

# BELZONA PIPE REPAIR KEEPS COOLING TOWER IN SERVICE

ID: 5940

**Industry:** Heating, Ventilation & Air Conditioning  
**Application:** VPF-Valves, Pipes and Fittings  
**Substrate:** PVC  
**Products:** \* Belzona 1161 (Super UW-Metal) ,  
\* Belzona 1321 (Ceramic S-Metal) ,

**Customer Location:** Nashville, TN, USA  
**Application Date:** May 2015

## Problem

The water inlet on a cooling tower had developed a spiral crack due to the inflexible nature of the pipe and the movement of the cooling tower. It was leaking so badly that while the pumps were running, it would spray a stream of water over the side of the building onto walkways below.



## Photograph Descriptions

- \* Remnants of previous attempts to repair the pipe externally ,
- \* Remnants of previous repair attempts inside the pipe ,
- \* Pipe and crack cleaned, roughened and ready for the Belzona application ,
- \* Repair completed, crack sealed with Belzona 1161 and an additional two coats of Belzona 1321 ,

## Application Situation

Fractured pipe spraying water on a cooling tower.

## Application Method

The application was carried out in accordance with a combination of Belzona Know-How System Leaflets VPF-8 and VPF-11. A flexible joint was removed next to the leak to allow the repair to be conducted from the inside of the pipe. Materials used in a previous attempt to stop the leak were removed and the inside of the pipe was thoroughly cleaned and abraded using a rotary tool

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015  
FS 695214  
ISO 14001:2015  
EMS 695213

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and an oscillating tool. The crack was then v-ed out. Belzona 1161 was applied through the crack and two coats of Belzona 1321 were applied over this and for 6 inches in each direction from the repair for wear and erosion protection.

## Belzona Facts

Previous attempts to stop the leak had been made with no success, where repairs with sealants and fiberglass patches had all failed.

The alternative was to replace the pipe inlet, which was impractical since the crack was beyond the outer wall of the water tower and would have required disassembling a large portion of the water tower to allow for the repair. The Belzona solution was the only practical option. The repair has currently been in service for 5 months with no issues.

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