Tectyl™

User case:

Corrosion protection for marine fasteners and exposed components

Problem

A major shipyard in the Netherlands, with annual sales exceeding 2 billion EUR, experienced recurring corrosion issues on bolts and fasteners used in marine equipment and exposed structural assemblies.

Marine environments are among the most aggressive operating conditions for metal components. Fasteners and exposed steel parts are constantly subjected to saltwater spray, high humidity, and fluctuating temperatures, which significantly accelerate corrosion processes.

Operating in such conditions, components were continuously exposed to:

- Saltwater and sea spray
- High humidity
- Rapid temperature fluctuations
- Wind-driven moisture
- Long-term outdoor exposure

Corrosion on bolts and fastening systems can compromise structural integrity and increase maintenance interventions. In marine applications, even localized corrosion on fasteners may lead to premature component replacement, additional inspections, and increased operational costs.

The shipyard therefore required a corrosion protection solution capable of providing durable protection for exposed fasteners while supporting reliable long-term performance in harsh maritime environments.

Tectyl proposed approach

Tectyl proposed a preventive corrosion protection system specifically selected for equipment operating in aggressive marine environments. The objective was to protect bolts, fasteners, and exposed metal components before corrosion initiation, reducing maintenance requirements and improving long-term operational reliability.

The objective was to:

- Provide durable corrosion protection for exposed fasteners and assemblies
- Improve resistance to salt spray, humidity, and marine contaminants
- Reduce corrosion-related maintenance and replacement of components
- Support long-term structural reliability in maritime conditions

The proposed approach focused on protecting critical fastening elements that are particularly vulnerable to corrosion in marine environments. In such conditions, even minor corrosion on bolts and fasteners can compromise mechanical integrity, increase inspection requirements, and lead to costly maintenance interventions.

By implementing a preventive coating system as part of the preparation and assembly process, the shipyard aimed to ensure consistent protection of exposed components while maintaining practical application methods suitable for large-scale marine equipment production.

CORPRO

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Solution

Marine-grade corrosion protection for bolts and metal components

The implemented solution included:

- **Tectyl 3217-E** for durable protective coating and long-term surface sealing
- **Tectyl 5506W** as a water-based corrosion preventive for additional environmental protection

This combination delivered:

Enhanced resistance to salt spray and moisture
Protecting bolts and fastening systems against aggressive marine corrosion.

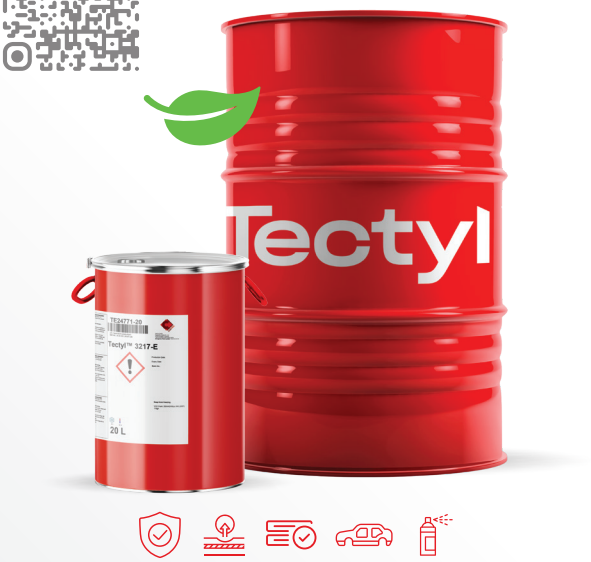
Improved equipment reliability
Reducing corrosion-related failures and inspection interventions.

Extended maintenance intervals
Minimizing premature bolt replacement and service downtime.

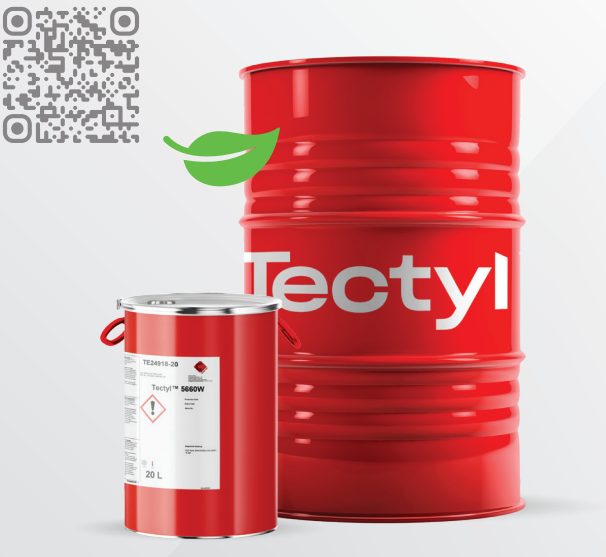
Long-term surface protection under heavy weather exposure
Supporting structural durability in demanding offshore and marine applications.

The treatment was integrated into the shipyard's preparation process to ensure consistent and repeatable corrosion protection performance.

Tectyl™ 3217-E



Tectyl™ 5506W



Result

Following implementation, the shipyard observed improved resistance to corrosion on bolts and exposed components, even under continuous maritime exposure.

Maintenance frequency decreased, equipment reliability increased, and long-term durability of fastening systems improved significantly.

This case demonstrates how preventive corrosion protection plays a critical role in ensuring structural integrity and operational reliability in the marine industry.

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