Overview

• Applications
• Valve Insertion Options
• Valve Insertion Process
• Valve Insertion Project
• Lessons Learned
Water Main Valve Installation

Typical Valve Installation

- Requires the isolation of the existing water main
- Distribution of water service to residents and businesses
- Risk of contamination of existing water main.
Water Main Valve Insertion

What is a Valve Insertion?

- A method to install a new valve on an existing, in-service, pressurized and operating water main without the need to shut down the flow of water.
- A special sleeve is installed on the water main and a hot tap is performed, then a valve body is installed.
- Once the work is complete, you have a functioning gate valve.
Water Main Valve Insertion

Valve Insertion – Why?

- Existing water main cannot be isolated due to malfunctioning or missing valves.
- Existing water main cannot be isolated due to critical customer.
- Utility does not want to shut off watermain due to possible contamination of existing water main.
Valve Insertion Options

Four Manufacturers for Valve Insertions

1. Advanced Valve Technologies – EZ Valve
   - Cut slot in pipe
   - Valve “seats” on existing pipe
   - Built in isolation valve for installation purposes
Valve Insertion Options

Four Manufacturers for Valve Insertions

2. Hydra Stop – Insta Valve
   • Cut hole in top of pipe
   • Valve “seats” on existing pipe
Valve Insertion Options

Four Manufacturers for Valve Insertions

3. Romac Industries – Quik Valve
   - Cut hole in top of pipe
   - Valve “seats” on existing pipe
Valve Insertion Options

Four Manufacturers for Valve Insertions

4. Team Industrial - InsertValve
   • Remove entire section of pipe
   • Valve “seats” on new valve body
Valve Insertion Options

Insertion Valve Comparison

- AVT EZ Valve
  - Slot Removed

- Hydra Stop & Romac Insta & Quik Valve
  - Hole in Top of Pipe

- Team Industrial InsertValve
  - Entire Section of Pipe Removed
Valve Insertion Process

Step 1
- Install Sleeve

Step 2
- Pressure Test Sleeve and Check for Leaks

Step 3
- Install Isolation Valve

Step 4
- Cut Hole in Pipe
Valve Insertion Process

Step 5
• Close Isolation Valve

Step 6
• Remove Cutter / Drill

Step 7
• Install Gate Valve Assembly

Step 8
• Remove Isolation Valve
Valve Insertion Process

**Step 9**
- Secure Valve Assembly

**Step 10**
- Check Operation of Gate Valve
Valve Insertion Project
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Valve Insertion Project
Lessons Learned

Valve Insertions were successful
• Would consider using again

Planning is Critical
• Prior to the start of the job there was months of planning
• Know the size and exact diameter of the water main
• Conduct Pre-Job Meeting with Contractor(s)
• Know what is expected from all parties involved