



INTERNAL PIPE

HydraTite®

JOINT SEAL

Market

Water / Utilities

Challenge

A Colorado raw water pipeline project required rehabilitation at a transition joint connecting a 36-inch concrete pipe to an approximately 42-inch steel pipe. The difference in diameters created concern for long-term integrity as the system was being developed to transport raw water to the City of Boulder for treatment.

The project location introduced additional challenges, as the pipeline was situated in a remote mountainous area at elevations approaching 10,000 feet, with limited access and no cellular service. The transition between differing pipe materials and sizes created a complex geometry that required a flexible, trenchless sealing solution.

Engineered Solution

HydraTech recommended a HydraTite® Internal Pipe Joint Seal to accommodate the irregular transition. An extra-wide seal was selected to span the joint and provide full circumferential contact across the differing pipe materials and diameters.

To allow HydraTite to accommodate the transition, our engineer specified an additional 2-by-5-inch rubber spacer and sealant to hold it in place.



Scope

Access to the site required travel by ATV through mountainous terrain, with the installation taking place at a remote location approximately 15 to 20 miles from the nearest developed area. HydraTech provided a single technician, supported by a small on-site crew, to complete the installation.

The joint was accessed internally, and the seal was installed directly over the transition without removal of the existing liner. Inside the pipe, only two people worked to install the seal. The installation was completed efficiently, with the in-pipe work taking about 1 hour.

Solution

The transition joint was successfully sealed, establishing continuity between the concrete and steel pipeline sections. HydraTech was not phased by the complex geometry and remote installation conditions.

This project demonstrated HydraTite®'s ability to deliver reliable performance in challenging transition joints, irregular pipe configurations, and hard-to-access environments, ensuring long-term functionality of critical raw water infrastructure.



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