

Case Study

CB[®] 300
In synergy
with paint
system



Revolutionizing Corrosion Protection for Gas Utilities

A Smarter, More Efficient Approach to City Gate Maintenance

A leading European natural gas distributor sought an innovative solution to extend the lifespan and efficiency of its city gate maintenance process. Coreteel's technology delivered substantial benefits in corrosion resistance, cost savings, and project execution speed.

Client: Leading European Gas Utility
Contractor: Local Execution Contractor
Supervision and Training: Coreteel Technologies

A Legacy of Innovation in Gas Distribution

Since the 19th century, this gas utility has supplied energy to homes and businesses. Ranked among the world's most sustainable gas utilities, the company operates over 800 "city gate" facilities, ensuring a smooth gas transition from high-pressure pipelines to local networks while managing pressure regulation, metering, and odorization.

Each city gate undergoes maintenance every 15 years, with approximately 55 projects executed annually. The traditional process involves mechanical paint removal and a three-layer re-coating system that complies with ISO 12944 C3 standards.

The Hidden Threat - Corrosion & Condensation:

City gate pressure reduction facilities are highly susceptible to condensation buildup on piping. This moisture penetrates the protective coating, resulting in blistering and ultimately, corrosion. The conventional maintenance approach involves abrasive surface preparation, which is time-consuming and costly. Moreover, the presence of explosive hazards in these environments necessitates the use of explosion-proof tools.

The utility sought to evaluate Coreteel's CB300 technology as a potential upgrade to its coating system, focusing on five key factors:

- **Enhanced Corrosion Protection** – Modifies the metal surface itself to combat damage from condensation.
- **Simplified Surface Preparation** – Faster and easier pre-application with pressure washing.
- **Longer Maintenance Cycles** – Extending the lifespan of the coating and prolonged maintenance intervals.
- **Cost Savings** – Lowering material and operational expenses.
- **Faster Execution** – Minimizing downtime and disruptions.

Coreteel's Unique Solution to Corrosion Protection:



In collaboration with Italgas, Coreteel introduced CB300, a next-generation corrosion protection technology designed to improve coating performance and simplify surface preparation.

Coreteel's technology eliminates the need for abrasive surface preparation and reduces costs and time by using high-pressure water jetting instead of mechanical methods.

How It Works:

- 1. Water Jet Surface Preparation** – High-pressure water efficiently removes paint residue and dirt.
- 2. CB300 Application** – A liquid solution is applied by spraying or painting. It chemically bonds to the metal, forming a protective oxide layer that prevents corrosion and blistering.
- 3. Final Coating** – A mid-coat and topcoat paint complete the system (PPG), reaching a total thickness of 190µm (7.48 mil).



Proven Results: Efficiency, Savings, and Durability

Before diving into specific performance metrics, it's essential to highlight that CB300 successfully improved corrosion resistance while optimizing overall project execution.

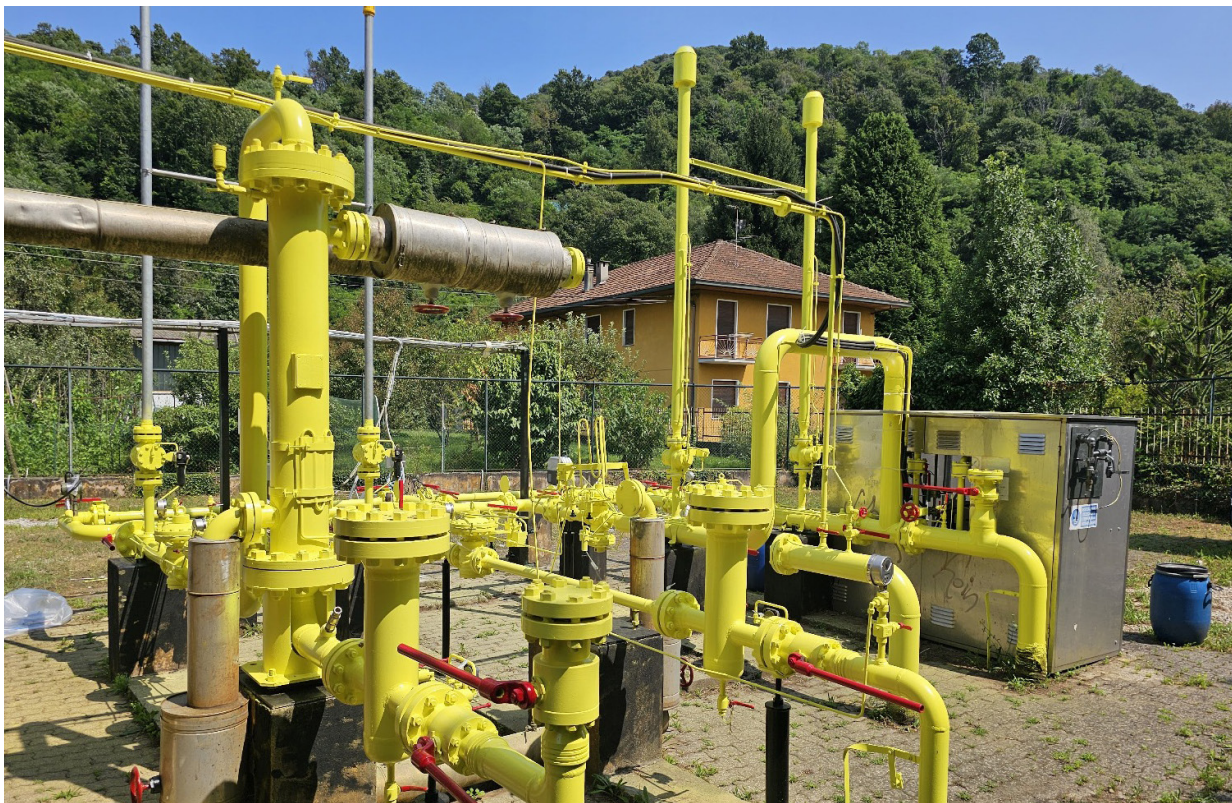


- 1. Unmatched Corrosion Resistance** - The utility upgraded its coating protection from ISO 12944 C3 to C5 at no extra cost, ensuring superior defense against moisture and corrosion.
- 2. Enhanced Surface Preparation** - The water jet surface preparation method is simpler, faster, explosion-proof, and more cost-effective.
- 3. Longer Maintenance Intervals** - Predicted maintenance cycles were extended from 15 to 25 years, reducing annual city gate projects from 55 to approximately 35 - leading to substantial long-term cost savings (CAPEX).
- 4. Lower Execution Costs** - Material costs remained similar, but labor reductions and faster application led to a 40%-60% decrease in total execution expenses (OPEX).
- 5. Accelerated Project Completion** - Maintenance time was cut from 13 to approximately 7 workdays, minimizing operational downtime.

The Bottom Line: A Future-Ready Solution

Coreteel's CB300 offers Italgas a more durable, efficient, and cost-effective approach to city gate maintenance. By eliminating the need for surface preparation, improving corrosion resistance, and extending maintenance cycles, it not only reduces costs but also significantly improves the longevity of infrastructure.

This case study highlights how adopting innovative, field-proven technologies can revolutionize industry practices, ensuring long-term reliability and efficiency in critical gas distribution infrastructure.



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



✉ info@coreteel.com
🌐 www.coreteel.com