



PPG SIGMAGLIDE® 2390

Minimum overspray, maximum impact: the sustainability edge of electrostatic application



Customer Overview

Longship B.V., founded in the Netherlands, is a maritime transportation company specializing in industrial freight. With a growing fleet that includes modern vessels, Longship delivers reliable and sustainable shipping solutions across Europe and beyond. The company emphasizes innovation and environmental responsibility, equipping its ships with advanced propulsion systems and flexible cargo capabilities. Longship's focus on efficiency and sustainability strengthens its position as a reliable partner in the evolving global logistics landscape.

The Vessel and Shipyard

The vessel, named LONGEDEN, is a general cargo ship built in 2025. The construction took place at Atlas Shipyard in Turkey. Designed for flexibility and efficiency, LONGEDEN features advanced capabilities such as methanol-ready diesel-electric propulsion and open-top cargo handling. Making it well-suited for transporting everything from dry bulk to oversized components like wind turbine blades.

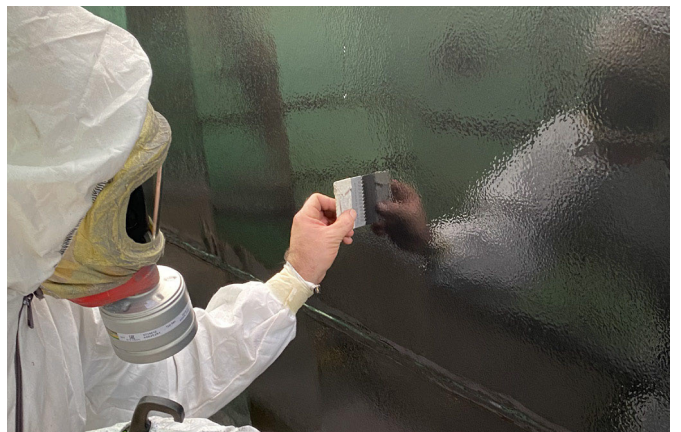
Longship needed a coating system that could be applied efficiently and precisely, without compromising quality or safety. To address these challenges, Longship partnered with PPG to find the best coating solution to address their needs.



Project Challenge

During the construction of LONGEDEN at Atlas Shipyard in Turkey, Longship B.V. faced several technical and environmental challenges. The company aimed to meet strict sustainability standards while ensuring strong operational performance, requiring a hull coating that could reduce drag, lower fuel consumption, and minimize greenhouse gas emissions.

In addition to these environmental priorities, the vessel's complex geometry and tight construction schedule added further logistical demands.



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The Solution

PPG has applied its advanced fouling-release coating, PPG SIGMAGLIDE 2390, to the vertical bottom of the newbuild vessel LONGEDEN. The coating's ultra-smooth, biocide-free silicone formulation is designed to reduce drag, lower fuel consumption, and support reduced greenhouse gas emissions, aligning with Longship B.V.'s sustainability objectives.

The product was applied using electrostatic spraying, introduced for the first time in Turkey at Atlas Shipyard. This technique increases efficiency by drawing charged paint droplets to the grounded hull surface, resulting in a more uniform film, reduced overspray, and lower material waste.

PPG's Field Technical Service team provided on-site guidance throughout the project, working closely with the shipyard and application subcontractors to ensure a consistent, high quality result and demonstrate a shared commitment to innovation, efficiency, and environmental responsibility.

The Benefits

PPG *Sigmaglide* 2390 provides Longeden with a hull coating built for long-term performance. Its ultra-smooth surface reduces resistance through water, supporting lower energy use and smoother navigation. The coating meets IMO EEXI sustainability requirements and contributes to reduced greenhouse gas output.

Through electrostatic application, Longship B.V. achieved higher transfer efficiency with less overspray, minimized waste, and lower VOC emissions during application.



Key Benefits : PPG SIGMAGLIDE 2390 Coating

- **Biocide-free formulation:** providing exceptional fouling control without releasing biocides into the ocean.
- **Substantial power savings:** by creating an ultra-smooth, almost friction-free hull surface, the coating reduces drag, leading to power savings of up to 20%*.
- **Reduced emissions:** the decreased power requirement delivers up to 35% reduction in emissions*, aiding compliance with IMO GHG reduction measures.
- **Minimal speed loss:** the coating promotes a speed loss performance of less than 1%**; allowing vessels to operate at higher speeds while maintaining CII compliance.
- **Extended idle performance and durability:** the coating can withstand up to 150 days of idle periods and can offer a service life that can exceed 10 years with minor maintenance. Enhancing operational flexibility and reducing dry-docking frequency.
- **Sustainable application:** designed for electrostatic application, the coating ensures high transfer efficiency, leading to reduced coating overspray and material waste during application.

The Result

As a newly built vessel, Longeden was expected to deliver strong performance and meet environmental requirements from the start. By selecting PPG Sigmaglide 2390, Longship B.V. achieved both. The vessel now benefits from improved operational efficiency, reduced fuel use, and more consistent schedule reliability.

The coating also supports Longship B.V.'s sustainability objectives by lowering environmental impact and reducing long-term maintenance needs, allowing the vessel to remain in service longer with fewer interruptions.

The use of electrostatic application marked an important milestone for Longship B.V., demonstrating its commitment to sustainable innovation and setting a higher standard for environmentally responsible shipbuilding.

*compared to traditional antifoulings

** actual performance will depend on ship model and operating conditions

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