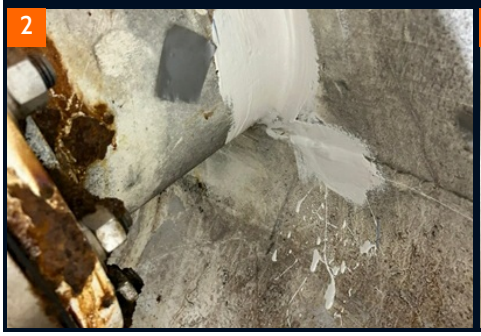
NSF-APPROVED REPAIR OF PERFORATED PIPE IN POTABLE WATER SYSTEM

ID: 9924


1


2


3


4

PROBLEM

A municipality discovered a perforation in a carbon steel pipe feeding a pressure vessel containing granular activated carbon. The pipe, which conveys potable water with 4 ppm hydrogen peroxide, had suffered coating failure and internal corrosion. With the system needing to be operational within two weeks, the municipality sought a repair method that would minimize downtime and avoid hot work, while being suitable for continuous immersion in drinking water.

APPLICATION SITUATION

The pipe is part of a water treatment system and required a repair that met NSF/ANSI 61 standards for potable water. Although initially considered a temporary fix, the municipality was open to a longer-term solution if durability and performance allowed. Upon surface preparation by abrasive blasting, additional defects were revealed, highlighting the need for a system that could both seal and reinforce the area efficiently.

APPLICATION METHOD

After abrasive blasting to remove corrosion and failed coating, the surface was cleaned and prepared to the required profile. Belzona 1111 was used as a cold bonding solution to bond a steel plate over the perforated area, sealing the defect and reinforcing the weakened section of the pipe. The bonded area was then overcoated with Belzona 1341N, providing long-term protection for potable water service under continuous immersion conditions.

BELZONA FACTS

The Belzona solution offered a cold-applied, no-welding repair that allowed the pipe to be restored without interrupting nearby operations. Both Belzona 1111 and Belzona 1341N are approved for NSF/ANSI 61 potable water service, making them ideal for this application. The system provides excellent resistance to erosion and wear in continuous immersion, ensuring long-term reliability. The entire repair was completed within the customer's tight timeframe, returning the vessel to service without the need for pipe replacement or invasive work.

INDUSTRY

Water / Wastewater

LOCATION

Kitchener, Ontario

APPLICATION DATE

June 2025

PRODUCTS

Belzona 1111 (Super Metal)
Belzona 1341N (Supermetalglide)

SUBSTRATE

Carbon steel

PHOTOS

1. Problematic area showing the through wall defect
2. Cold bonding repair completed and through wall defect sealed
3. Full repaired section protected with Belzona 1341N
4. View from the tank's manhole of the repaired section