



NEXEON™ 810

PPG helps ship operator and shipyard contribute to sustainability targets with a copper-free antifouling solution

CASE STUDY



Customer Overview

FRS (formerly Förde Reederei Seetouristik) is based in the North of Germany and is an international ferry operator with around 75 vessels. The company carried 5.7 million passengers and 1.5 million vehicles on its numerous national and international shipping lines in 2023. FRS Syltferry with one of their ferries called SyltExpress is not only responsible for transporting tourists to and from the island List on Sylt but is also responsible for the island's access to food, infrastructure, and life on land, which is all distributed by the ferry.

MS SyltExpress is a Ro-Ro Passenger Ship operated by FRS Fleet and sails in the North of Germany between Havneby on Rømø to List on Sylt. The docking took place at Esbjerg Shipyard, Denmark, in collaboration with the applicator MMT Group and Industrial equipment supplier Mouritsen A/S. Mouritsen A/S supported the shipyard and PPG with the equipment needed to ensure that the application went smoothly.

The location & vessel

SYLT EXPRESS is a Ro-Ro Passenger Ship and is sailing under the flag of Cyprus. Her length overall (LOA) is 88.16 meters and her width is 16.1 meters. SYLT EXPRESS is in the dry dock for maintenance and repair at Esbjerg Shipyard in Esbjerg, Denmark.

The challenge

One of FRS's guiding principles is Corporate Social Responsibility (CSR). FRS is always looking for innovative, sustainable solutions that are geared towards long-term business goals and sustainable strategies with the intent of reducing their ecological footprint.

Esbjerg Shipyard, the shipyard responsible for the docking of the vessel M/S Syltexpress, is always looking for innovations that can help them to reach their sustainability goals and minimize their environmental footprint. ***“Operating a shipyard in the middle of a National Park also brings obligations to think of more environmental and sustainable products to be used for maintenance and repair of ships”***, explains Brian Mose, Sales Supervisor of the shipyard.



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The solution

For many years, PPG has invested in developing sustainably advantaged products, helping ship owners reach their sustainability targets. By investing in advanced hull coatings helps ship owners cut fuel use, lower GHG emissions, and comply with IMO regulations. By reducing drag, these coatings boost efficiency and support sustainable, cost-effective operations.

One example is PPG SIGMAGLIDE® 2390, a fouling release silicone-based coating that is 100% biocide free along with PPG NEXEON™ 810, which is a copper-free antifouling with a reduced content of photodegradable biocides. These two products are unique not only due to being sustainably advantaged, but they are also suitable for electrostatic application. This spraying technique significantly reduces coating overspray and waste, minimizing the loss factor, resulting in less paint needed.

To support the customer's needs, PPG proposed PPG NEXEON 810 as an ultra-low friction hull coating for the ferries. As PPG NEXEON 810 is a 100% copper-free hull coating, PPG could ensure that no copper would be released into the marine environment in relation to the coating. This ultra-low friction also delivers immediate power and emissions savings, compared to traditional antifouling coatings, thereby reducing environmental impact.

PPG NEXEON 810 is suitable for electrostatic coating application, a coating application technology that has an increased paint transfer efficiency compared to airless spraying. Using an electrostatic spray gun, the charged paint droplets are drawn to the grounded hull surface like a magnet. This technique not only creates a uniform, ultra-smooth, long-lasting film layer but also significantly reduces overspray and waste. It also minimizes the need for masking the vessel and cleaning the dock post-application, saving time, materials and costs.

Features & benefits

PPG NEXEON™ 810

Features:

- Ultra-low friction antifouling based on pure hydrolyzing and copper-free technology
- Unique biocide package: copper-free, reduced biocide content and photodegradability of organic biocides
- Suitable for electrostatic application

Benefits:

- Instant smoothness, up to 25% greenhouse gas emission savings, minimal speed loss, and ultimate fouling resistance up to 60 days of idle time resistance*
- Outstanding fouling resistance and color retention during the entire service life
- When applied electrostatically: High transfer efficiency, minimal waste, less paint consumption, improved health and safety benefits

**Compared to traditional antifouling coatings. Actual results are dependent on ship type, vessel-specific utilization and operation, and are subject to conditions as specified in performance guarantee to be issued by PPG.*

Electrostatic application

- **Overspray reduction:** significantly minimizes overspray, resulting in less waste
- **Minimal contamination:** high transfer efficiency requires less masking and ensures cleaner decks, topsides and drydock floors, reducing the need to clean afterwards.
- **Cleaner work environment:** reduces the need for masking the vessel and cleaning the dock after application, contributing to an improved work environment for applicators.
- **Waste reduction:** generates less waste, promoting operational and cost efficiencies.
- **Enhanced performance:** delivers superior application results, achieving a smoother and glossier paint film, boosting overall efficiency and operational performance.



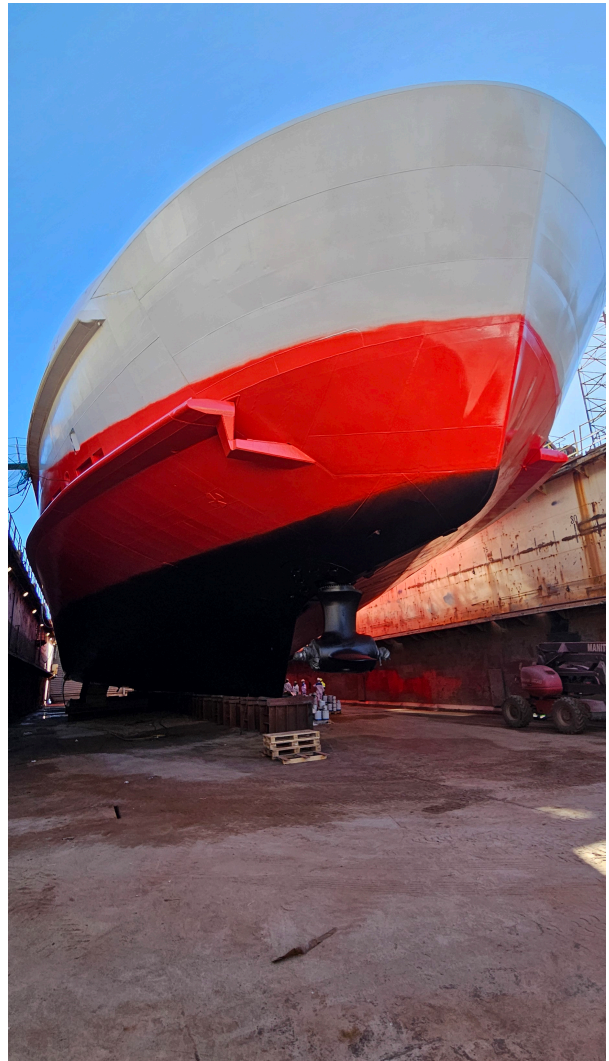
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The result

Relying on PPG as a trusted partner, FRS Syltferry and Esbjerg Shipyard took significant steps to achieving their sustainability ambitions, while not compromising on aesthetics and performance. PPG NEXEON 810 helps to improve vessel performance by delivering up to 25% emissions savings due to reduced drag, maintaining higher speeds while staying CII compliant, and improving speed by +0.5 knots, compared to traditional antifouling coatings.

The shipyard greatly reduced overspray around the shipyard and reduced contamination in the waters around the shipyard, thanks to the electrostatic spraying technique. This method minimizes processes such as masking the vessel and cleaning the dock post-application, thereby saving both time and costs.



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