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Battelle Number(s):

12220-E; 12092-B; 12241-E; 12898-B; 13093-B; 13610-E

Patent(s) Issued

Available for licensing in all fields

Available Technologies

In-Line Fluid Analysis Technology

SUMMARY

Consider the possibility of having crucial information about the condition of your machinery at your fingertips. Imagine real-time, analysis data that tells you the condition of oils or other lubricants and detects contamination and metal wear content. PNNL's in-line fluid analysis technology makes such prognostics a reality.

Our fluid analysis technology allows the machine operator to continuously analyze fluid levels either through on-demand information gathering or through automatic notification if lubricating or hydraulic oil parameters fall outside predetermined limits. It can be applied to a prognostic system that mounts directly on a host machine and provides near real-time analysis information of the same type available from commercial laboratories.

Combining this technology with the latest machine prognostics tools such as the REDI-Pro system gives the operator information on potential faults well in advance of an actual failure. This advance notice can help avoid costly failures and machine downtimes through proactive maintenance and early ordering of replacement parts.

ADVANTAGES

- * Around-the-clock analysis
- * Testing on location, on demand
- * Automatic notification of current conditions
- * Saves time and money in maintenance costs and repairs
- * Integrated into a condition-based maintenance/repair program
- * Advanced software provides reports, trending, prognostics
- * Modular design for adaptability

STATE OF DEVELOPMENT & AVAILABILITY

PNNL's In-line Fluid Analysis technology provides real-time data such as:

- * Lube oil condition, including: viscosity, oxidation, total acid/base numbers, and additives
- * Lube oil contaminants, such as: fuel, coolant, particles, and water
- * Lube oil wear/debris that will affect the engine performance and wear: ferrous, non-ferrous metals, wear metals/elemental analysis, particle characteristics, and fuel quality



Patents & Intellectual Property

- » IP Summaries
- » Patent #: 6,561,010
- » Patent #: 6,662,091
- » Patent #: 6,668,039
- » Patent #: 6,810,718
- » Patent #: 6,859,517
- » Patent #: 6,941,202
- » Au Patent #: 779313

Technology Portfolio(s)

- » Electronics
- » Combination Sensors

Potential Industry Applications

- » Aerospace & Defense
- » Agriculture & Mining
- » Automotive & Transportation
- » Computers & Electronics
- » Manufacturing & Warehousing
- » Oil & Gas

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