



**Independent paint inspectors vital to a successful coating application**

# ECOLOCK® ultra long-lasting protection for offshore hulls



**E**colock is designed to protect offshore vessels for decades without the need for drydocking. Increasingly, offshore units such as FPSOs, FSOs, FLRSUs and others used for offshore oil and gas exploration, drilling, storage and transport need to stay out of drydock for 15, 25 even 40 years.

The challenge has been to protect the underwater hull from corrosion and to provide a cleanable surface so that the biofouling that accumulates can be removed successfully and safely for UWILD and to reduce weight. Ecolock is the answer to that challenge.

Ecolock is an extremely tough and durable coating designed to remain

in excellent condition for 15 - 25 years without drydocking, repair or replacement. Ecolock can be cleaned underwater as often as needed to meet the UWILD and weight requirements of FPSOs, drill ships and other offshore vessels. Ecolock is the result of continual R&D on offshore hull coatings since the 1990s.

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**ECOLOCK®**   
LIFETIME CORROSION PROTECTION

# Independent paint inspectors vital to a successful coating application

The Ecospeed family of coatings which in addition to Ecospeed include, Ecospeed Ice, Ecoshield, Ecolock and Ecolast, are all extremely high performance coatings. They come with a 10-year warranty (as long as a qualified paint inspector is present to monitor the application and assist the applicator or shipyard) but in fact are expected to last the life of the vessel without need for replacement.

“The reason Subsea Industries always advises shipowners to have a qualified inspector representing us as coating manufacturer present on every project is to ensure that all the specifications and quality requirements are followed precisely,” explains Andi Hermans, Production Manager at Subsea Industries and himself a qualified paint inspector.

“The coatings must be applied on a correctly prepared surface, which is



*Andi Hermans, Production Manager at Subsea Industries and qualified paint inspector verifies correct surface preparation on one of the rudders of a DEME dredger, Charlemagne in drydock.*

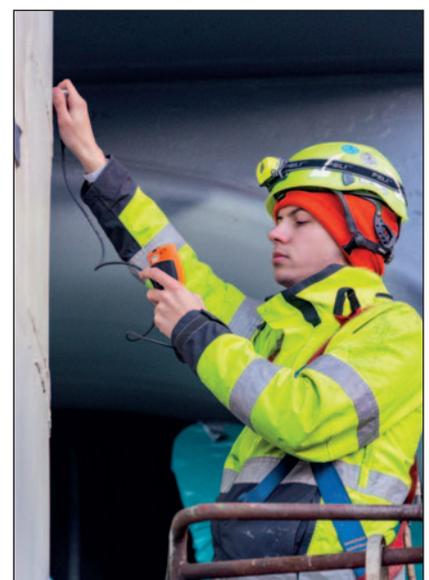
crucial for a proper result, and they must be applied according to the standards and specifications of the coating itself,” Andi continues.

“Another reason it’s very important to have a knowledgeable and experienced inspector on site is so that

they can guide the application,” he adds. Paint is not always given correct importance in shipyards when multiple operations are vying for priority, all under time pressure. The paint inspector will make sure that the application of the coating is given the importance it deserves.



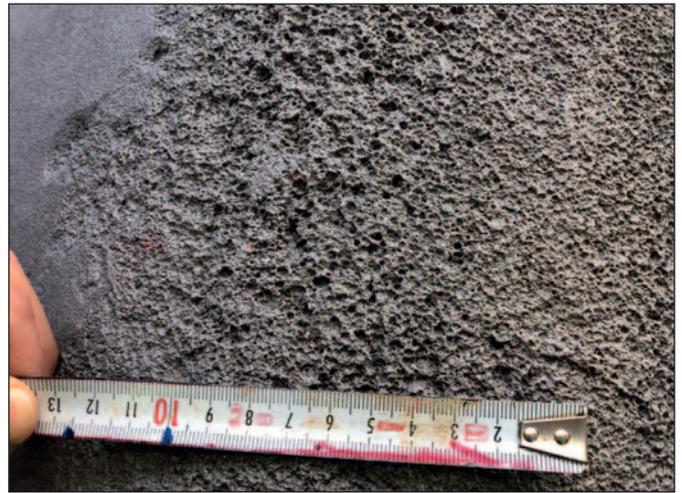
*The finished hull of the Mirva VG with two coats of Ecospeed. The inspector helps ensure that the applied coating will last the life of the vessel without the need for replacement.*



*Beaux Ackx, Coating Inspector for SCICON worldwide checks the DFT of the first coat of Ecoshield.*



*The bow of the Umiak 1 in drydock prior to the application of Ecofix (our compatible filler) and Ecospeed. The poor previous protection had left the hull exposed and resulted in heavy pitting and corrosion.*



*Gunnar Ackx was one of the inspectors at the full hull reblasting and recoating of the Umiak 1. Here he is showing the extent of the pitting that needs to be repaired.*



*The bow of the Umiak 1 after Ecofix has been applied to repair the pitting and erosion in preparation for recoating with Ecospeed.*



*The first coat of Ecospeed being applied to the bow of the Umiak 1. Ecospeed can be applied just 1 hour after Ecofix has been used to repair pitting and corrosion.*

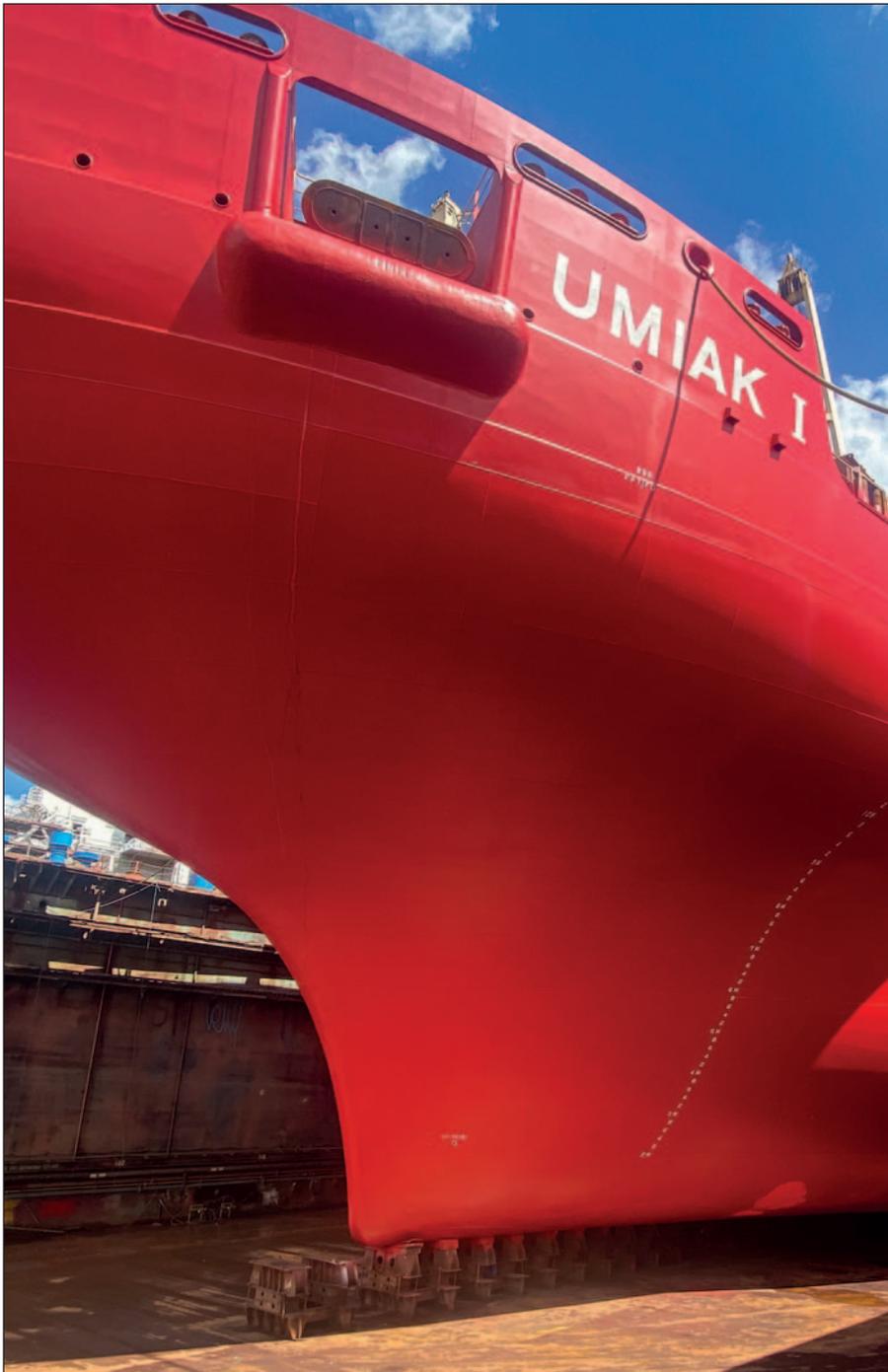
To this end, over the years, Subsea Industries has built up a network of qualified and reliable paint inspectors who can be called at short notice to attend coating applications and ensure that these are correctly done in all cases.

According to Andi, the paint inspector's key functions include:

- Ensuring the surface has been properly prepared: roughness of at least 75µm, clean to SA 2 ½.
- Checking the equipment to make sure the pump, hoses, spray gun

and tip meet the requirements. Also that tools are available in case anything comes up that needs rapid repair.

- In the case of applicators new to the products, the inspector offers them brief but necessary training to familiarize them with the



*The finished bow of the Umiak 1. Because Ecospeed has been used, the hull will not need to be recoated. At most minor touch-ups of mechanical damage may be needed.*

great flexibility in the shipyard's schedule."

It is not only the inspector's knowledge of the materials, the surfaces, equipment, and standards that are key. Andi considers that flexibility and the ability and willingness to communicate with all the different people involved in the application are vital to the success of the project. "It's a team effort and only cooperation between all involved can obtain the premium result we are striving for on every application," he says.

### **Network of inspectors**

In order to get the full picture, we interviewed several of the top independent paint inspectors who regularly attend applications of Ecospeed, Ecoshield and Subsea Industries' other coatings. These are all independent – not Subsea Industries' employees – and their experience covers a wide range of coatings and applications. We are including one of the interviews in this article and will follow up with others in the future. Even though this inspector has attended many full hull Ecospeed applications, we stressed Ecoshield and Ecofix in our interviews. Ecofix is our 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.

### **Gunnar Ackx**

Gunnar Ackx is the Managing Director of SCICON worldwide ([www.sciconworldwide.com](http://www.sciconworldwide.com)). His impressive credentials include NACE Level III Certified Coating Inspector, SSPC Level III Certified Protective Coating Inspector, SSPC Certified Protective Coating Specialist and SSPC Past President (2016-2017). Based in Beernem,

actions necessary for a correct application.

- The inspector guides the applicators as needed with the mixing so that it is according to specs.
- During the spraying, he checks that the desired wet film thickness is achieved and that overspray is kept to a minimum and provides guidance as needed.
- After the first coat is applied, the inspector checks the DFT and notes where it has to be compen-

sated for on the second coat. He also makes note of any sags that must be ground down before the second coat is applied.

"Ecospeed is a good coating for shipyard application," Andi says. "It's really flexible. You can apply the second coat just three hours after the first. Not many paints can do that. And you can also wait for a couple of days or even weeks to apply the second coat." This permits



*Gunnar Ackx, Managing Director of SCICON worldwide, NACE Level 3, SSPC Level 3 certified coatings inspector, has been inspecting Subsea Industries projects since the early 2000s.*

Belgium, Gunnar and his team cover the globe and a wide range of coating inspection and consulting projects. Gunnar was kind enough to provide detailed feedback regarding his experience with Subsea Industries coatings.

“SCICON worldwide has been inspecting Ecospeed projects since the early 2000s. We have seen that the further development of additional specialty products such as Ecoshield and Ecofix has helped to strengthen the corrosion protection of ship hull components, which are often as difficult to protect as they are critical to the ship's operations.

“Rudders, Kort nozzles, bow thruster tunnels are all essential to the reliable operation of any vessel. At the same time they are in close proximity to the propeller blades which often causes significant cavitation challenges, on top of an already challenging corrosion protection problem.

“In our 25+ years of having inspected a wide range of ship coating projects as an independent coating inspection and consulting company, we can honestly say that we have never come across a product equal to Ecoshield. Not only does the 1000  $\mu\text{m}$  of glass-platelet reinforced coating provide for excellent barrier corrosion protection, but more importantly (and that's where we have seen many 'similar glassflake' coatings fail) outstanding resistance against long term cavitation and mechanical impact (ice, debris, etc...). In that respect, Ecoshield really is in a class of its own.

With regards to application, he says, “While Ecoshield and related products may require some 'special attention' during application that not all shipyards are used to, they are equally easy to apply if the applicator sticks to the Application Guidelines. In fact, if you play by the rules, Ecoshield is actually much easier/quicker to apply and much more efficient in a drydocking, because you can literally go from final blasting to final touch-up and inspection within roughly 36 hours. And 24 hours later you're good for undocking.

“The required attendance of an Ecoshield paint inspector at each application means problems are very rare. It also results in an even better product for the owner.

“Not surprisingly, we have seen vessels coated with Ecospeed and Ecoshield, often sailing in harsh (icy) conditions, coming back into drydock multiple times over a period of 10 to 15 years without requiring any significant touch-up other than for very localized (heavy) mechanical damages. We have not

seen any other hull coating system come near to this performance.

“An added advantage of Ecoshield is that it is 100% compatible with the sister hull coating product Ecospeed, so wherever on the hull cavitation damage is observed, you can very easily switch from Ecospeed to Ecoshield to provide that extra bit of cavitation protection.

“And similarly Ecofix is 100% compatible with Ecoshield, so it is the perfect solution for filling up the cavitation pitting and damage first, prior to overcoating with Ecoshield.”

## Conclusion

These are the observations of one of the many independent paint inspectors we contract with to ensure that each Ecospeed, Ecoshield, Ecolock or Ecolast application is carried out to the correct specifications and standards which will ensure that they perform at optimum for the life of the vessel. We consider the paint inspectors to be an essential element in our delivery and we frequently receive glowing feedback from our customers.

They are an essential part of the team.

We will publish further interviews with paint inspectors in future issues of the magazine as they provide a valuable external viewpoint to our operations. ■

**Contact us for more information or an estimate for our coating systems for your ships.**  
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# Lasting scrubber protection

**E**cospeed fits in seamlessly with the environmental idea behind scrubber systems. It is a lasting, chemically resistant coat-

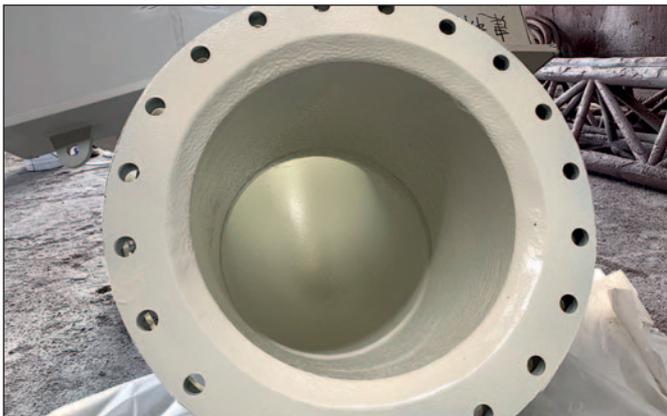
ing that will withstand the hazardous pollutants and will prevent corrosion damage and the resulting consequences. Ecospeed will

protects the exterior outlets as well as the interiors of scrubbers for the lifetime of the vessel.

## Outlets



## Overboard pipes



## Holding tanks



## The actual scrubber



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# SUBSEA

PROTECTION AND PERFORMANCE



**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)**

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