TRIDENT™ FQMS

Fluid Quality Monitoring System

Multi-sensor systems for advanced fluid quality analysis

PRODUCT OVERVIEW

Poseidon Systems offers fluid quality monitoring systems that accommodate a suite of sensors for assessing the condition of a lubricant through real-time, online measurements. Several sensor options are available to allow for customization to your application. These include the following:

- Oil Quality Sensor
- Water-in-Oil Sensor
- Wear Debris Monitor
- Online Viscometer

The sensors are plumbed and wired into a 12”x12”x 6” NEMA 4 enclosure with external interfaces provided for fluid connections, power, and communications. An optional data acquisition system (Trident AP2200) handles all sensor data acquisition, storage, and relaying. Data can be directed to the Poseidon Live online data portal for trending, analysis, and automated alarm notifications or to a 3rd party historian.

BENEFITS

- Enable condition based fluid maintenance
- Identify equipment faults prior to failure
- Maximize equipment life
- Minimize reliance on offline analysis
- Optimize fluid drain intervals

KEY FEATURES

- Complete online fluid monitoring solution
- Easy-to-install, self-contained kit
- Optional data logger & network interface
- Customizable to user application
- In-depth fluid & system health insight

OIL CONDITION SENSOR

An in-line sensor that provides real-time monitoring of oil quality via measurements and interpretation of the electrochemical properties of the fluid. The device allows for continuous insight into fluid condition, alerting operators to an array of fluid degradations including soot contamination, water contamination, and additive depletion. An integrated water-in-oil sensor provides direct measurement of dissolved water content in the fluid.

WEAR DEBRIS MONITOR

An online fluid sensing technology for the detection of metallic wear debris and particulates in oil. The device will detect, categorize (ferrous vs. non-ferrous), and size metals within a machinery lubrication system. Poseidon's wear debris devices use best-in-class inductive coil technology providing sub-50µm detection sensitivity. Trending wear debris concentration levels provides early warning of system damage to allow for proactive maintenance

ONLINE VISCOMETER

An online viscometer that can measure and report the viscosity and density of an in-service fluid. By monitoring viscosity trends, this device can provide early warning of fluid degradation and contaminations such as fuel dilution. This device reports the dynamic viscosity of the working fluid in Centipoise as well as the density in Grams per Cubic Centimeter.

ADDITONAL SENSOR MODULES

The system can support a range of 3rd party sensors to meet specific customer requirements. RS485, RS232, CANBUS and other sensor inputs are supported, though custom driver development may be required.

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