

CASE STUDY

Midstream Pipeline Company Relies on Twist-LOK™

FILTRATION TECHNOLOGY PROTECTS
SOPHISTICATED DOWNSTREAM
EQUIPMENT DURING VITAL STAGES OF
THE FILTRATION PROCESS.





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Midstream services are an integral part of transporting natural gas, crude oil, condensate, and NGL commodities across the United States. With expansive gathering, processing, fractionation, transportation and logistics, pipelines are strategically placed.

Our customer operates approximately 11,000 miles of gathering and transportation pipelines, 20 processing plants with 4.8 billion cubic feet of net processing capacity and seven fractionators with 260,000 barrels per day of net fractionation capacity.

THE CHALLENGE

A Compressor Station was experiencing high levels of iron sulfide and other oxides that were contaminating equipment downstream. Iron sulfide is the most prominent contaminant in natural-gas pipelines and compression equipment in pipeline, refinery, gathering, and storage applications. When black powder collects in gas pipelines it causes wear, reduces efficiency in compressors, clogs instrumentation and valves, and leads to flow losses.

Our challenge was to develop a filtration solution to filter the black powder before it entered the compressor station. Iron sulfide shears easily, breaking into submicron-sized particles and a competitor's elements created a bypass that allowed liquids downstream.

THE SOLUTION

Jonell Systems, a Process Technologies brand, installed Twist-LOK™ elements to filter the iron sulfide contaminants and eliminate liquids downstream. These elements fit into the existing housing with multiple media options.

The Twist-LOK™ cartridge provided a first stage 'outside-to-inside' flow direction filter element and a second stage 'inside-to-outside' flow coalesce element. Three sealing points eliminated the liquids flowing through the bypass, optimizing the media and reduced the contaminants downstream.

THE RESULT

By installing Twist-LOK™ filters, the Compressor Station reduced the impact of the iron sulfide contamination.

The success with the Twist-LOK™ elements carried over to other midstream gas plants in the same company. Improvements were realized intermediately which helped to preserve equipment downstream. The improvements resulted in millions of dollars in savings.

