EMBRACING AN EVOLVED MAINTENANCE STRATEGY

FINDING A PERMANENT, COST-EFFECTIVE SOLUTION THAT OFFERS FLEXIBILITY, IMPROVED SAFETY, AND MORE

A White Paper by Hydra-Stop

Water maintenance professionals are continually hampered by aging valves that do not work as intended, including some a century old or older, or a lack of valves where control is needed. As a result, pipeline repairs can cause significant system disruptions while being risky and expensive.

To offset those issues, insertion valves are increasingly being adopted as an alternative maintenance strategy. In addition to avoiding service disruptions to residents or businesses near the repair area, these products allow water utilities to circumvent the incremental costs that normally accompany a shutdown, while lowering the risk to personnel, the system itself, and the environment.

Insertion valves earned a bad reputation in their infancy because they were considered for temporary use, to only be opened a few times, and therefore were considered a product of last resort when it was critical to keep water flowing. Along the way, they were also seen as complex to install and negatively impacting pipe integrity.

OVERCOMING MISCONCEPTIONS

With advancements in design, those problems have long since been offset and are now just lingering misconceptions. The latest generation of insertion valves are permanent, cost-effective solutions that offer flexibility, improved safety, and a host of other benefits.

BEHIND THE TECHNOLOGY

Here's how insertion valves work: Installation is accomplished through a single line tap made under full line pressure into the pipe. After installation, the insertion valve

remains a permanent asset and can be operated, when needed, allowing for system control, repair, and maintenance in the same manner as a traditional gate valve.

Insertion valves can be installed before, during, or after an incident and as close together as necessary. The most innovative products can be installed inline and operated during a 100 percent full-flow event where a line is sheared or a section is blown out. Once inserted, the valve can simply be closed to isolate the point of repair.

Because installation takes place without interrupting the flow, service disruptions and the generation of rusty water are both avoided. The latter is critical in an era where customers are more sensitive than ever to the look and taste of the product.

BIG BENEFITS

Compared to traditional valve installations, valve insertion technology is safer, as maintenance personnel avoid flooded trenches and chop saws. Because the water doesn't need to be shut off, there's also no need to rush to finish a repair (which carries an elevated risk) and no disruption to fire service and sprinkler systems.

The cost savings for switching to an insertion valve maintenance approach can be substantial when added up. It starts with avoiding the incremental costs that normally accompany a shutdown, including boil orders, negative publicity, loss of treated water, and lab testing fees. Municipalities also avoid major excavation costs for a contractor, which can run in the thousands to tens of thousands of dollars, as well as the labor for traditional valves, which can take twice as many steps to install. Even for water utilities that can provide the equipment and labor in-house, the

savings come from being able to allocate those resources to other concerns.

Additionally, the insertion strategy avoids backflow, bacteria, and cross-connection issues that tend to be problematic in traditional valve installations. With insertion valves, the work is done in a contained, controlled area where water can be pre-chlorinated so that any water that gets into the system is safe. Because they eliminate almost all water loss and require smaller excavations, insertion valves are a significantly more environmentally friendly solution.

A PROPER EVALUATION

Once you've determined that insertion valves offer a solid maintenance strategy, there are several things to consider when selecting a vendor:

- Do their products meet or exceed industry design standards, and have they been tested to the four major tests that a traditional valve would be subject to?
- Do they offer training and technical support?
- Is the installation process simple?
- How versatile is the solution? Can it be installed at any increment of 360 degrees around a pipe, even upside down if necessary? Does it have a low profile to be able to work in a shallow burial?
- What is the longevity of the product? Is it built to be a permanent asset for your infrastructure?

Water service disruptions and environmental issues caused during pipe repairs can have significant negative impacts on a community. By switching from traditional to insertion valves, water utility managers can minimize those impacts while lowering the associated costs and risks.time and money compared to utilizing valve insertion.

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