



Velcon Introduces the Mining Industry's First Full-flow Particulate and Water Contaminant Analyzer for Diesel Fuel

Colorado Springs, CO, August 22, 2012 – Water and particulate contaminants in off-spec highway fuel causes 90% of engine failures, significantly impacting equipment up-time. Contaminants become introduced to fuels throughout the transfer and delivery process, requiring proactive monitoring and control of fuel. In response to this demand, Velcon developed the diesel fuel industry's first ever full-flow contaminant analyzer, being unveiled next month at the MINExpo International 2012 in Las Vegas, Nevada.

The Velcon Contaminant Analyzer for Diesel (VCA®-D) provides accurate real-time detection of water and particulate contaminants in diesel delivery systems. The excessive water in fuel causes starting problems, increases heat buildup, reduces lubricity within a diesel engine, and can cause severe damage. Additionally, particulate matter in diesel fuel acts as a powerful abrasive on the internal surfaces of engine fuel components. Due to the ultra-fine tolerances and extremely high injection pressures of newer common rail diesel engines, particulates can cause poor injector performance or failure.

To help reduce these problems, fuel quality must meet ISO 4406 Cleanliness Standards specified by equipment manufacturers. Velcon's VCA-D is designed to constantly monitor fuel quality using a patented laser sensing device that provides significant advantages over conventional technologies currently used in the mining industry.

- As a "full-flow" analyzer, the VCA-D mounts within a fuel delivery system thereby providing a true representation of the pipeline contents. Other technologies rely on sampling only a small amount of fuel drawn from the main pipeline—a process often completed at very low flow rates, referred to as side-sampling. The VCA-D analyzes fuel at flow rates higher than 1000 gallons per minute through a 4-inch pipeline. Side-sampling has substantial difficulty in accurately representing contamination in high fuel-flow applications.
- Particle counters fail to differentiate with precision between water and solid contaminants thereby producing erroneous results. The VCA-D uses two separate sensor technologies to consistently differentiate between water and solid contaminants.
- The VCA-D analyzes the contents of flowing fuel in a pipeline approximately 600 times a second, and outputs an averaged result every two seconds in mg/l, ppm, and representative ISO 4406 codes. Commonly used particle counters typically need at least one minute to produce a normalized ISO 4406 code and parts per million (ppm).

The first VCA technology came online with a primary function to monitor high-volume military fueling systems. The VCA laser sensing device simultaneously detects solid particulate and water contaminate within the fuel. In the presence of wet and particulate contaminated fuel, the VCA can initiate the halting of the fueling operation and alert the operator, assuring that only clean-dry fuel reaches the equipment. Velcon's Vice President of Engineering, Tom Muzik says, "the VCA-D is the first instrument to offer real-time full-flow contamination monitoring and can be applied anywhere throughout the fuel transfer process. By utilizing the VCA-D, there is peace-of-mind knowing the fuel system is delivering high-quality clean-dry fuel."

The VCA-D will display at the MINExpo on September 24 – 26 in the South Hall of the Las Vegas Convention Center at Velcon's booth, 26046.

About Velcon

Velcon Filters, LLC, a portfolio company of The Sterling Group and headquartered in Colorado Springs, Colorado, is a niche manufacturer of bulk fuel filtration systems, including vessels and replacement cartridges that meet specific requirements for fluid filtration processes in a variety of domestic and international end-markets. The company's aviation division, through Velcon branded product lines, is a global leader in the filtration process for aviation fuel delivery, engineering and manufacturing products that filter, purify and remove water and containments from aviation fuel along the transport chain from the refinery to the aircraft. Velcon's process division, through its Twin Filter brand, engineers, manufactures and markets equipment and replacement cartridges for the oil, liquid and air filtration markets in Europe, Asia, North America and other international markets.

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