

Rosemount 2110 in Coolant / Lubricating Oils (Filtration)

RESULTS

- Reliable high and low-level control
- Unaffected by high pressures
- Easy to install, no calibration was required



Figure 1: The Rosemount 2110 vibrating fork level switches reliably measure high and low levels to prevent low level dry running and detect overflow.

APPLICATION

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

CUSTOMER

Original Equipment Manufacturer (OEM) manufactures machines that provide lubricating or coolant oils at high pressure.

CHALLENGE

An instrument is required to measure the point level of oil coolant. The machines in figures 2 and 3 are used second to a much larger plant and serve to store lubricating or coolant oils at high pressure. A typical example of where they are used is in high speed grinding machines manufacturing titanium turbine blades for gas turbine engines.

As the oil is circulated within the system, it picks up contaminants such as metal swarf which must then be filtered out. Within these primary filtration tanks, the point level instrumentation must measure high and low-levels to prevent both overflow and low-level dry running.

The larger versions of these machines will use up to four point level measurements while the smaller filtration units will usually have a single switch for pump protection.



Figure 2: The Compact Vibrating Fork Level Switch used in a smaller filtration unit.

SOLUTION

The Rosemount 2110 is used for high and low alarms and pump control. The 2110 manages pressures up to 1450 psi (100 bar) which means it is unaffected by the high pressures involved in this application. The 2110 is simple to install and requires no calibration.

The 2110 is available with either direct load switching or PNP output. The direct load switching version operates on two wire 24-264V ac or dc and can be used to directly control the pump and alarms. The other version has a PNP output for direct interface with a PLC. Both can be used in this application.



Figure 3: Two Compact Vibrating Fork Level Switches used in a larger filtration unit.

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