

The Water and Wastewater Department for the town of Cave Creek, Ariz., serves 5,004 customers in a community just north of Phoenix.

Water Superintendent Dennis Charles has worked for the town of Cave Creek since 2007. He and his team provide 24-hour support for repairs.

A collar connecting two classes of asbestos cement (AC) pipe of different diameters cracked and started to leak. Charles and his team tried a variety of clamps to repair the crack, but the difference in outside diameters (OD) between the two pipes made it difficult to connect them. Both ends of the pipe also were not smooth, which made them difficult to couple. None of the other repair products Charles used offered a durable solution to a chronic problem.

The Versa also is durable. It features weld-free construction and stainless steel parts, making it resistant to corrosion. The radial closing design and sealing systems help eliminate installation errors.

The coupling presented three fundamental advantages for this repair:

Ease of installation. The coupling could wrap around the two pipes in one step without digging into the hard ground underneath. This allowed the installation time to be dramatically shortened compared to cutting the damaged pipe and installing a conventional stab-fit coupling.

Cutting the pipe also would have required adhering to stringent environmental precautions given its asbestos-concrete material. By using the coupling, the complications associated with this course of action were avoided.

Installation was facilitated by the top-facing



The Right Coupling for Cave Creek

By Stan Pachorek

Arizona community benefits from pipe repair

The leaking pipe also was visible to members of the community, who wanted the problem fixed quickly. The lack of a permanent solution became a customer relations issue that Charles wanted to address as soon as possible.

A new coupling needed to be installed, but the ground underneath the pipe contained a layer of caliche with soil particles cemented together by lime (calcium carbonate). This made the ground hard and difficult to excavate to install a traditional stab-fit coupling.

A Challenging Repair

Charles used a 4-in. Hymax Versa with an overall range of 4.76 to 5.67 in. to connect the two AC pipes. This had enough range to connect pipe with ODs of 5.14 and 5.57 in., respectively.

The Versa can connect and repair a wide range of water and wastewater piping types with a variety of diameters from 1.5 to 70 in. It can be stab-fit between two separate pipe or repair the pipe by wrapping it around the damaged section. The coupling offers versatility to connect to a variety of piping materials and diameters, and gives installers the flexibility to make repairs within an extensive range of circumstances. This multi-functionality, together with wide tolerance, substantially reduces inventory costs and saves shelf space, as the products suit a range of pipe diameters, eliminating the need for dedicated wrap-around and coupling products.

bolts, which were easy to tighten around the smooth ends of the pipe, and the coupling's low weight.

Wide OD range. The coupling could connect pipe of differing operating diameters since its tolerance of 1.3 in. was enough to accommodate the two pipe ODs. Other repair products that Charles used could not accommodate this difference and eventually led to leaking.

Durability. The coupling uses the same gasket that is used in the Hymax coupling, which features a patented hydraulic pressure-assisted gasket that inflates as the water pressure increases. This allows for three degrees of dynamic deflection to reduce the risk of future damage to the pipe due to ground shifts and temperature changes.

After shutting off the water supply, Charles' crew installed the coupling by wrapping it around each end of the pipes. Once put in place, the coupling's top-facing bolts were tightened and the job was completed within five minutes.

With the coupling, crews have in one product the option to couple pipe by either cutting and reconnecting pipe, or wrapping the damaged section in one easy step.

Its top-facing bolts and lightweight construction enable easy installation and handling with minimum manpower. **w&w**

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