UTILITIES

Ball Valve Replacement at City Gate Station Achieves Unprecedented Noise Reduction with No Additional Pressure Drop

Meter readings measure increased flow rates and decreased decibels at multiple facilities with Fisher™ WhisperTube.

CHALLENGE

A statewide public natural gas utility provider operating multiple sites received continuous complaints from neighbors due to the persistent noise levels.

One of the city gate stations in question was sized for a flow rate as high as 2500 MCFH but would record 100 decibels (dBA) even with a flow rate as low as 1100 MCFH. Target pressure is 900+ PSIG inlet cutting to 590 PSIG outlet.

The elevated noise levels not only disrupted the surrounding community but also posed safety risks for personnel. Plus, the noise-induced vibration could potentially cause equipment damage to the pipeline system and create process control issues.

Alternative path treatments available on the market simply muffle the sound and substantially drop the pressure without addressing damaging vibration.

SOLUTION

Staying ahead in the industry by embracing groundbreaking technology and product innovations can solve real-world problems and provide immediately quantifiable benefits.

When Novaspect announced Emerson's Fisher WhisperTube launch, the natural gas utility company got started by testing several units at a single facility to validate the equipment's effectiveness. After initial readings recorded continuously positive results at the first site, the company considered the project a success and proceeded to replace ball valves at additional sites.

OUTCOME

After years of enduring several challenges due to elevated noise and vibration levels, the utility supplier has discovered and deployed an effective solution that alleviates safety concerns and reduces complaints at its sites.

At the most recent install, the city gate station is recording 82-85 dBA at approximately 1600 MCFH with a goal to stay within 90 dBA at maximum flow rates of 2200-2500 MCFH during colder months.

The WhisperTube achieved a remarkable noise reduction of 10-15 dBA (900+ PSIG inlet/590 PSIG outlet) which is now in compliance with OSHA's 90 dBA safety standard for 8-hour exposure.

This groundbreaking solution proved to be a wise investment with long-term value, enabling unprecedented noise and vibration reduction while increasing flow rates that minimized neighbors' noise concerns and posed fewer safety risks to personnel.

VIEW THE ONLINE CASE STUDY
and connect with an expert