The filtration of Coal Bed Methane (CBM) gas normally uses horizontal pressure vessels with multiple small horizontally installed elements and service and change out can be time consuming because removal of a multi-bolt vessel closure is usually required as well as removal of multiple elements. Portable compressors to power impact tools are also normally needed for service.

One installation in West Virginia was changing out elements at least every two weeks at a cost of $800 plus three hours labor for two employees. Often, vessel alarms would sound on a weekend, which mandated an eight hour paid shift (for two employees) to change out.

Sparks™ Filters, represented by Tennacor Canada, Inc. has developed a new coalescing pipeline filter product. This R100 series filter is a horizontal pipeline filter with extended surface area vertical elements and extended service life. It allows complete service to be accomplished with a single 3/4 inch adjustable wrench in less than 1-1/2 hours.

R-Series filters remove the solid particles and liquids from natural gas, vastly reducing or eliminating service to engines, turbines and other compressors, valves and meters. Superior filtration is achieved first through inertial impaction, secondly through gravitational settling, and thirdly through a nearly vertical coalescing multi-stage filter element with efficiencies of 0.03 micron and higher. Media has been independently lab tested using various oils as contaminants.

The largest natural gas supplier in the Appalachian basin recently installed Sparks™ R100 coalescing pipeline filters at five coal bed methane operations in Virginia and West Virginia. The first two units have now been in continuous, service-free operation for six months and more. One processes seven million cubic feet per day of natural gas, filtered at the manifold head of ten gas wells, to remove water, liquid mist, coal dust, and sand to protect two downstream Caterpillar engines and two compressors. R-Series filters remove the solid particles and liquids from natural gas, utilizing multi stage filtration technology, vastly reducing maintenance service and downtime to compressors, engines, turbines and other gas fired equipment.

This same pipeline filter replaced a competitive unit that had seven 4 inch x 36 inch elements with only three elements and has operated continuously for six months without needing service. This has saved 75 hours of remote field maintenance and over $20,000 in replacement filter elements.

After six months of service, the CBM producer opened the vessel and pulled the elements for inspection. Although soiled, they were quickly washed and placed back in service. The dirty sump area, filled to capacity with water, sand and coal dust showed a substantial amount of contaminant was removed prior to the filter elements, prolonging element life. The sump area was drained, the elements were reinstalled and the vessels have been placed back in service. To date, this same vessel has been in service free operation for an additional five months. All of the other R100 filters in service have similar or better results.

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