

METHANOL COLUMN SKIRT REPAIR

ID: 9997



PROBLEM

Upon removal of fireproofing from the base of a methanol column, corrosion and pitting damage were observed across the skirt surface. The bottom 30–35 inches showed extensive damage, including deeper pitting and metal loss.

The remaining upper skirt area had milder corrosion.

The plant needed a solution that restored integrity, minimized downtime, and avoided hot work.

APPLICATION SITUATION

During scheduled inspection, corrosion and pitting were discovered beneath the fireproofing at the base of a methanol column. The lower 30–35 inches of the skirt showed significant degradation, with deeper pitting and signs of wall thinning. The remaining upper skirt areas were moderately affected.

Client Needs & Challenges:

Structural integrity had to be restored, especially at the base, to ensure safe load-bearing.

Fireproofing removal exposed large surface areas requiring quick remediation.

Hot work (welding or plate replacement) was not preferred due to safety, permitting, and shutdown concerns.

A solution was required that balanced mechanical strength, corrosion protection, and cost-efficiency.

Belzona offered a hybrid composite system that could:

Address pitting (1511) without cutting or grinding out damaged areas.

Provide engineered structural reinforcement (SuperWrap II – with Resin Belzona 1984) in high-stress zones

Deliver immersion-grade protection (5811) for broader skirt areas at lower cost

APPLICATION METHOD

Surface Preparation:

Fireproofing removed. Surface grit blasted to achieve minimum SSPC-SP10 (Near White) and 75 µm anchor profile. Cleaned using Belzona 9111.

Spot Repair with Belzona 1511:

Deep pitted areas were rebuilt with Belzona 1511.

INDUSTRY

Chemical & Petrochemical

LOCATION

Scarborough, ON

APPLICATION DATE

September 2025

PRODUCTS

Belzona 1511 (Super HT-Metal)

Belzona 1984

Belzona SuperWrap II

Belzona 5811 (Immersion Grade)

SUBSTRATE

Carbon steel

PHOTOS

1. Heavy pitting at the bottom of the skirt. Before the application of Belzona.
2. Closeup of worst defect in the column
3. We have successfully revitalized the structure, restoring its strength and beauty after the application of Belzona.
4. Another angle of completed repair

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Hand-applied and profiled flush with parent metal.
Reinforcement with Belzona SuperWrap II
Applied using Belzona 1984 resin to bottom 30–35 inches. Applied in multiple wraps with reinforcing sheet for hoop strength.
Coating with Belzona 5811:
Remaining skirt area coated in two layers of 5811 for immersion-grade corrosion protection.

BELZONA FACTS

Alternatives Considered:

Welding or plate replacement (hot work, high cost, extended downtime)

Full SuperWrap coverage (effective but higher material cost)

Belzona Solution: Hybrid approach:

- 1511 for pitting
- SuperWrap II (1984) for structural reinforcement at base
- 5811 for cost-effective corrosion protection on the remainder

Why Belzona?

Cold-applied – no hot work or shutdowns

In-situ repair – minimal disruption

Engineered + economical – custom system matched to damage severity

Faster, safer, and more cost-effective than traditional methods

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