

ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

021/2021

**HVAC
COOLING TOWER
COLD BONDING**


BELZONA[®]
Repair • Protect • Improve
AUTHORIZED DISTRIBUTOR

THE PROJECT

COOLING TOWER
APRIL, 2019

A company in Central Ontario was having problems with their cooling tower. The equipment was experiencing corrosion and in some areas they even had through wall defects.

In terms of HVAC maintenance, corrosion is a major issue for building owners and managers. If corrosion is left untreated, the overall efficiency and longevity of the equipment can be affected, leading to an increase in operating costs and expensive replacement in the event of equipment failure. Repair and, most importantly, prevention of corrosion problems is critical to avoid premature replacement.

NO HOT WORK NEEDED

The customer wanted to seal the holes in the equipment to prevent further deterioration. They did not want to weld as they knew that welding would require specialized equipment, hot work and post-welding treatment to revert metallurgical changes caused by welding.

We showed the advantages of our Belzona cold bonding solution and the customer decided to proceed with it.



THE SOLUTION

Belzona 1111 (Super Metal) was specified as the cold bonding material. This product is a cold curing 100% solids epoxy that can be used as a high strength structural adhesive.

Patch plates were pre-designed to fit the damaged area. The surface of the weakened substrate and underside of the plate were cleaned and abraded to create a mechanical profile. Belzona 1111 (Super Metal) was mixed and applied over the damaged area and on the underside of patch plate, making sure the material was wetting out the profile as much as possible.

100% SOLIDS



The metal plate was then forced onto the weakened substrate. Excess material exuding from the edges was removed and chamfered around the perimeter of the plate.

Belzona 1111 (Super Metal) is a paste grade 100% solid epoxy material. The product can be used for multiple purposes such as bonding, shimming, rebuilding, wrapping, patching to name a few. The product will not shrink while curing, so it allows to achieve exact dimensions and geometries when necessary.

