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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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Two newbuild tugboats to be protected with Ecospeed hull coating

Three years ago, Ecospeed was applied on *Antarctic*, a shallow draught anchor handling tug supply (AHTS) vessel owned by Ark Shipping Company. The success of this application led the owner of the boat to order the same protection for his next two shallow draught AHTS vessels: *Polar* and *Polus*. Building of these vessels will start in 2021 and will again take place at the Atlas Shipyard in Kocaeli, Turkey.

Ark Shipping Company is a large Russian business structure performing river and sea transportation. The organization has been successfully operating in the transport and logistics market since 1992. The key cargo transportation routes run through the basins of the Neva, Volga, Oka, Don rivers, the Caspian, Black, and Azov seas, as well as the Gulf of Finland and the seas of the Arctic Ocean.

Atlas Shipyard was established in May 2005 and has focused on the construction and repair of specialized vessels up to 25.000 Dwt. The layout of the facilities and manufacturing processes at Atlas Shipyard allows for maximum efficiency through application of mass production techniques in shipbuilding.

The best protection for ice-going vessels

Ark Shipping Company originally selected our coatings amidst strong competition because of their proven performance in polar waters. The Ice-Class 1A, 65m tug *Antarctic* car-



Digital rendering of m/v Polar, one of two newbuild shallow draught anchor handling tug supply (AHTS) vessels that will be coated with Ecospeed.

ries out anchor handling and oil recovery duties in the ecologically sensitive Arctic in compliance with the IMO Polar Code requirements.

Due to its unique composition, Ecospeed is not only the best protection available for underwater hulls of icebreakers and ice going vessels, the coating also provides the best hull performance and is the easiest ice going paint to apply and maintain.

Many applications on ice going hulls show that our coatings can withstand the impact of ice for many years on end. Some of these vessels have been sailing for well over ten years without needing to be repainted.

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.

Orkun Çomuoğlu who is the managing director at Amat Engineering, Subsea Industries' agent in Turkey said: "These are super ice-class vessels that require extensive hull protection for the operations they (will) undertake. The positive experience with the *Antarctic* made the choice for the next two vessels much easier for the owner." ■



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



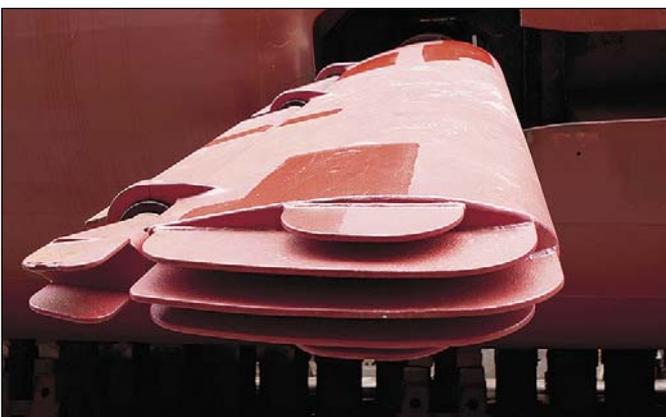
Thrusters



Nozzles



Stabilizer fins



Thruster tunnels



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 defined

The purpose of Ecospeed is to offer a long-lasting, non-toxic protection for all ship hulls and to provide a system that keeps a hull very smooth and free of fouling for the service life of the vessel with minimal repair and no replacement. Instead of using chemicals to try to kill and repel marine fouling organisms, Ecospeed uses a hard, impermeable, impenetrable coating along with manual removal of fouling at an early stage.

The technology can be broken down into three parts:

1. Coating

Ecospeed is a glassflake reinforced resin coating that is impermeable, impenetrable, long-lasting, inert and non-toxic. The coating is applied in two coats each of 500 µm dry film thickness (DFT) to a properly prepared hull, either at new build or in drydock for an in-service vessel. It works equally well on steel, aluminum or GRP. A minimum of about 3 hours is required in between coats and there is no maximum overcoat time. This coating has extraordinary adhesion and bonding qualities. It is very tough and resistant to abrasion. It is also flexible and remains firmly bonded to the plates even when these flex considerably.

2. Fast and easy cleaning

Underwater maintenance of Ecospeed is carried out with specially designed underwater hull cleaning tools that simultaneously remove all fouling and optimize the smoothness of the paint surface. It allows divers to clean the flat areas as well as the harder to reach parts of the hull



Ecospeed offers a cost-effective and environmentally-acceptable approach to hull protection and anti-fouling.

without damaging the coating. One of the many unique characteristics is that with repeated underwater hull cleaning the coating's surface improves. Cleaning can be carried out whenever needed, at any point in its lifespan.

Ecospeed can also be cleaned in drydock with high pressure tools. With Ecospeed the coating is always in a brand-new, excellent condition after a high pressure washing and no material is lost. Only the fouling is removed. The coating stays on the ship instead of dispersing in the water and contaminating the shipyard and the surrounding waters.

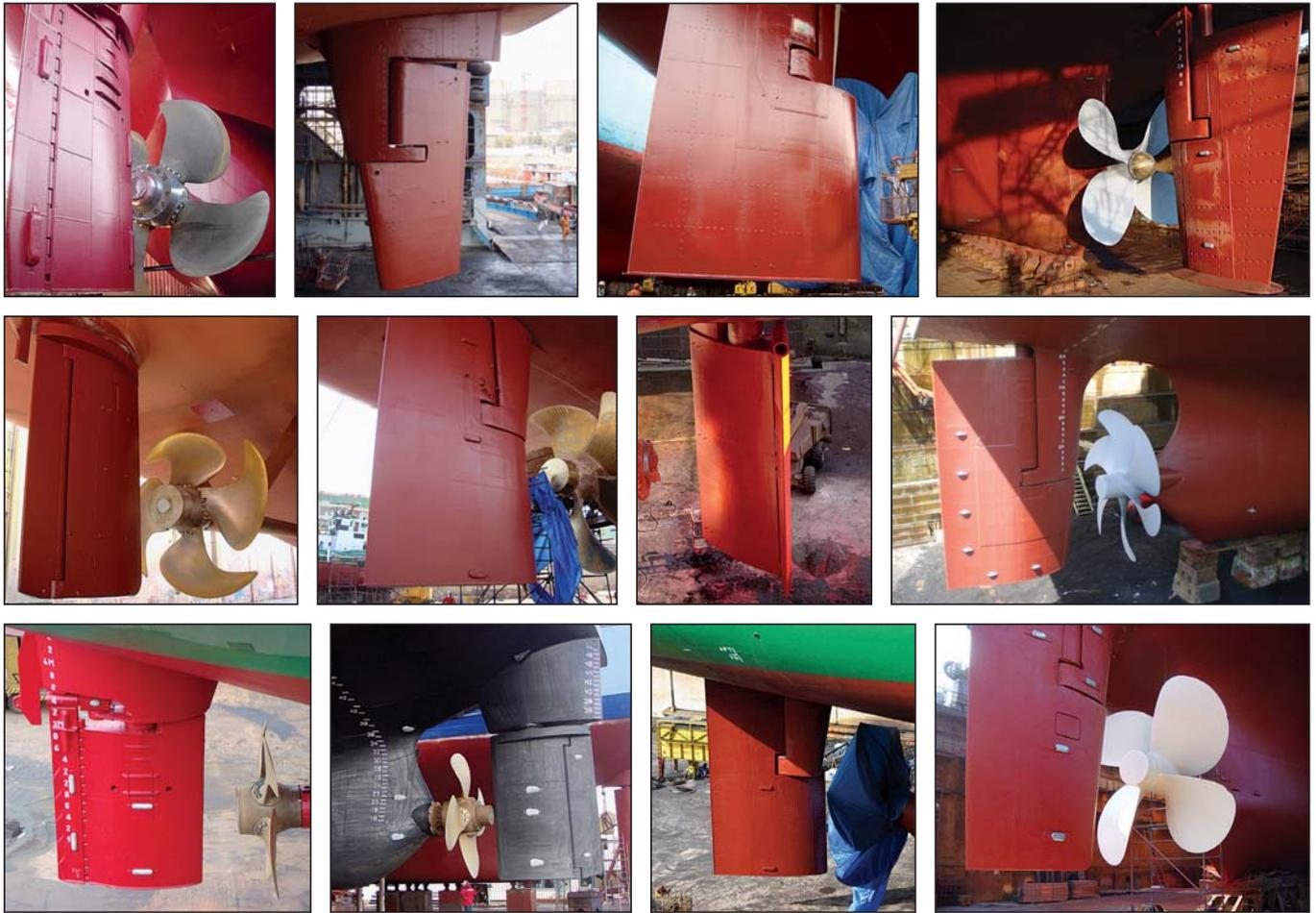
By optimizing hull surface friction and using the best possible surface hydrodynamic characteristics, fuel savings over the lifetime of the ship are most often found to be in the 20-40 % range. In contrast with AF compounds that rapidly degrade over time, our coating lasts. Therefore the performance of the ship does not degrade either.

3. Minor touch-ups in drydock

The coating is expected to last the full service life of the ship without need for replacement or any major repair. Mechanical damage such as that caused by collision or anchor chain abrasion, or by welding on the hull can easily be touched up during routine drydocking. Because the coating consists of a single, homogenous layer, any repair or touch-up easily blends in without any difficulty. The integrity of the hull coating is maintained despite such repairs. Because no repaint is needed, several days and up to a week can be saved in drydock times during each visit.

The coating alone provides superior hull protection, but it is the full Ecospeed technology that results in the major fuel savings. ■

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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ECOSHIELD®
ULTIMATE PROTECTION 

SUBSEA

PROTECTION AND PERFORMANCE



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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