

Filtration Equipment Manufacturer Improves Performance with Reliable Level Switch

RESULTS

- Prevented overfill conditions
- Protected pump from low level dry run conditions
- Minimized maintenance
- Increased equipment availability

APPLICATION

High and low-level detection of coolant/lubricant oil in feeder tank.

CUSTOMER

Original Equipment Manufacturer (OEM) in Europe

CHALLENGE

The filtration equipment requires reliable point level measurement for the coolant / lubricant reservoir as seen in the photographs. These machines store coolant / lubricant oils at high pressures in order to serve other equipment needs for coolant. A typical example is in high speed grinding machines that manufacture titanium turbine blades used in gas turbine engines.

As the oil is circulated within the system, it collects contaminants such as metal swarf which must be filtered out or it may cause greater damage to the equipment. With these primary filtration tanks, the point level instrumentation must detect high and low reservoir levels in order to prevent both tank overfill and low level dry running conditions. The larger versions of these machines will use up to four point level devices while smaller filtration units may only have a single switch for pump protection on low levels.

SOLUTION

The Rosemount 2110 Compact Vibrating Fork Liquid Level Switches were used to turn the pump on or off when high or low level alarms occur, providing both protection from overfill and prevention of pump cavitation. Because the 2110 can be used in high pressure applications of up to 1450 psi (100 bar), the switches are well suited for this type of application. The 2110 is easy to install and requires no calibration or maintenance. Using the 2110 switches allowed the equipment to be automated, maximizing its availability.



The Rosemount 2110 Compact Vibrating Fork Liquid Level Switch was chosen for its reliability in detecting high and low level conditions in OEM equipment.



Two 2110 compact switches installed in a large filtration unit.

The Rosemount 2110 is available with either direct load switching or PNP output. The direct load version controls the on/off function of a pump or alarm. The PNP output version is used to integrate the switch into a PLC. Both versions can be used for these applications.

RESOURCES

Rosemount 2110

<http://www.emersonprocess.com/rosemount/products/level/m2110.html>

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