

Jiangsu Luneng Dongtai 200 MW Concession Offshore Wind Farm

The PPG SIGMASHIELD™ 880 system delivers ultimate abrasion protection for extreme conditions



Case study

Customer

Developer – Jiangsu Guangheng New Energy Co., Ltd.
OEM – Siemens

Location

Jiangsu, China

Challenge

To provide extended service life for extreme, corrosive offshore conditions. Also to offer a fast-drying coating solution to meet the tight project schedule to deliver sound preliminary protection during the construction phase

Solution

The PPG SIGMASHIELD™ 880 high-build, surface-tolerant epoxy system

Benefits

The PPG SIGMASHIELD 880 abrasion-resistant epoxy coating delivers ultimate abrasion protection in extreme conditions for extended asset lifetime. Its high-build- and surface-tolerant characteristics reduce the time and cost of pre-application surface preparation, and improve application productivity

Result

The PPG SIGMASHIELD 880 system helped Jiangsu Luneng realize the project requirements and achieve completion in a shorter time frame

The Challenge

Jiangsu Luneng Dongtai 200 MW Offshore Wind Power Plant is located 34km offshore in the East China Sea. Its operation condition is complex, influenced by coastal climate, splashes, salt mist and acid rain. The fifty grounded, monopole foundations needed effective coating protection for corrosion resistance, color- and gloss retention, and an extended protection life cycle in the extreme coastal environment.

In addition to coating protection, the owner had to achieve project commencement and grid connection for power generation within a year. This critical timescale resulted in a shorter construction time period, which placed high demands on the coating's effective, fast-cure preliminary protection properties.

The Solution

It was critical on this project to use an effective coating solution that would strengthen the performance and quality of the coating to improve the cost effectiveness of coating protection under various extreme environments.

Our PPG SIGMASHIELD 880 high-build, surface-tolerant epoxy coating can greatly reduce the time and costs spent on surface preparation during fabrication. The coating's excellent abrasion resistance also provides effective protection for the most challenging and demanding service conditions.



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The Benefits

The PPG SIGMASHIELD 880 product is engineered and formulated to resist corrosion in a wide range of industries and applications. It offers cost savings by reducing the time and expense associated with surface preparation as well as providing greater application efficiency and enhanced finish quality.

As the PPG SIGMASHIELD 880 coating can be rapidly immersed and continues to cure after seawater immersion, it is particularly suited for structures exposed to tidal movement and surges, and for offshore splash zones such as those encountered in offshore projects.

Benefits of two coats – in a single coat

As a fast-drying, single-coat system, the PPG SIGMASHIELD 880 product accelerates the application process to minimize downtime. Application is simplified by its high surface tolerance (suitable for damp- or wet-blast clean substrates), extended recoat window, and the high film thickness that is achieved in one coat.

Our PPG SIGMASHIELD 880 coating's superior resistance to abrasion, impact, corrosion and seawater prolongs service life and protects assets in some of the world's most severe environments.

Benefits of PPG SIGMASHIELD 880:

- Designed for use in offshore splash zone
- Exceptional resistance to seawater, corrosion and abrasion
- Proven protection for extended coating life cycle
- High-build and fast cure: 200 – 1,000 µm per coat
- Continues to cure when immersed in water
- Conforms to NORSOK M501 System 1
- Conforms to ISO 12944-6 C5-M
- Conforms to ISO 12944-6 Im³ (Include HPWJ-treated substrates)



The Result

The PPG SIGMASHIELD 880 system provided outstanding application performance and excellent abrasion- and weather resistance. The fast-drying rate enabled it to be handled and transported within a short time to keep up the project schedule.

This durable, abrasion-resistant epoxy coating system will provide protection to the Jiangsu Luneng Dongtai 200 MW Offshore Wind Project for many years to come.

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