



fluidVFOX

The clever
online fluid analyser

Maintenance

Maintenance and repair are large cost factors in industry. Almost a quarter of all production costs are caused by downtime and service times and a large part of which is attributable to unplanned shutdowns. In condition-based or predictive maintenance, these costs are significantly reduced by systematically monitoring and analyzing the operating conditions of the machine. Oil analysis is considered one of the most effective approaches for early detection of potential failure cases, thus enabling reliable predictive maintenance.

Oil Condition Monitoring

The monitoring of lubricating and hydraulic oils enables special insights into the plant. These fluids contact machine parts that otherwise are hard to access during normal operation and therefore carry valuable information. Traditional oil laboratories provide an immense wealth of accurate parameters obtained under controlled conditions using regularly calibrated instruments. In comparison, online sensors face much harsher conditions and higher demands on reliability but allow for constant monitoring of the plant, a prerequisite for detecting anomalies without intervening in a running process.

The fluidFOX from Micro Resonant

The fluidFOX bridges the gap between the oil lab and online sensors. It is a fully autonomous multi-parameter condition monitoring system that is permanently vigilant and monitors a large number of physical fluid parameters which, taken together, show the state of aging of lubricating oil with high confidence. It is designed for outstanding reliability, accuracy and sensitivity, the key requirements for effective predictive maintenance based on online oil condition monitoring.



Homepage

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key features of the measurement system



Precise Viscosity Sensing

The viscosity is the most important constructive parameter of an oil; the load-bearing capacity of the lubricating film depends on it. The viscosity measurement of the fluidFOX, therefore, meets the highest demands and is competitive to laboratory equipment.

Accurate Temperature Control

Many monitored parameters, particularly the viscosity, show strong temperature dependencies. Active temperature control of the measuring cell ensures, that the measured values are always determined at the correct temperature.

Multi-Parameter Sensing

The fluidFOX determines several parameters of the oil simultaneously. In addition to viscosity and density, also the electrical properties such as permittivity and conductivity, as well as oil moisture are measured.

Monitoring of Dependencies

With the active temperature control implemented in the fluidFOX, the temperature curves of the individual parameters are obtained by cycling the measuring temperature. For high-pressure applications, it is even possible to evaluate pressure-dependent characteristics, which include for instance the compressibility and the viscosity-pressure coefficient.

Long-term Monitoring & Validation

Due to the large number of measured variables, the system can carry out independent consistency checks of the measurement results. This increases the reliability of the data and increases its usefulness.

The fluidFOX, therefore, is much more than just an oil condition sensor. It is a small-format laboratory for reliable, permanent operation. This unique and robust measuring system offers many options to obtain precise information about the medium oil and reacts quickly and precisely.

