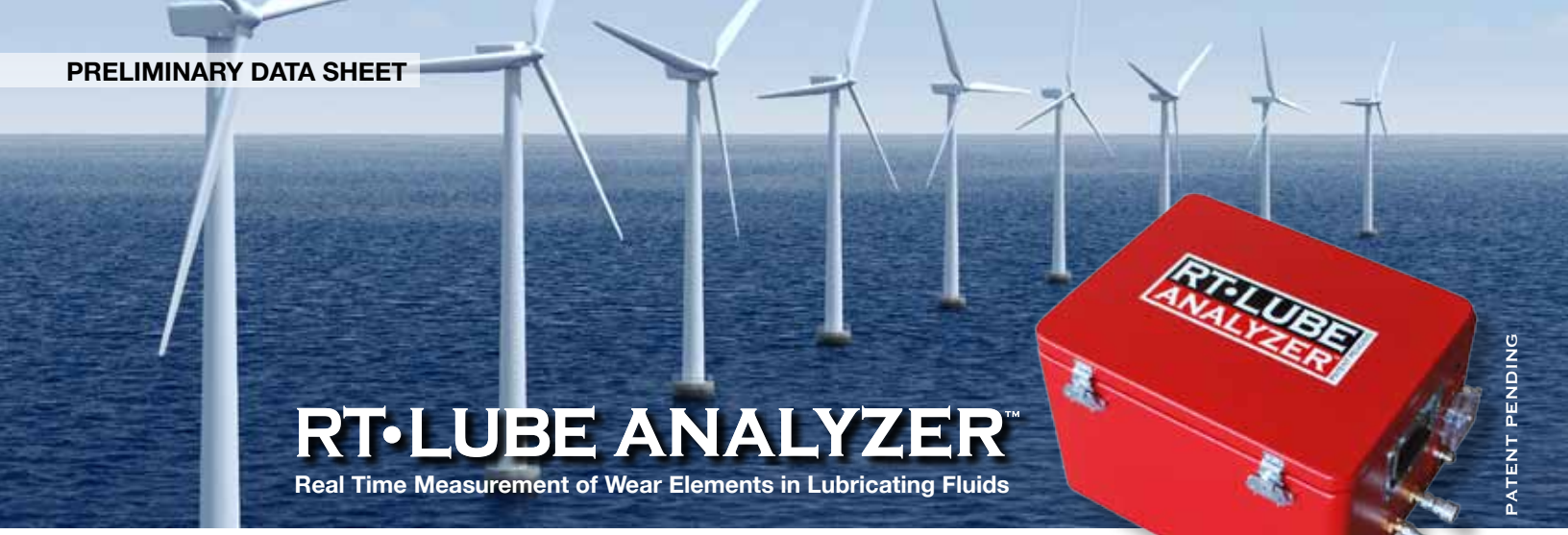
PRELIMINARY DATA SHEET

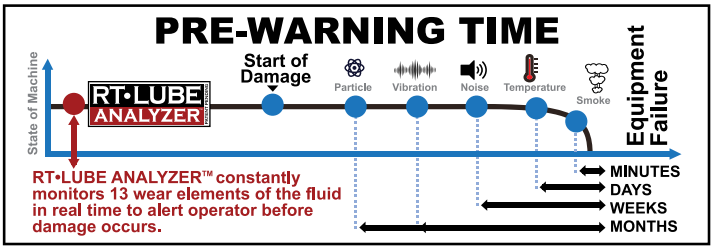


RT•LUBE ANALYZER™

Real Time Measurement of Wear Elements in Lubricating Fluids

The high cost of manually sampling machine lubricants is over.

Now it is possible to monitor lubricant wear in real time before equipment damages occur. Eradicate unexpected and excessive maintenance and downtime expense.



Game Changer Technology

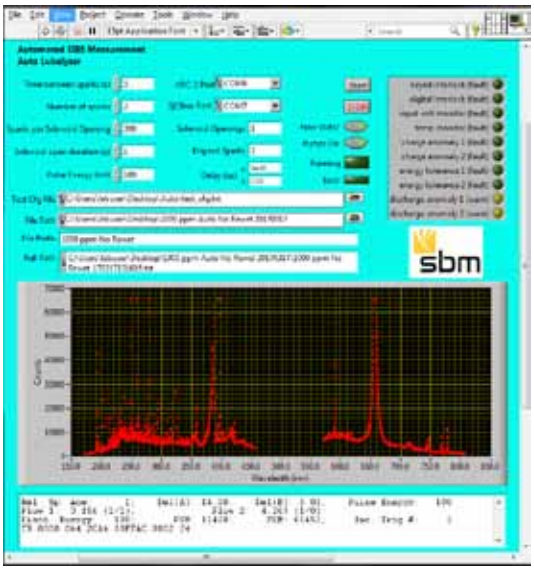
Most on-line systems report after a failure condition is in progress or damage has occurred.

RT•Lube Analyzer™ automatically and continuously samples the lubricant in real time and spectrally provides measurement of 13 wear elements in the fluid.

Prognosis and predictive analytics alerts the operator well ahead of any machine damage, avoid costly downtime and loss of revenue.

Cost Effective Analytical Measurements Installed

RT•Lube Analyzer™ is a miniaturized version of an expensive lab analytical device. A patented microfluidic cell accepts a continuous lubricant flow from the gearbox or bearings and is ablated in nanoseconds. As the oil cools, photons are released and are captured in our patented silicon based arrayed waveguide spectrometer. The spectrometer frequency range and wear elements detected can be customized for each end users.



MASTInc
MICROMEM APPLIED SENSOR TECHNOLOGIES, INC.
121 Richmond St. W., Suite 304, Toronto, ON M5H 2K1 CA
1-877-388-8930 • www.mastinc.com

To discuss how MASTInc. can help reduce unscheduled maintenance costs and extend the life of your equipment, please contact Joseph Fuda, President and CEO at :

Jfuda@micromeminc.com 416-364-6513 or 1-877-388-8930

RT•LUBE ANALYZER™

Real Time Measurement of Wear Elements in Lubricating Fluids

Billions of dollars are spent annually replacing machinery components that are damaged due to the inability of lubricants to perform the required task. Knowing how to interpret changing lubricant properties will increase uptime and extend the life of your mission critical capital equipment.

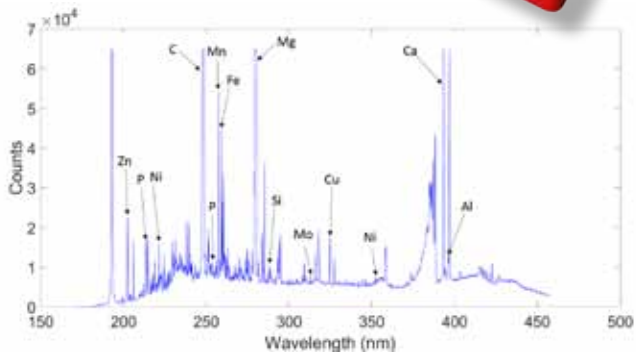
Industrial Analytics using IIoT Systems

In an industrial setting, a major cause for unplanned downtime and expense is machine outage. Critical problems are often missed due to insufficient diagnostics. This translates to billions of dollars lost in unplanned failures of equipment and unnecessary maintenance. Both the over- and under-maintenance of assets contribute to higher operating expense.

Maintenance needs to shift to prognostics that will only schedule maintenance based on component lifetime characteristics and its usage, rather than solely on schedule.

RT•Lube Analyzer™ utilizes real time machine condition monitoring or predictive maintenance, to asses a machine's condition by gathering data on key machine-health indicators to determine when to schedule maintenance.

Advance to predictive maintenance where analytics are applied to sensor and monitor machine operational data to forecast the likelihood of certain failures in a given period, before equipment failures occur.



Preliminary Specifications

Ambient Temperature: -4°F to 149°F (-20°C to 65°C)

Output: CSV Data

Communications: Ethernet 10/100/1000Mbps USB 2.0

Detection: Element LOD (ppm)

Al	50	**Mn**	5	**P**	10
Cu	10	**Mo**	10	**Si**	50
Fe	50	**Na**	25	**Zn**	5
K	25	**Ni**	10		

Oil Connection: 1/4 ISOA Quick Connect, Self-Sealing Hydraulic Fitting

Fluid Compatibility: Petroleum, Synthetic Oils and water/oil

Fluid Temperature: 65°F to 149°F (18°C to 65°C)

Max Fluid Pressure: 90 psi

Power Supply: 85-265Vac 50/60Hz

Weight: 80lbs

Dimensions: Initial Release 15" x 18.25" x 12.25"

MEMS Version: 2.7" x 3.75" x 1.1"

Specifications are subject to change without prior notification

MASTInc
MICROMEM APPLIED SENSOR TECHNOLOGIES, INC.

121 Richmond St. W., Suite 304, Toronto, ON M5H 2K1 CA
1-877-388-8930 • www.mastinc.com

To discuss how MASTInc. can help reduce unscheduled maintenance costs and extend the life of your equipment, please contact Joseph Fuda, President and CEO at:

jfuda@micromeminc.com 416-364-6513 or 1-877-388-8930