



For **Severe Service** Control Solutions, Turn to Fisher Technology and Innovation

## FISHER VALVE REPLACES WORLD'S MOST EXPENSIVE 'FLOWER POT'

A gas-storage facility in Texas experienced repeated noise and control issues with a number of six-inch cavern-storage valves. The valves controlled the first blast of high-pressure gas, up to 3275 psid, coming from a mile-deep, gas-storage dome carved out of salt. (They inject high-pressure water into the dome in the winter when gas prices are low, and then store the gas to fill summertime demand.)

One of the high-pressure valves, an eight-inch valve equipped with a piston actuator and trip-valve assembly, had the capacity to flow eight million standard cubic feet per hour. It was performing poorly; The salt is corrosive, and according to one technician, "the valve sounded like a freight train."

Gas-plant personnel considered retrofitting the valve, but opted to replace it with a ten-foot-tall, 2500# SST valve with "tortuous-path" noise-abatement trim. This was an expensive commitment, involving more than 40-feet of piping and an estimated \$50,000 associated with labor, transportation, and installation downtime. Plus, the valve's substantial size and weight required a poured-concrete pad for support.

Unfortunately, in spite of all that extra cost, the new valve-and-actuation package never did work properly. Once installed, it experienced the same noise and shutoff issues as its predecessor. Each failure caused the plant to shutdown, isolate the valve for repair, and add the cost of maintenance and lost-time production to its initial purchase price.

After repeated and frustrating attempts to get the valve to perform, plant managers turned to the Fisher Valve Division and its Severe Service team for help. After carefully reviewing the application, Fisher engineers determined that the plant was operating its cavern-storage valves at very low lifts, which contributed to plugging, seat erosion, and poor shutoff. This was a critical piece of information, overlooked by the previous valve supplier.

Gas-plant personnel ultimately ordered three high pressure Design EHT valves with Whisper® III noise-abatement trim to replace the two-ton behemoth and two other high-pressure valves. The Fisher® valves and their simple actuation packages have eliminated set-up and low-lift erosion while providing a 210:1 turndown and tight shutoff, even at 3275 psi inlet!

Two years later, the Fisher valves are still operating without any problems. Pleased with their performance, the plant manager said, "I'm going to put the old, two-ton valve in front of the office and use it as flower pot . . . That is all it appears it is good for."

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Severe Service