



INTERNAL PIPE

HydraTite®

JOINT SEAL

Market

Water / Utilities

Challenge

A Texas water treatment facility identified active infiltration within a 39-inch steel raw water transmission line, with leaks occurring upstream of a pump station. These leaks posed a risk to system efficiency and long-term reliability, requiring prompt repair.

One of the most significant challenges was the location of the leaks, with the deepest occurring approximately 1,000 feet inside the pipeline. Access to the repair area required confined space entry deep within the pipe, where airflow conditions could become unsafe without proper ventilation. Additionally, the exact joint locations were not marked internally prior to repair, requiring coordination between external and internal crews to accurately identify the leaking joints.

Engineered Solution

HydraTech recommended the use of HydraTite® Internal Pipe Joint Seals to eliminate infiltration and restore the integrity of the pipeline. Due to the non-standard pipe size, the seals were custom manufactured to ensure proper fit and performance.

Two double-wide HydraTite® seals were selected to provide extended coverage over the leaking joints. Each seal was installed using three stainless steel retaining bands, delivering uniform compression and a long-term mechanical seal.



Scope

The pipeline was dewatered and prepared prior to HydraTech's arrival, with the joints already clean and ready for installation. To safely perform the work at this depth, positive and negative airflow systems were established by the site team to maintain proper ventilation throughout the pipe. A two-person HydraTech crew entered the pipe and navigated approximately 1,000 feet to the repair locations using a skateboard, allowing efficient movement through the confined space.

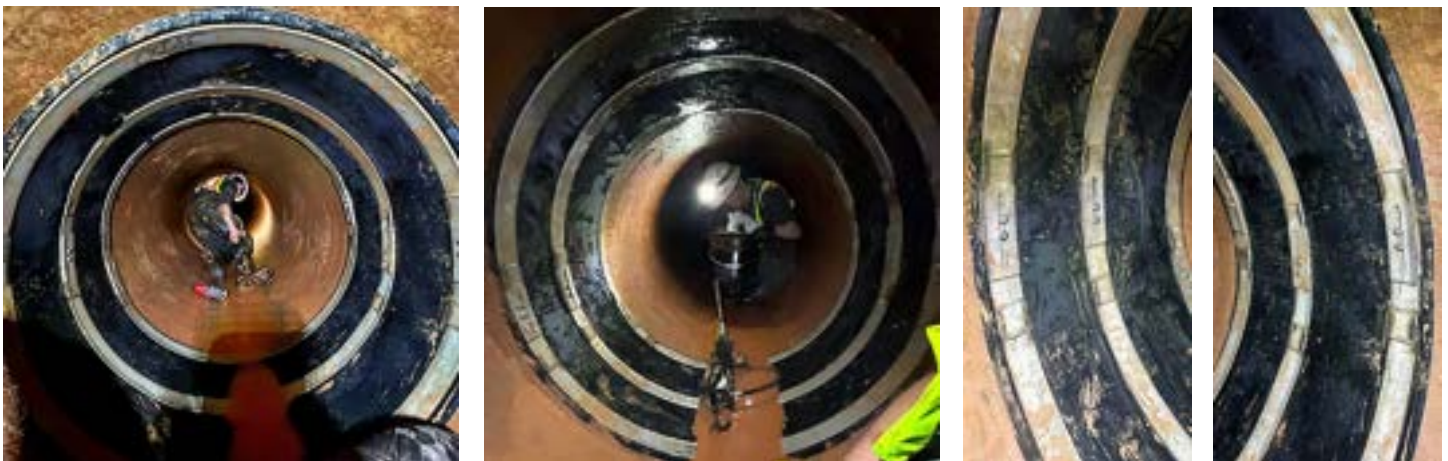
Prior to HydraTech's arrival, some of the fill above the pipe had been dug away, exposing the compromised joints. Because the exact leak locations were not precisely marked internally, a person outside the pipe tapped on the pipe at the repair locations, allowing the internal crew to audibly identify the correct joints for repair.

Once located, both leaking joints were sealed using the custom double-wide HydraTite® seals. The installation required no additional surface preparation and was completed efficiently despite the challenging access conditions. The entire installation was completed in approximately 2.5 hours.

Solution

Both leaks were successfully sealed, eliminating infiltration and restoring the performance of the raw water transmission line. The HydraTite® system provided a fast repair that addressed deep pipeline leaks.

This project demonstrated HydraTite®'s ability to perform in extreme access conditions, combining custom manufacturing, efficient installation, and coordinated field communication to deliver a reliable, long-term solution in a matter of hours.



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