COMPANY PROFILE

SPECTRO, INC.

By Stephen Sisk

Based in Massachusetts, Spectro, Inc. is a technology company that offers products specifically for condition monitoring of lubrication systems and industrial machinery.

THE COMPANY'S PRIMARY FOCUS is taking lubrication and condition analysis out of the laboratory setting by providing highly portable specialized analysis tools such as spectrometers, viscometers and particulate and contamination analyzers. Armed with the information that this onsite analysis provides, maintenance personnel can detect and avoid machinery failure while making decisions that can increase efficiency, reduce maintenance costs, improve safety and extend equipment life.

"We seek to produce unique technologies across a broad base of use cases that support the predictive maintenance industries," Spectro CEO Brian J. Mitchell said. "Oil and lubrication analysis has traditionally been performed in central testing laboratory settings and we build a full suite of analytical tools for these service providers. The need for real time actionable information, however, has resulted in the development or portable, easy to use tools that enable customers to perform the analytical process by themselves directly at the asset."

Mitchell likens lubricant and fluids analysis to a doctor taking blood samples from a patient. In order to know more about a patient's condition and subsequently forming a diagnosis, the physician will analyze the patient's blood and other fluids for telltale signs of poor health. This simple analogy translates directly to the life and health of machinery and components.

"In mechanical systems, the analysis of the lubricating oils and fluids for contamination, chemical degradation and wear metals content provides a plant or maintenance manager valuable insight as to the condition of that system and how best to treat it (i.e. change or top off the lubricant, break down and re-build the system, etc.)," Mitchell said. "In essence, Spectro, manufacturers the 'blood' analyzers for large mechanical systems deployed in the military, power, mining, marine, wind and other high value asset industries."

This system is aimed directly at industries where a large amount of maintenance is required in the operation of machinery — namely construction, mining, transportation, and power generation.

Spectro's real-time solution allows machine operators to monitor and plan for operations and circumstances more efficiently, leading to increased reliability and a decrease in downtime. Often, operators have to collect lubricant samples and send them out to a laboratory for detailed analysis. This process eats away at schedules and efficiency, ultimately costing operators money.

The need for these types of product is evident in the wind energy industry, where maintenance is an ongoing process.

"A huge investment goes into establishing wind farms and the power generators need to ensure maximum up time and efficiency from their substantial investment in theses power generating systems," Mitchell said. "In addition, the volume and remote nature of these assets makes sampling at every turbine and sending them off to remote labs a challenging proposition at best. The ability to test and determine appropriate action immediately at the asset is of great importance. In addition to the necessary hardware to support these reliability and maintenance personnel in their efforts, Spectro also offers a broad range of software platforms that enable more efficient data and asset management."

One such product is the SpectroTrack information management system, which works in harmony with the company's monitoring and analysis equipment to, according to the company, "provide a comprehensive, historical view of fluid conditions for a single piece of equipment or an entire fleet."

This software, which recently celebrated its second version release with numerous updates, is the heart of Spectro's predictive maintenance system. The application provides, real-time, consolidated, comprehensive data and monitoring of a customer's equipment, allowing maintenance personnel to be quickly and efficiently apprised of an asset's conditions.

The browser-based software is easily accessible by management, maintenance personnel and laboratory technicians anywhere at any time on any device with a Web browser.

An additional segment of Spectro's clientele is the military and defense industry, which require the utmost reliability from its fleet of aircraft, armored and transport vehicles. Considering the high monetary investment that goes into these vehicles, timely, accurate information about equipment and the ability to predict and prevent failure is essential.

"The military has been a long standing partner to Spectro for many years and has helped us define a road map for technologies that are important to the military and commercial markets," Mitchell said. "We are today and have been for the last 15 years the sole supplier of specific analytical instrumentation into the US military market place, and we currently support the global NATO military forces as well."