

Instrument Air

Models 3050-OLV, 2850

Application

Moisture is measured in instrument air to ensure that the air is properly dried.

Problem

Instrument air is used throughout a facility to protect delicate electronics, instruments, and to operate key process actuators. Many instruments also use instrument air to operate various pneumatic operators they might possess. Too frequently, there is excessive moisture present in the instrument air due to a failure of the air drying system. The excessive moisture can promote corrosion of the very electronics the instrument air is supposed to protect. This damage can lead to instrument inaccuracy and eventual equipment failure. Wet air can also result in the freezing and failure of air-operated process valves.

A moisture analyzer provides an invaluable safeguard

against damage to expensive and critical process instruments and control electronics.

Equipment

While any quartz-crystal based moisture analyzer is an excellent choice for this application, the Models 3050-OLV and 2850 fit the needs of almost every instrument air application.

Procedure

The instrument air source is connected to the analyzer's inlet. If the instrument air pressure exceeds the maximum inlet pressure of the analyzer, an unheated pressure reducer is used to regulate down the pressure. Since the sample is simply air, the analyzers are vented to atmosphere.

How Previously Handled

Most instrument air systems have either an aluminum oxide sensor or no moisture measurement at all. While

aluminum oxide sensors are a tremendous improvement over nothing at all, their inherent time-based loss of sensitivity and inaccuracy limit their usefulness.

Results

Continuous moisture monitoring and control with a 3050-OLV or 2850 will greatly reduce the possibility of poor quality instrument air going undetected. Both analyzers possess on-line verification ability that both ensures measurement confidence and eliminates the need for, and cost of, routine factory recalibrations. Quite often, the entire cost of the analyzer can be justified by examining the equipment damage and productivity loss risked from a single undetected wet air event.

Specifications

Concentration Range:
Less than 1000 ppmv


PROCESS INSTRUMENTS

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