

Case Study

CB[®]300

In synergy
with paint
system



Next-Generation Corrosion Protection at Caofeidian Port

Caofeidian Port, a crucial deep-water hub in China, plays a key role in global trade and industrial logistics. As a major gateway for bulk cargo - including coal, iron ore, and energy resources - the port's infrastructure must withstand harsh environmental conditions to ensure operational efficiency and longevity.

Client: Caofeidian Port
Location: Tangshan, Hebei Province, China

Contractor: Local certified coating contractor
Supervision: Coreteel Technologies

The Innovative Solution for Preserving Critical Port Infrastructure:

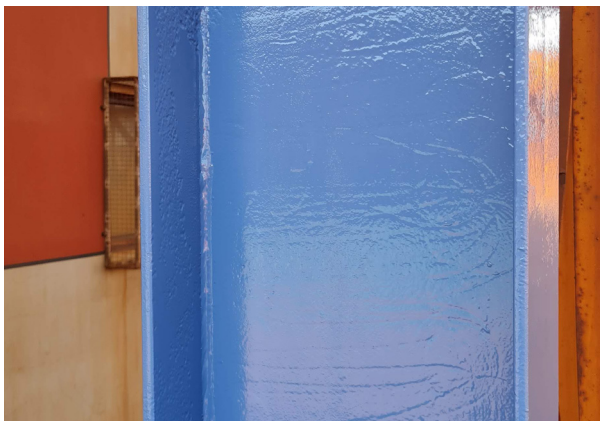
A critical component of this infrastructure is a 4,600-meter-long conveyor system, responsible for the loading and unloading of iron ore. In such a large-scale operation, strict time constraints leave little room for delays.

With 70,000 square meters of surface area exposed to moisture, a saline coastal environment, and abrasive iron ore particles, the conveyor system faces severe corrosion and wear. To extend its lifespan and optimize maintenance, Coreteel's technology was selected.

Coreteel's Solution: Advanced Corrosion Protection with Coreteel Base 300



Coreteel's CB300 is an innovative corrosion protection system that works in synergy with industrial paint systems, designed for demanding industrial environments. In contrast to conventional methods, CB300 does not require abrasive surface preparation, thus avoiding the use of hazardous materials or processes, such as sandblasting.



How it Works:



1

Water Jet Surface Preparation

High-pressure water jetting removes old paint and loosens rust safely and efficiently.



2

CB300 Application

The liquid solution is applied via spraying or brushing, chemically bonding to the metal surface to form a protective oxide layer, preventing corrosion and blistering.



3

Coating System

A mid-coat and topcoat (Jotun system was used in this project) are applied to achieve protection that meets ISO 12944 C5 standards. thickness of 190µm (7.48 mil).

Key Benefits:

- **Superior Corrosion Resistance** - CB300 forms the protective oxide layer beneath the paint, ensuring protection even in harsh environments.
- **Extended Lifespan** - The solution extends maintenance cycles, improving infrastructure durability.
- **Fast and Efficient Application** - CB300 is capable of being spray-applied, enabling uniform coverage over large areas.
- **Optimized Surface Preparation** - High-pressure water blasting is 50% faster than abrasive cleaning and can be used in places where abrasive cleaning is not allowed.
- **Eco-Friendly and Safe** - Eliminating abrasive blasting reduces pollution and enhances workplace safety.
- **Regulatory Compliance** - The system meets ISO 12944 C5, the industry standard for corrosion protection of steel structures.

Demonstrated Impact: Speed, Savings, and Longevity

Coreteel's CB300 surpassed expectations, delivering exceptional results:

- **Enhanced Durability** – Corrosion resistance significantly improved, extending the conveyor system's lifespan to over 15 years.
- **Lower Maintenance Costs** – A 30% reduction in maintenance expenses due to longer-lasting protection.
- **Operational Efficiency** – The project was completed in just 40 days, with zero operation downtime, and the need to mask conveyor bearings eliminated.
- **Cost Savings** – Efficient surface preparation and fast application reduced execution costs by 40%-60%.
- **Improved Safety & Compliance** – The process eliminated hazardous dust exposure, ensuring a safer work environment while meeting international standards.

Revolutionizing Industrial Corrosion Protection

Coreteel's achievement in Tangshan exemplifies how advanced, field-tested technologies can transform industry standards, providing lasting reliability, sustainability, and improved operational performance in critical infrastructure.

A project engineer at the site had this to say: "Implementing Coreteel's CB300 technology was a game-changer for us. The innovative surface preparation method, combined with its long-term durability, allowed us to complete the project efficiently without disrupting operations. Protecting the conveyor bearings from abrasive damage was a significant advantage, and the environmentally responsible approach aligned perfectly with our sustainability goals. CB300 exceeded our expectations, and we are extremely satisfied with the results".

Join us in adopting
a more cost-effective,
eco-friendly,
and efficient solution.



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