

INTRODUCTION

The Electric Actuator is designed to provide accurate, emissions-free electric control of oil and gas production process. In a recent field trial, the actuator was installed on a plunger lift operation in South Texas.

PROBLEM

A producer had originally used pneumatically operated control valves to control their plunger lift system. However, they were having to use either casing gas, air systems, and/or portable compressors to provide the pneumatic signal to the valve.

They switched to Kimray High Pressure Control with Valvcon Electric Actuators, which solved the problem associated with pneumatic controls—wet, dirty gas. However, they wanted an actuator with a quicker open/close cycle and an easier calibration process.

Also, because of production variables like volume fluctuations and compressor shut downs, the Valvcons weren't performing as well as expected because their gear boxes were unable to handle higher torque ratings.

PRODUCTION DETAILS

- Production Type: Plunger Lift
- Oil Volume: 0
- Water Volume: 15-20 bbl/d
- Gas Volume: 1.2 mmcf/d
- Solids in Fluid: Low
- Corrosiveness: Low
- H2S: N/A (CO2 present)
- Upstream Pressure: 400 psi
- Downstream Pressure: 350 psi
- Vessel Type: Wellhead

SOLUTION

We approached the producer with a request to field test a prototype of the new Kimray Electric Actuator. The producer was very eager, as we explained the benefits of a Kimray-produced electric actuator and the benefits of working directly with a Kimray product.

Date Installed: 9/8/22

Sizes Installed: 2" Electric Actuator

“Since the first day of the field trial, it’s performed well beyond our expectations.”

— Production Superintendent, South Texas



RESULTS

We inspected the actuator every two weeks during the field trial, and these were the results.

EASE OF INSTALLATION

The ease of installation, calibration, and programming were all very impressive to the field superintendent, as well as knowing that they have a product that is 100% Kimray.

DECREASED IN MAINTENANCE TIME

The actuator performed to the producer's satisfaction, handling increased production, compressor shut downs, and the grueling South Texas heat.

Whereas the Valvcons normally required maintenance or replacement every 6-9 months, the Electric Actuator was still in operation 13 months later, with the only maintenance performed being a basic factory reset one month after installation.

CUSTOMER QUOTE

“I am very happy with the performance of the Kimray electric actuator. Since the first day of the field trial, it’s performed well beyond our expectations. We are going to standardize this actuator on all of our plunger lift locations moving forward.” — Production Superintendent, South Texas