Case History

New Filter Elements Increase Filter Life, Virtually Eliminate Solids Carryover

"Clark-Reliance makes the **best** gas filters I have used."

- **Jeff Boyd,** *Maintenance Supervisor, CNX*

Coal bed natural gas is produced and stored within the coal seam. Oftentimes, the gas that is extracted contains large volumes of fine particle solids. These solids cause excessive wear of compressors and foul gas processing equipment. With particle ranges of 0.2 micron to 1.8 micron, the solids can be costly to remove. The solids have a tendency to contaminate and accumulate in the lubrication oils. The solids carryover to the lubrication oil dramatically reduces compressor service life and results in excessive oil change out.

CNX Gas in Pounding Mill, Virginia operates over 90 compressors. They had been using conventional graded density elements in their filter/ separator units. These depth filters were binding off on the surface due to the large volume of solids.

Jeff Boyd, Maintenance Supervisor, CNX, contacted Clark-Reliance to explore ways to reduce filter use, protect the compressors and improve the quality of the gas entering the pipeline. After analysis of the particle size and distribution, Clark-Reliance evaluated the elements the customer was using. The graded density elements were supplied by another company, and it was estimated the <23% of the elements' dirt-holding capacity was used due to the particle distribution. The elements were caked with salts and solids. When the elements were cut open, the element cores were clean and the centers were white.

Based on the application requirements, Clark-Reliance provided Gas Sentinel elements. The Gas Sentinel elements are designed to maximize available surface area and increase overall solids holding. The Gas Sentinel also provides low differential pressure.

After installing the Clark-Reliance Gas Sentinel elements, the customer has experienced an increased service life. The Gas Sentinel element life is four to seven times the service life of conventional depth elements. Solids carryover has been virtually eliminated. The removal of troublesome solids from the natural gas has improved overall gas quality, reduced fouling of process equipment and improved lubrication oil quality.

Clark·Reliance®
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