1278 STEAM AND ATTEMPERATOR VALVE LEAK DETECTION SYSTEM

One Source for Asset Protection Solutions

Online Critical Valve Monitoring for Power Plants

Overview

Undetected attemperator valve leaks are an industry-wide issue that affect unit reliability and result in avoidable maintenance costs. MISTRAS' 1278 is a 2-Wire standalone device that performs online through-valve leak monitoring. Specializing in leak detection, it keeps you remotely informed when your valve is not performing as intended.

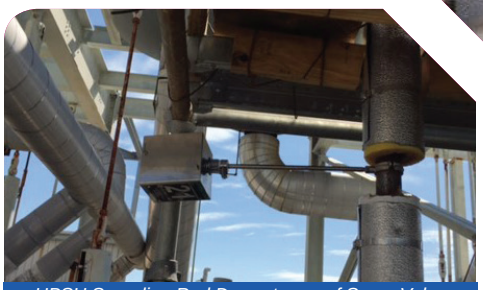
- Online, real-time valve leak detection
- Essential for verifying correct valve operation in critical plant systems
- Direct connection to plant DCS via loop powered 4-20ma (i.e. no separate power)
- Can be used in a variety of frequency ranges
- Work with galvanic or zener barriers

Based on over two decades of valve-monitoring experience, the 1278 through-valve monitoring system uses non-intrusive acoustics to identify, monitor, and alarm acoustic changes occurring due to valve leak-through. This equipment and the use of acoustic signals also allows for determining improper spray flow and even mechanical issues with a valve itself.

The 1278 can be used on SH and RH spray valves. Variations in noise trends are detected by the device and lead to the detection of valve leak-thru.

From main steam valves to boiler control valves, the 1278 is designed to monitor valve leak-through, preventing the resultant damage to high energy piping (HEP) or tubing across the power industry. When valves do not close properly, or leak for other reasons, the operator knows immediately. For maximum accuracy, we recommend instrumentation in 3 locations around a valve: upstream of the valve, at the valve, and downstream.

The system works with any loop-powered 24 volt 4-20ma system (power is derived from the current loop) and is supplied self-contained with a direct connection to the plant DCS.



HPSH Sounding Rod Downstream of Spray Valve

Reheater Spray Valve

Sounding Rod and Clamp Arrangement

STEAM AND ATTEMPERATOR VALVE LEAK DETECTION

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The system can be used to monitor:

- Attemperator/Desuperheater Spray Control Valves
- Main Steam Valves (HRSG)
- Boiler Feed Pump Recirc Valves (HRSG & Coal)
- Boiler Control Valves/Boiler Startup Valves BT, BTB, BE (Coal)
- System Clean Up Valves (Coal)

System Advantages

- Instant response when a valve sticks or leaks through, preventing losses that occur between manual surveys. Often, a repeat valve operation or adjustment of the limits is all that is needed to re-seat a valve properly. This provides an essential safety function.
- Reduced need for personnel to conduct manual surveys on critical valves.
- Critical information on isolation & bypass system effectiveness.

"Speak to one of our experts today about a critical valve-leak monitoring solution. Call 1-833-MISTRAS (647-8727) or visit www.mistrasgroup.com"

UNIT SPECIFICATIONS

Size	150 mm L x 65 mm W x 35mm H
Weight	0.35 kg
Power Consumption	<4-20ma from loop power
Noise	<3.5 uV rms RTI w/sensor
Operating Temp	(T4) -40° to +70° C (T6) -40° to +40° C
Storage Temperature	-40° to + 85° C
Power Requirements	Loop power, 4-20ma, 24 volt
4-20mA Output Drive	Corresponds to 0 - 100 dB AE 1-5 volts with 250 ohm termination
Dynamic Range	>87 dBAE -0.4 - 3240 litres/min gas for 3" (76.2mm) ball valve at 10 bar D.P.)
Sensor	23 mm diameter x 20.5 mm high, sealed, integral 2m cable
Extreme Temperatures	Waveguide (WG-SCR, WG-WLD) allows operation from cryogenic up to >650° C

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#200A-19100-01