

ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

006/2021

**LOCAL GOVERNEMENT
PIPE
RESTRENGTHENING**



BELZONA[®]
Repair • Protect • Improve
AUTHORIZED DISTRIBUTOR

THE PROJECT

WATER PIPE
NOVEMBER, 2020

The city of Toronto was carrying out waterproofing and structure rehabilitation work on the Rosehill Reservoir at David Balfour Park. The city needed to ensure the structural integrity of the reservoir, extend its service life and bring the infrastructure to a state of good repair.

One of the assets they needed to repair was a 60" carbon steel pipe that had suffered from external corrosion and metal loss over the years. The defective area was about 15 feet. They required a solution that would reinstate the structural integrity of the pipe.

PRESSURIZED SYSTEMS

Belzona Great Lakes calculated the number of wraps required using ASME PCC2 equations. The defect was type A (thin wall), corrosion was external, and the pressure was relatively low (25 psi). 2 wraps of Belzona SWII were recommended to structurally reinforce the pipe and effectively stop corrosion on the pipe. This repair system can remain maintenance-free for up to 20 years.



THE SOLUTION

First, the pipe was grit blasted and prepared according to SSPC SP10. All the pitting and resurfacing was then done with Belzona 1121 (Super XL-Metal) because of its longer overcoating time. The next day, they started applying Belzona SWII. They applied the wrap in 4 feet sections at a time, so every 4 feet they would consolidate the repair with Belzona 9382 and continue with the next section. Though the application was during colder climate, Belzona 1982 was chosen to give more working life and allow the crew to complete the application properly.

STRUCTURAL REINFORCEMENT



Customer received an ISO/ASME compliant repair system able to stop the corrosion, return the mechanical strength back to the water pipe and designed to provide a 20 year lifetime.

Belzona SuperWrap II is a composite repair solution designed to safely rectify pipes and equipment to a "zero-defect" status. The system can be used to not only repair metal loss defects but it can also be used for refurbishment of equipment suffering from through-wall defects. It's high young modulus and the ultra-high adhesion to the substrate ensure the long-term integrity of the repair and maximizes performance.