SIGMA ECOFLEET® 690
Self-polishing, high-activity antifouling protection for low-activity vessel

Case study

The Customer
Allseas

The Location
Cantieri Navali Palermo, Italy

The Challenge
To provide an antifouling solution that offers protection against fouling for a ship that is slow moving and often idle

The Solution
The SIGMA ECOFLEET 690 self-polishing, high-activity antifouling protection for aggressive fouling conditions

The Benefits
The SIGMA ECOFLEET 690 product, through its specialized formulation, is a faster polishing antifouling specifically designed for low-activity ships, such as pipe-layers. These vessels traditionally spend much of their time idle when pipes are being welded and installed onto the bottom of the sea

The Result
In total, 7,000 liters of SIGMA ECOFLEET 690 product was successfully applied on the underwater hull of the Solitaire

The Customer
Founded in 1985, Allseas Group S.A. is a global leader in offshore pipeline installation and subsea construction, and has gained worldwide experience in all types of offshore and subsea construction projects. The company employs over 2,300 people worldwide and operates a versatile fleet of specialized pipe-laying and support vessels, designed and developed in-house.

Allseas’ Solitaire is the largest pipe-laying vessel in the world. Converted from a bulk carrier and operational since 1998, she has achieved pipe-laying speeds in excess of 9 km (5.6 miles) per day with its automatic welding system developed and manufactured in-house by Allseas. As a result of the large number of welding stations on board, Solitaire is capable of installing hundreds of kilometres of pipeline in a single year.

The Challenge
Pipe-layers traditionally operate at low sailing speeds and are therefore subject to some of the most aggressive fouling conditions.

As these vessels usually spend a great deal of time immobile, when pipes are being welded and installed onto the sea bottom, the antifouling has to be resilient and reliable to provide the necessary protection for these difficult operational environments.
The Solution

PPG created the SIGMA ECOFLEET 690 product to deliver excellent self-polishing antifouling for extreme and aggressive fouling conditions.

The SIGMA ECOFLEET 690 antifouling has been formulated using PPG’s unique patented binder technology ensuring consistent performance levels and fouling control for in-service periods of up to 60 months.

Allseas chose the SIGMA ECOFLEET 690 product based on its clear advantages over other products in terms of its effectiveness as a faster polishing antifouling specifically for low-activity ships. In addition, Allseas was particularly interested in the SIGMA ECOFLEET 690 antifouling as the Solitaire had its next assignment in Australian waters, so therefore a clean, smooth and attractive hull upon arrival is critical.

The Benefits

Vessels, like the Solitaire, with low sailing speeds during pipeline installation operations, need antifouling protection that can cope with the most intense fouling conditions. The SIGMA ECOFLEET 690 product produces reliable and consistent high-activity antifouling performance with faster polishing rates for these types of low-speed- and low-activity vessels.

Fully compliant with the IMO AFS Convention, the product is suitable for a wide range of vessel types and contains an ultra-high volume solids content of 70%, thus reducing potential VOC emissions. It is also easy to apply, thereby increasing productivity and reducing overall maintenance costs.

Main Benefits:

- Excellent self-polishing antifouling for extreme and aggressive fouling conditions
- Fouling control for service periods up to 60 months
- Extended fouling control periods – reduces maintenance costs
- Easy application and recoating – less time, more productivity
- Developed specifically for coastal- and low-activity vessels
- Industry standard for high-film build with 70% volume solids
- Complies with IMO AFS Convention
- PPG’s patented self-polishing binder composition
- Reduces VOC emissions

The Results

The entire underwater hull of the Solitaire has been coated with the SIGMA ECOFLEET 690 product.

By adopting the SIGMA ECOFLEET 690 antifouling, Allseas can now be confident that the Solitaire has one of the market’s leading solutions for combating fouling species, wherever in the world it operates.

Image: Allseas’ Solitaire after application of SIGMA ECOFLEET 690