

Concrete Column Repair Restores Integrity



Overview

Specialized repair of primary structural concrete columns provides safe and successful solution to major integrity threat.

Project

Restoration of steel reinforced concrete columns

TEAM Service

Concrete repair and polymer coating

The Need and Challenge

When a large pulp and paper facility discovered cracking in its primary structural columns they turned to TEAM for a quality solution to improve integrity, prevent future deterioration and provide a professional finish.

Solution and Outcome

TEAM's concrete repair and polymer coating specialists developed a safe and efficient repair that included:

- Removal of loose concrete
- Priming of exposed repair surfaces
- Reinstatement of lost concrete with specialized repair mortar
- Overwrap of carbon fiber
- Epoxy top coat to seal repair and provide professional finish

The completed repair reinforced the structure and prevented future deterioration.

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Solution and Outcome

When a large pulp and paper manufacturer discovered damage to primary structural steel-reinforced columns, they called TEAM's concrete repair and polymer coating specialists for a safe and successful solution. Over time the contaminated water vapor from the paper production process had penetrated the concrete and corroded the reinforcing bars causing corrosion expansion and subsequent spalling of the concrete. Vibration in the structure due to the manufacturing process increased the rate of damage to the critical structural members.

Continued spalling of concrete and metal loss to the reinforcing bars would eventually lead to structural instability and building collapse. The customer required a repair that would improve integrity and prevent future degradation. Given the damage and active vibration the repairs were required on an urgent basis.

TEAM's specialists developed a repair based on the customer's loading data. This repair was then approved by the end user and their 3rd party structural specialist.

The repair involved removal of damaged material, surface preparation and priming of exposed steel and concrete, priming substrate, installation of stainless steel anchors across repair region, re-instatement of concrete using specialist repair mortar, surface preparation and priming of restored concrete and installation of specialist uni-directional carbon fiber reinforcement. The structure and repair area was coated with an impervious epoxy material to prevent further moisture ingress and to provide a professional finish.

All repairs we executed safely, on time and within budget. TEAM's solution was chosen on the basis of safety culture, technical compliance and responsiveness, TEAM's concrete repair and polymer coating specialists deliver industry leading solutions led by our corporate mantra – Safety First – Quality Always.

