Tectyl™

User case:

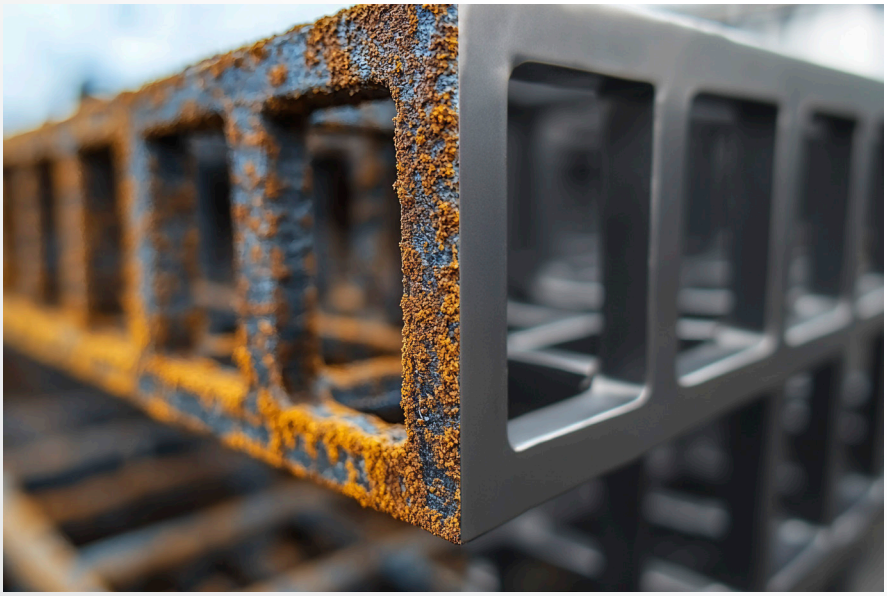
Cost-effective corrosion protection for lighting and infrastructure masts

Problem

An EU-based OEM mast manufacturer designs, produces, and installs high-quality steel masts for infrastructure applications, including lighting columns, catenary masts, communication towers, camera poles, and advertising structures.

These steel structures are continuously exposed to outdoor environmental conditions such as moisture, temperature fluctuations, urban pollution, and seasonal weather changes. Over time, these factors can lead to corrosion of exposed metal surfaces if protection systems are not properly designed and applied.

Traditionally, corrosion protection relied on galvanizing processes. While galvanizing provides effective corrosion resistance, it also introduces several operational and economic challenges. The process involves high energy consumption, significant logistics coordination, and longer production lead times. In addition, galvanizing limits flexibility in manufacturing schedules and may complicate production of customized mast configurations.



With increasing pressure to optimize production costs while maintaining durability and compliance with infrastructure standards, the manufacturer sought a corrosion protection alternative that could reduce manufacturing complexity while still ensuring reliable long-term performance of outdoor steel structures.

Tectyl proposed approach

Tectyl proposed a corrosion protection system designed to function as an alternative to galvanizing when combined with an epoxy top coating system.

The objective was to:

- Reduce production costs
- Maintain long-term corrosion resistance
- Improve manufacturing flexibility
- Integrate protection directly into the coating process

The selected system had to ensure durability under outdoor exposure, including moisture, temperature variation, and urban environmental conditions. At the same time, the solution needed to remain compatible with existing industrial coating processes to enable efficient integration into the manufacturer's production workflow.

CORPRO

User case:

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Solution

Alternative corrosion protection system integrated into OEM production

The implemented solution included:

- **Tectyl 3217-E** as the primary corrosion protection layer
- Epoxy top coating applied over the Tectyl system

This combined coating system delivered:

Effective corrosion protection for outdoor steel masts
Providing durable surface protection against environmental exposure.

Significant production cost reduction
By replacing the expensive galvanizing process with a coating-based solution.

Improved process efficiency
Allowing corrosion protection to be integrated directly into the OEM coating line.

Design and manufacturing flexibility
Supporting complex geometries and customized mast configurations.

The system maintained required durability standards while enabling more efficient production economics.

Tectyl™ 3217-E

Result

By implementing a Tectyl-based corrosion protection system combined with an epoxy top coating, the manufacturer achieved a more efficient and flexible production process while maintaining reliable corrosion protection performance.

Replacing galvanizing with a coating-based protection system allowed corrosion protection to be integrated directly into the OEM painting line, reducing logistical complexity and improving production planning.

The solution helped lower overall manufacturing costs while maintaining the durability requirements for outdoor steel infrastructure structures. At the same time, the manufacturer gained greater flexibility in producing customized mast designs and responding more efficiently to project-specific requirements.

Overall, the new corrosion protection approach improved cost control, production efficiency, and long-term durability of lighting and infrastructure masts.

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