been overcome.

7. Time and effort in drydock:

As reapplication is never necessary, work and time in drydock can be

more than halved. Planning work in drydock can be done very precise as only small touch-ups will be needed. Waiting for acceptable weather is no longer necessary. This allows drydock companies to deliver on time. As a result more ships can be docked in the same period.

8. Transfer of invasive species:

The underwater cleaning of Eco-speed prevents the spread of biofouling entirely. The cleaning frequency is optimized to minimize fouling. This process is 100% environmentally safe and prevents macrofouling from building up.

9. Building costs:

Cost for new building ships is substantially reduced as the repairs of our homogenous coatings are many times more efficient. This results in thousands of man hours saved during the building process. Reapplication for speed trials at the end of the building period is not necessary

any longer: a simple underwater hull cleaning is sufficient. This saves more than the total cost of the coating material supplied and the ship's speed is guaranteed.

10. Ice-going and icebreaking ships:

150 applications on ice going hulls, including 4 ships owned by British Antarctic Survey, 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. Our coatings have also applied on the newbuild research vessel *RRS Sir David Attenborough*, the biggest commercial shipbuilding contract in Britain for 30 years.



Subsea Industries NV
Boud Van Rompay
Founder

RRS Sir David Attenborough receives lifelong protection



When the polar research ship *RRS Sir David Attenborough* was launched its hull was protected by the most environmentally-safe hull coating ever developed: our ice abrasion resistant and washable Ecospeed.

RRS Sir David Attenborough is now afloat with a hull protected by the same Ecospeed coating that has protected its sisters, *Ernest Shackleton* and *James Clark Ross*, for many years.

Ecospeed is a safe, hard-type coating with zero toxic compounds. It eliminates the potential pollution of polar waters with heavy metals or biocides and hull contamination during research activities, which is extremely important to the scientific work the vessel will carry out.

Contact us for further information on the cost and energy savings Ecospeed will bring for your (ice-going) vessels.

ECOSPEED®
SHIP HULL PERFORMANCE TECHNOLOGY



On the road with Subsea Industries

The last couple of months have been busy for Subsea Industries and Hydrex with both of the companies' coatings and hull care teams attending key maritime events across the globe as part of their aim to optimize their market share in the marine sector.

Kick-starting the Fall 2019 exhibition and conference schedule was a visit to the NEVA event in St. Petersburg. This biennial event has grown exponentially over recent years with the 15th edition welcoming over 600 participating organizations from 32 countries.

The organizers called the event a resounding success. They said that "both International and Russian organisations alike answered the call of opportunity from NEVA 2019. Record numbers of professionals and visitors attended the Exhibition and Conference Programme to enjoy a direct networking connection to



The booth of Nordweg JSC, our agent for Russia, was bustling with activity from start to finish.

Russian maritime industry buyers who actively sought best-of-breed internationally-sourced products and services to fulfil their projects

and active redevelopment requirements."

"For us, the event was also very fruitful," said Subsea Industries Production Executive Manuel Hof. "We had many networking opportunities throughout the exhibition and the booth of Nordweg JSC, our agent for Russia, was bustling with activity from start to finish."

NEVA 2019 was followed in quick succession by Europort, one of Europe's foremost maritime exhibitions.

The 39th Europort exhibition for maritime technology in Rotterdam was attended by 26,000 trade visitors from 93 countries. The many exhibitors, including Subsea Indus-



Subsea Industries Production Executive Mr. Manuel Hof (2nd from the left) with representatives of Nordweg JSC.



Our team getting ready for another busy day at Europort.

tries and Hydrex were very satisfied with the event.

According to the exhibition's post-event press release, special ship markets in recovery and real progress on maritime digitalisation brought a feelgood finale to Europort 2019. With over 1,000 exhibitors and a record number of international visitors, Europort's focus on special ship markets paid particular dividends in 2019, as its successful recipe of conference sessions, Masterclasses, networking events and exhibitor showcases came seasoned with a sprinkle of market opportunity and business wins.

Innovation and expansion

With a wide variety of products and techniques on display, the Subsea Industries/Hydrex booth fitted in perfectly with the innovative aspect of Europort. As part of the Dutch pavilion it was a popular spot for visitors.

Many existing customers, Subsea Industries agents, technical people from all phases of shipbuilding and

maintenance and many interested newcomers to Subsea Industries and Hydrex dropped by and enjoyed the friendly, comfortable but business-like and informative atmosphere. Much new business was conducted.

Europort 2019 was a great success for us and we would like to thank all of you who visited us there. We look forward to working with you on an ongoing basis. ■



The booth maintained a friendly, busy atmosphere throughout the four-day show.

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.

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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One complete solution to protect rudders and running gear

Over the last few months the rudders and running gear of different types of vessels were given an Ecoshield protective coating at yards in the Netherlands, Canada, Turkey, Finland and China. These ships include container vessels, tugboats, vehicle carriers, a reefer and a tanker.

Most of the ships belonged to different owners. Some of them were new customers, others returning ones. The returning customers had seen firsthand that Ecoshield solved the problem on their other rudders and wanted the same protection for the rest of their fleet. The new ones saw the excellent result obtained by other owners and chose Ecoshield to prevent corrosion and cavitation damage from reoccurring.

Groundbreaking protection

In the last couple of years 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 manufacture 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, the financial consequences can be substantial for the owner.

Ecoshield puts an end to this. By removing the existing paint layers and applying the coating system on running gear we can break the



Surface preparation prior to Ecoshield application.

never-ending cycle of painting, suffering damage, having to perform extensive repairs in drydock followed by a full repainting, again and again. Ecoshield gives a very

thorough and lasting defense for a ship's entire service life. No repaint will be required during drydocking. At most minor touch-ups will be needed.



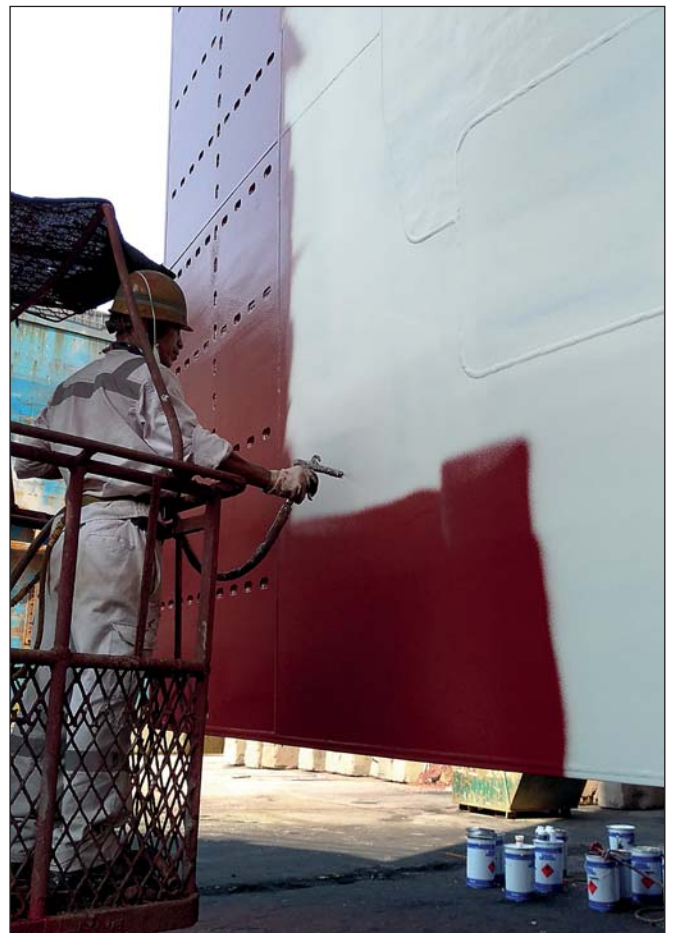
Ecoshield is applied in only two layers.



Application can easily be scheduled around the yard's work.



Overcoating time between both Ecoshield layers is only three hours.



No repaint will be needed during future dockings.



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 time can be as short as three hours. With the right planning grit blasting and application of the two required layers can be performed in just one day.

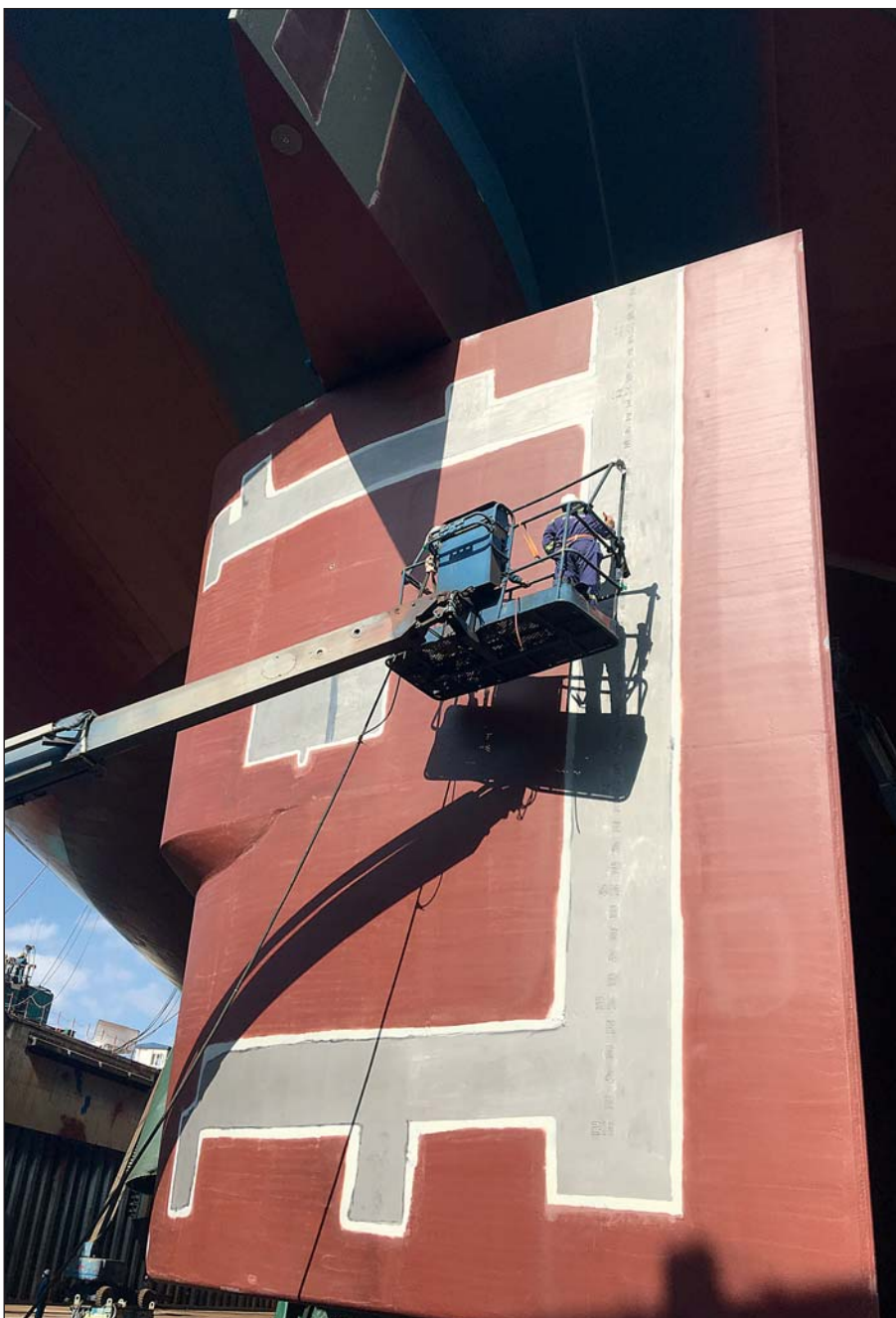
Suitable for all running gear

Besides offering rudder protection Ecoshield is also suitable for thrusters, azimuth thrusters, azipods, thruster nozzles, thruster tunnels and 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. For this reason several of the vessels treated recently had their thrusters, thruster tunnels or Stator Fin coated with Ecoshield as well.

Conclusion

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.



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



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



Applying Ecoshield is fast, easy and only needs to be done once.



All running gear can be safeguarded from cavitation damage.

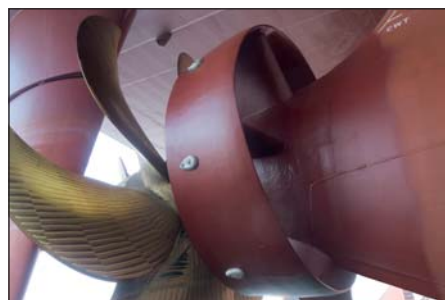
You can give the rudders and running gear of your vessels the same lifelong protection. Contact us for more information.

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ECOSHIELD®
 ULTIMATE PROTECTION



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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