



SIGMAGLIDE 2390

PPG introduces cutting-edge electrostatic coating application technology in Greek shipyards



Customer Overview

Dynacom Tankers Management Ltd., established in 1991, is a leading global manager of modern, high-quality oil tankers. With a fleet of 67 vessels, Dynacom has a strong and respected presence in the oil industry, providing reliable service to customers worldwide. Its ships call at over 1,000 ports, ensuring efficient and far-reaching global coverage.

Vessel & Location: The vessel, named the Karolos, is a crude oil tanker. The docking took place at the Skaramangas Shipyard, in West Athens regional unit, which has more than 60 years' history in new buildings and ship repairs.

Project Challenge

'Karolos' is a crude oil tanker of 150K DWT, that underwent dry docking maintenance at Skaramangas Shipyard in December 2024.

The customer's main objective was to reduce vessel drag, lower fuel consumption and greenhouse gas emissions, and minimize environmental impact by using the latest application methods. Together with Aegean Protective Coatings, a representative of PPG coatings in Greece, PPG sought a solution that would optimize coating efficiency, reduce material waste, and deliver long-term performance benefits. Electrostatic coating application was used for the first time in a Greek shipyard. This marked a significant step forward by introducing innovative, high-performance hull coating application methods to the Greek maritime industry.

The Solution

PPG applied 1,160 liters of PPG SIGMAGLIDE® 2390 fouling release by electrostatic application to the vessel's vertical bottom. We also applied PPG SIGMA SAILADVANCE™ GX and RX high-performance, self-polishing antifoulings to the flat bottom and boot top.

PPG *Sigmaglide 2390* extremely durable, silicone-based, biocide-free fouling release coating is known for its ability to enhance vessel efficiency. This innovative coating reduces drag, lowers fuel consumption, and helps minimize green house gas emissions by delivering an ultra-smooth hull surface.

For the first time in Greece, PPG *Sigmaglide 2390* coating was applied electrostatically. Using an electrostatic spray gun, the charged paint droplets are drawn to the grounded surface of the ship like a magnet. This technique not only creates a uniform, ultra-smooth, long-lasting film layer but also significantly reduces overspray and waste compared to traditional airless application. The result is a more efficient application process with higher transfer efficiency and significantly lower material usage.

PPG's Field Technical Service Team played a critical role in the execution of this project, with specialized technicians overseeing the optimal application of the application system. The project was carried out in collaboration with Coral Piraeus, the subcontractor responsible for the application process, and supported by Skaramangas Shipyard.



PPG SIGMAGLIDE 2390

PPG introduces cutting-edge electrostatic coating application technology in Greek shipyards

The Benefits

The ultra-smooth finish of the PPG *Sigmaglide 2390* coating reduces hull friction, leading to immediate power savings and increased operational efficiency. The electrostatic application technology minimizes coating overspray and material waste, reducing volatile organic compound (VOC) emissions and overall environmental impact.

Reduced paint consumption and a cleaner operation in dock can also translate to cost and time savings. A vessel coated with a premium coating like PPG *Sigmaglide 2390* has a prolonged lifetime benefit which can have a far-reaching effect on return on investment.

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%, compared to traditional antifouling.
- **Reduced emissions:** the decreased power requirement delivers up to 35% reduction in emissions compared to traditional antifouling coatings, aiding compliance with IMO GHG reduction measures.
- **Minimal speed loss:** the coating ensures a speed loss performance of less than 1%, allowing vessels to operate at higher speeds while maintaining Carbon Intensity Indicator (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 Results

The successful application of PPG *Sigmaglide 2390*, using the electrostatic spraying method demonstrated the effectiveness of this new spraying technique in the maritime industry and has set a new standard for coating efficiency and sustainability in Greek shipyards.

With this pioneering achievement, we reaffirmed our commitment to delivering innovative and sustainable solutions to the maritime industry, thereby paving the way for more efficient and sustainable dry-docking practices in Greece.



Visit ppgmc.com to learn more

No rights can be derived from the content of this publication. Unless otherwise agreed upon in writing, all products and technical advice are subject to our terms of sale, available on our website ppgmc.com. All rights reserved. The PPG logo, *We protect and beautify the world*, and all other PPG marks are property of the PPG group of companies. Created MAY 2025. © 2025 PPG Industries, all rights reserved.

