



INTRODUCTION

The T-Body High Pressure Control Valve was created to help oil and gas producers extend production time through flowback and in erosive applications. It does this by utilizing a hardened D2 steel replaceable wear plug, which better withstands erosion and can be replaced without removing the valve body from the pipeline.

This plug reduces the amount of contact high-velocity, erosive production has with the valve's body, limiting the potential for valve body damage.

In this field study, we'll show how the valve performed at a site in East Texas.

PROBLEM

An oilfield services company was providing flowback services for wells in East Texas. A well's flowback phase is known for being very volatile due to the presence of erosive material in the production fluid, and they were experiencing rapid deterioration of their valve bodies.

Flowback projects take them anywhere from a few days to a few weeks. During that time they were going through as many as 3 valve bodies per week and 3 trim sets and cages per valve.

On top of the equipment damage and replacement costs, the compromised valves were causing downtime, a loss of production, and environmental issues due to production fluid leaking out from the valves. They were very motivated to find a solution.

PRODUCTION DETAILS

- Production Type: Oil and Natural Gas Production, Flowback
- Total Volume Flow through valve: 89 BBLS Mud/Water Mix
- Solids in Fluid: High
- Corrosiveness: Minimal
- H₂S: 0 PPM
- CO₂: 2%
- Upstream Pressure: 985 PSI
- Downstream Pressure: Atmospheric Pressure
- Temperature: 76°F
- Length of Job: 3 days
- Vessel: 3-Phase Separator



SOLUTION

The Kimray team in Kilgore, TX, supplied the customer with a prototype of the T-Body High Pressure Control Valve to address the issue.

Date of Installation: September 2020

Summary of Installation: The T-Body was installed on a liquid dump line from a separator and controlled by a level controller. The skid includes redundant liquid dump lines from the separator to allow for continuous operations while repairs are made to piping and valves on one line or the other.

**"This valve is a
GAME CHANGER."**

— Owner of Flowback Company, East Texas

RESULTS

The T-Body's wear plug, made of hardened D2 steel, was much more robust than the valve bodies. The plug is threaded in and sits exactly where the previous valve bodies were being compromised.

Whereas they were going through up to 10 valves per job with the previous valves, they were able to complete two entire jobs with one T-Body High Pressure Control Valve body.

Upon inspection, even after these two jobs, the valve had minimal wear on the wear plug.