

Technology Update: Oil Analysis Showcase

Written by Amanda Martyka, Assistant Editor
Friday, 01 February 2008 00:00



What's in your oil? Contaminants unseen by the human eye can significantly affect a plant's overall output. Thus, oil analysis is a crucial component to oil and machinery health. Regular oil analysis can reduce downtime and extend equipment life—helping save both money and resources. Sampling products for in-house analysis, as well as outside laboratory services and training, are among the offerings of the companies showcased on the following pages.

Emerson Process Management

Emerson Process Management offers a number of CSI oil analysis options to help customers achieve an up to 500% return on their investment in this technology. Emerson offers an on site minilab for industrial oil analysis. Accurate measurement of wear, contamination and chemistry can be accomplished in less than seven minutes using the CSI 5200 Machinery Health® Analyzer. Oilview® software modules are fully integrated with each other and with other technologies through AMS® Suite: Machinery Health Manager software. These modules are also effective as standalone programs. The CSI Oil Lab delivers easy-to-interpret oil analysis reports in both PDF format and as an electronic file, which is easily imported into AMS Machinery Manager.

Emerson Process Management Knoxville, TN

Analysts, Inc.

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Established in 1960, Analysts, Inc. has five full-service laboratories, located in the continental United States, all of which are certified under ISO 9002. All data evaluators are Certified Lubrication Specialists (CLS) or Oil Monitoring Analysts (OMA). Data on the condition of equipment, contamination and physical properties of lubricants are generated through analysis procedures. Viscosity, acid number (AN) and water content are customarily measured. Tests for fuel dilution, Base Number (BN), LEM® soot measurement, oxidation and nitration may also be recommended and performed on a regular basis. Depending on the customer's program requirements and system applications, Analysts also can perform testing for particle count analysis, Ferrography, dissolved gas analysis, RPVOT testing and other analytical procedures.

Analysts, Inc. Torrance, California

Trico Corporation

Trico offers the latest sampling supplies and accessories—including sample ports and collection devices—which are designed to extract system and component specific samples that are both representative and repeatable from the best diagnostic locations in the most effective ways possible. Access to systems is done through the use of a mating sample port adapter. The sample port adapter screws onto the sample port. Oil samples can then be drawn from the system and placed into a clean sampling bottle for analysis. To guard against contaminating the sample and for superior leak protection, Trico sampling ports all feature a check valve and viton o-ring seal cap. Trico sample ports are available in several types and sizes to match the varying requirements of manufacturers.

Trico Corporation Pewaukee, WI

Predict

For more than 20 years, Predict has been a provider of wear particle analysis, training and hardware to the maintenance industry. Predict offers a full line of lubricant, grease, fuel, coolant and transformer fluid analysis tests. Used oil analysis is a package of specific lubricant tests, which provide analytical results regarding the quality of a lubricant for an application. Combined with wear particle analysis, an analysis program can determine the usability and provide a wear assessment of equipment. Predict's laboratory is ISO 9001:2000 certified and employs Certified Lubricant Specialists, Machine Lubricant Analysts and Chemists.

Predict Cleveland, OH

Bently Tribology

Services Bently Tribology Services (BTS) is an independent laboratory that tests lubricants, fuels (petroleum and bio-based), synthetic machine fluids and coolants. The company's laboratories are certified to ISO 9001 and compliant with ISO/IEC Guide 25 and 10 CFR 50 App. B (Nuclear Power Quality Assurance) standards. Testing packages are designed with several factors in mind. Every sample receives a set of required tests that may vary dependent on the equipment application. In addition to the required tests, a set of advisable tests are available to perform on any sample deemed to be abnormal. This second set of tests provides two functions: It serves as corroborators to the initial screen tests and it serves as root cause analysis indicators. BTS also can also test for machinery wear and/or contamination problems via its DoublecheckSM technique.

Bently Tribology Services Peabody, MA

Predictive Service

Predictive Service offers a fully integrated approach to all predictive maintenance technologies including oil analysis services. Condition monitoring data—including oil sampling—is collected at regular intervals, providing analysis and detailed recommended actions. PSC's trained technicians can retrieve the samples or train customer's staff on collection techniques. The samples are subjected to analysis procedures, which include viscosity, water, elemental concentration, oxidation, nitrates, sulfites, fuel, glycol, additive degradation, acid and base level trends and particle counting, among others. All information is accessed through its Web-based software, ViewPoint®. The Viewpoint software places vibration, infrared, ultrasound, motor circuit and oil analysis information into one integrated system. Customer's can manage the entire process from problem identification, repair actions and the automated calculation of cost benefit.

Predictive Service Cleveland, OH

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A2 Technologies

A2 Technologies was founded on a simple premise: to bring FTIR Spectroscopy out of the lab and put it into the field, closer to the sample where it belongs. For forty years FTIR has been recognized as a powerful analytical tool. It has been, however, a tool of traditional laboratories due to its size, cost and complexity of the instruments. A2 is broadening the scope and use of FTIR and bringing it to applications and markets not previously served. A2's PAL™ FTIR Spectrometer is capable of measuring water in oil at levels that are critical to the reliable operation of turbine equipment.

A2 Technologies Danbury, CT

Louis C. Eitzen Company, Inc.

Aiding in used-oil analysis programs, Louis C. Eitzen Company's VISGAGE is a pocket-size viscosity comparator, which quickly and conveniently measures mineral oil viscosity on location. The VISGAGE will test any lubricating oil from light spindle to heavy gear oils and is a benefit for companies using large quantities of oils. This instrument determines oil change intervals, checks for fuel or coolant dilution and may prevent serious and expensive equipment problems if used periodically. No stopwatches or thermometers are required. The VISGAGE can be used to develop a predictive and preventive maintenance plan by periodic testing of oils.

Louis C. Eitzen Company, Inc. Glenwood Springs, CO

PdMA Corporation

PdMA's full service, independent lubricant analysis laboratory offers a wide range of tests on oil, grease, coolant, fuel and transformer oil. The company's laboratory is ISO 9001 Certified, and operates under the 10 CFR50 Appendix B QA Program. They are also licensed to receive radioactive oil samples. All reports have accurate data interpretations and recommended actions coupled with a quick turnaround time. Reports can be generated in various electronic formats.

PdMA Corporation

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