SUBSEA

PROTECTION AND PERFORMANCE

Magazine

216

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 chemicals 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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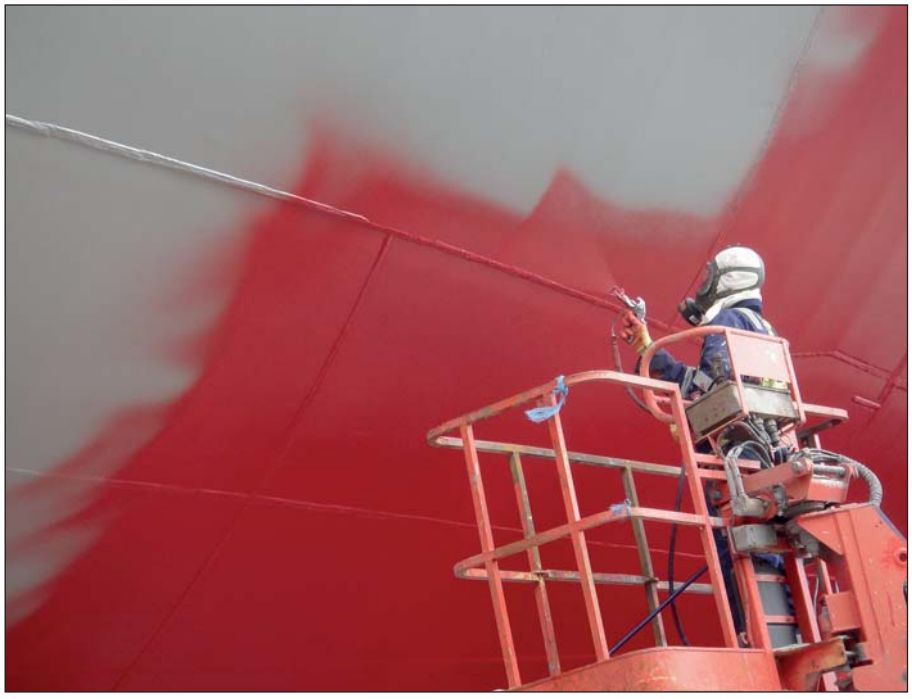
Editorial

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 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. 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.



A substantial reduction of time and effort in drydock can be obtained by using a hard coating system like Ecospeed.

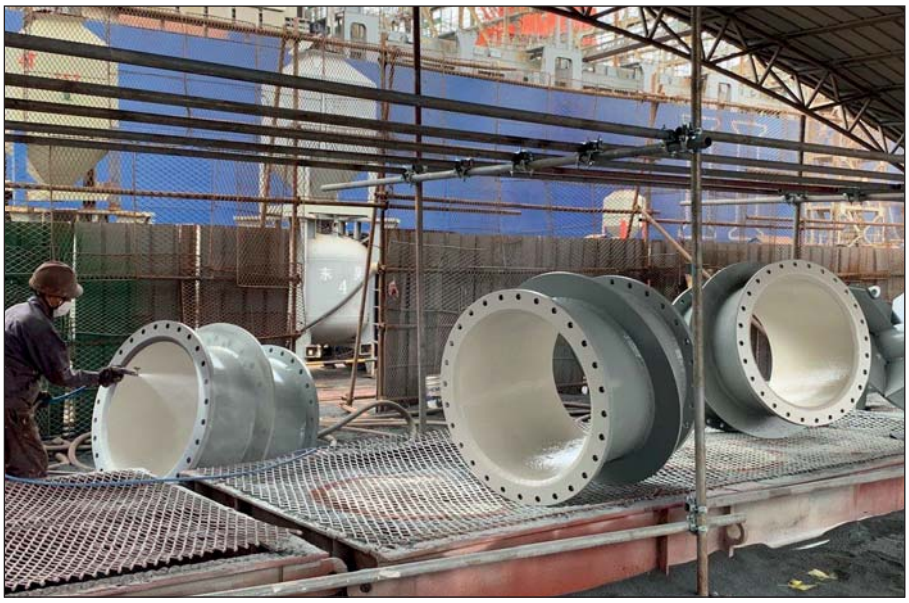
If no paintwork is required then it is obvious that the days in drydock can be more than halved. What this yields in terms of savings depends on the type and size of the ship. For a cruise ship fleet of 25 vessels this could result into 125-175 days saved per 2,5 year drydock interval. This amounts to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

Lasting scrubber overboard pipe protection given to two oil tankers

Recently our Ecospeed coating system was applied on the scrubber overboard pipes of two oil tankers. The applications took place in China and Singapore. A lasting, chemically resistant coating was needed that could withstand the hazardous pollutants of the exhausts and protect the areas surrounding the outlets.



Application of Ecospeed on scrubber overboard pipes in China.

Because of the tight regulations on emissions in the shipping industry, the installation of an exhaust scrubber system has become increasingly widespread. This unfortunately has also led to an increase of corrosion damage on scrubber pipes and outlets which results in water ingress in the engine room, ballast tanks and cargo holds.

Ecospeed will prevent these pipes from corroding.

Ecospeed however is highly chemically resistant. Using the coating to protect the exterior outlets as well as the interiors of scrubbers will prevent corrosion damage and the resulting consequences.

There are also several other benefits that make Ecospeed the perfect choice.

- The coating system is highly chemically resistant. Taking into account the nature of the process taking place inside the scrubber, this is essential for our customers.
- Ecospeed lasts the lifetime of a vessel. No repaints will need to be scheduled during future dockings of the ship. This saves on time and money.
- It is a true biocide-free solution.

Overboard pipes prior to Ecospeed application.

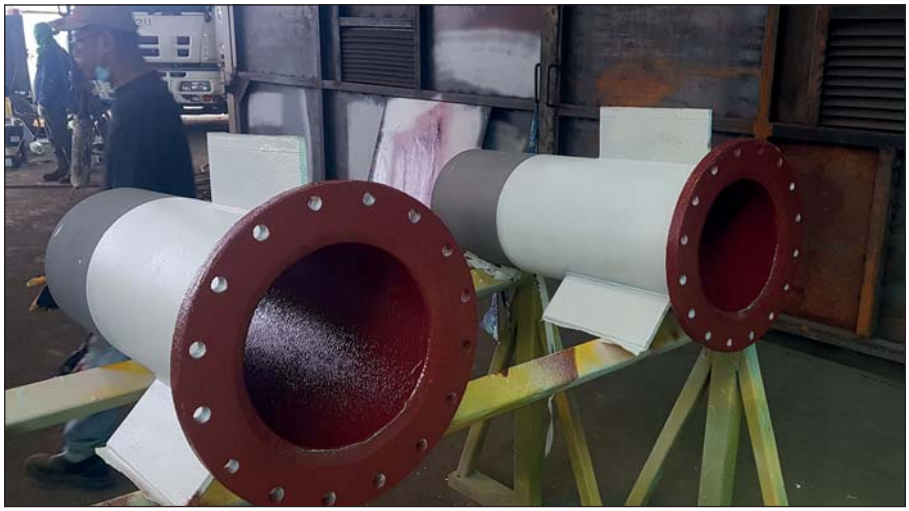
Independent research has proven that the coating is 100% toxin-free and that there is no negative effect on the water quality or the marine environment at any point of its application or use.

Ecospeed fits in seamlessly with the environmental idea behind scrubber systems. It is a lasting, chemically resistant coating that will withstand the hazardous pollutants and protect the scrubbers for the lifetime of the vessel.

Ecospeed surveyor inspecting the layer thickness.

Conclusion

Whenever protection is needed for a ship, Ecospeed offers the best solution. Whether it entails the underwater hull of a vessel or any other part of the ship, applying this coating system will make sure you will not have to worry about corrosion damage. This will save you time and money. ■



Ecospeed is chemically resistant and will withstand hazardous pollutants.

Contact us for more information
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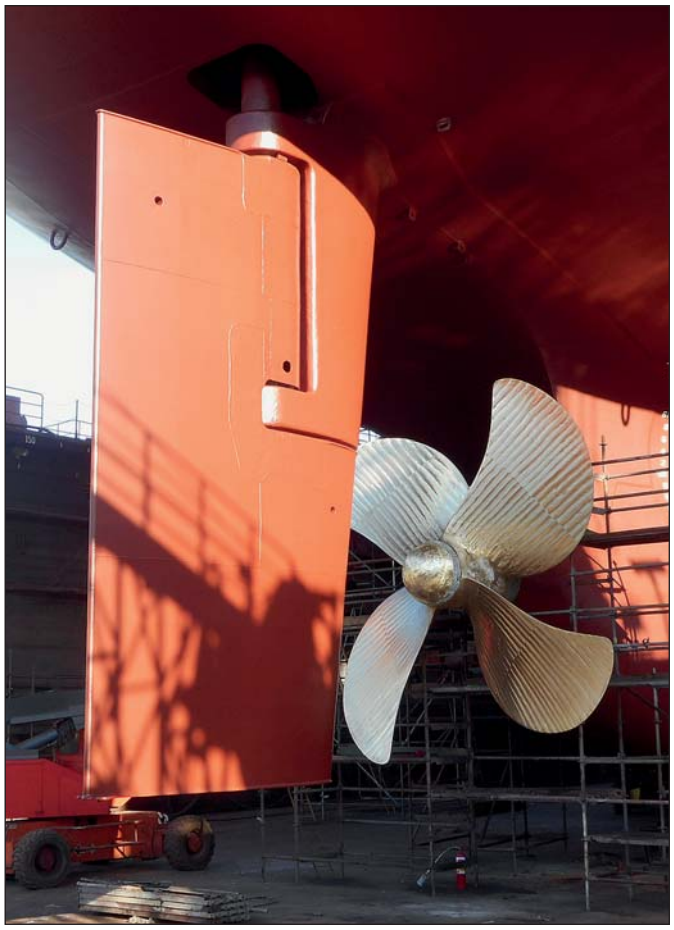
Lasting p

Running gear

Ecoshield offers long-lasting protection for underwater ship gear susceptible to corrosion and cavitation erosion. The coating protects these areas for the service life of the ship. There is no need for recoating or major repair.

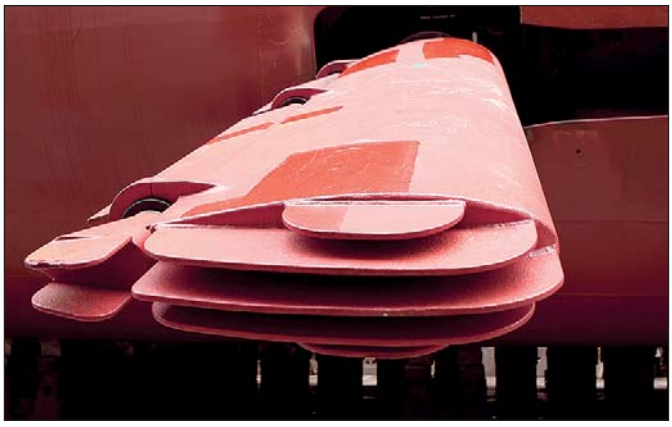
Rudders



Thrusters

Nozzles

Stabilizer fins



Thruster tunnels

ECOSHIELD®
ULTIMATE PROTECTION

rotection

Scrubbers

Ecospeed is highly chemically resistant. Using the coating to protect the exterior outlets as well as the interiors of scrubbers will prevent corrosion damage and its consequences.

Outlets

Overboard pipes

Holding tanks

The actual scrubber

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ECOSPEED®
SHIP HULL PERFORMANCE TECHNOLOGY

New agents for Colombia and Singapore

Subsea Industries has new agents for Colombia and Singapore. They will represent and support products throughout their countries.

A full list of our worldwide network of agents can be found on our website: www.subind.net/contact

Subsea Industries is a pioneer in the development of hard hull coating systems and hull and propeller cleaning systems. In 2002 a long-lasting, non-toxic method of protecting ship hulls was introduced into the market: Ecospeed. In 2013, after more than 10 years of strenuous testing, Ecoshield was launched for permanent protection against cavitation damage for rudders. In 2014 Ecolock was introduced. This coating system is designed to protect offshore vessels for decades without the need for drydocking. The latest members of the family are Ecofix, a superior, tested and proven filler and Ecolast, a UV resistant coating offering the full corrosion and abrasion protection Subsea Industries coatings are known for.

For more information, please contact your local agent directly or drop us a line:

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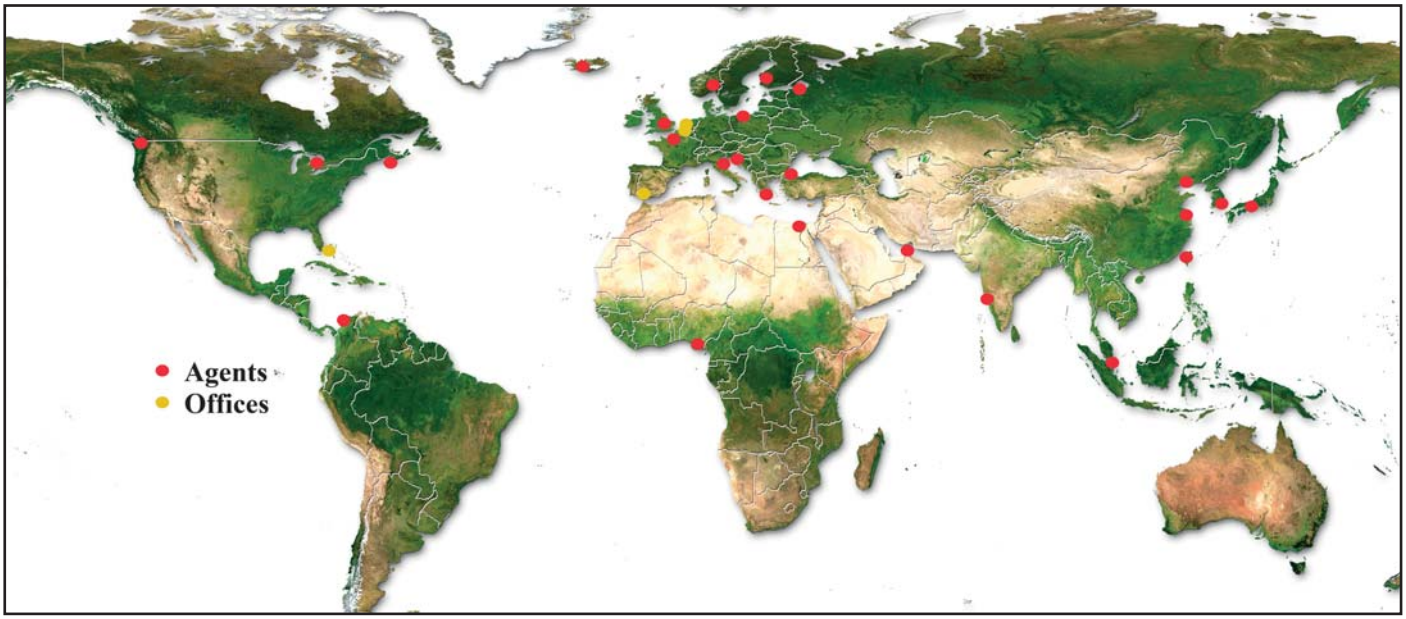
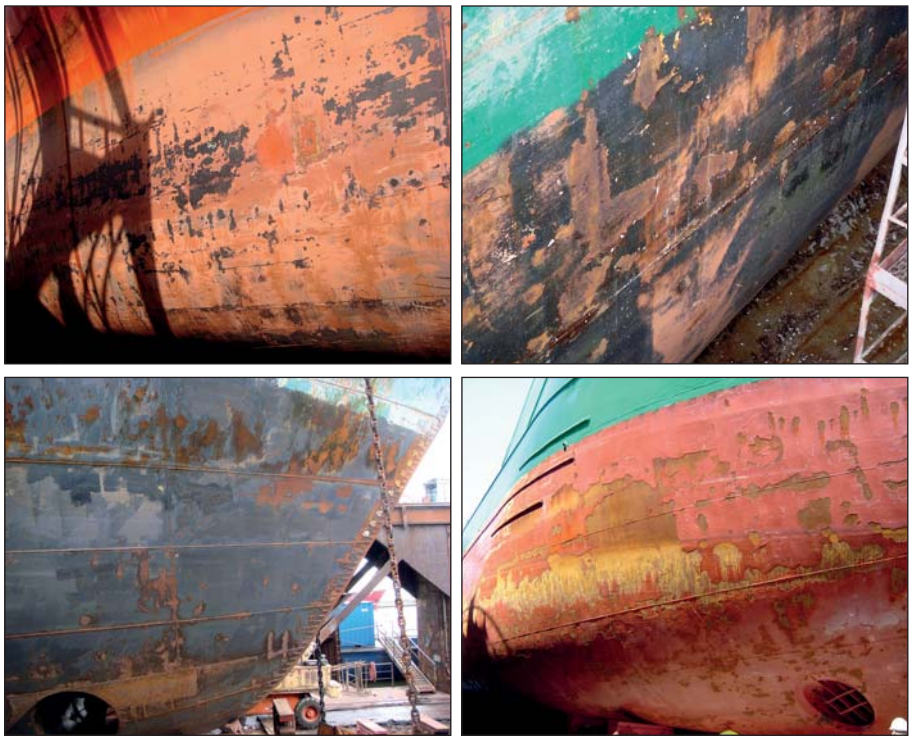


All major issues solved

Our technology has solved all major problems relating to ship hull performance and protection.



The effect of corrosion can be devastating if the wrong protection is used for an underwater hull.

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

Ecospeed still intact eight years after application on cruise vessel.

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 Ecospeed 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 newbuilding 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.

Experience has shown that Ecospeed stays on the hull much longer and resists the ice far better than the most generally used specialized ice coatings.

10. Ice-going and icebreaking ships:

150 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 been applied on the newbuild research vessel RRS Sir David Attenborough, the biggest commercial shipbuilding contract in Britain for 30 years.

Summary

We have optimized hull surface roughness and hence hull friction resulting in fuel savings in the 20-40% range. We have cracked all major problems in corrosion and cavitation erosion. We have halted all anti-fouling toxic emissions. We have substantially reduced the cost and time of drydocking and its peak distribution of toxic particles due to repainting work. We have provided the most adequate solution to mitigate the transfer of invasive species. We have reduced newbuilding costs. We have formulated the best way to prevent loss of coating in ice and general arctic conditions. ■

Corrosion damage very 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.

ECOFIX®
CORROSION REPAIR

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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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01/21