

# The Increasing Role of **Predictive Maintenance Technologies**

Technology in manufacturing continues to evolve with conditionbased monitoring at the forefront for a data-driven approach to maintenance. Predictive maintenance technologies include:

#### **Sensors**

Sensors enable real-time condition-based monitoring by constantly tracking equipment performance signifiers such as vibration, temperature, and more. By being proactive, you can detect even small fluctuations and variations in performance and address the issue before it causes unplanned downtime.





## Oil Analysis

By monitoring, reporting and correcting oil problems efficiently, years of reliability can be added to your manufacturing assets. The most common applications include spindle lubricants, gearbox oils and hydraulic fluids.

#### **Vibration Analysis**

Vibration analysis is used to measure abnormal levels of vibration in rotating equipment. When key components start to wear — tolerances are harder to maintain, there's more scrap and yields decrease.





## **Infrared Analysis**

Temperature changes are an early sign of problems developing inside production equipment.

Implementing an infrared analysis program allows for a proactive approach to maintenance.

#### **Ultrasonic Leak Detection**

Gas leaks from a pressurized system whistle at a pitch too high for humans to hear. By utilizing ultrasonic leak detection equipment, you are able to detect potential problems before they cause a failure.



### Benefits of Predictive Maintenance

- Proactive vs. Reactive
- Eliminates Unplanned Downtime
- Improves Production Output
- Increases Labor Efficiency
- Fewer Equipment Failures
- Extends Equipment Lifespan
- Improves Parts Management
- Measurable ROI