

TEMCO Furnace Water Leak Detection System Fact Sheet

Gas Component

Measured Gas	Water Vapour
Measurement Rang	0 – 50%
Detection Method	Tuneable Diode Laser Absorption Spectrometer

Host Gas

	Manganese Ferroalloy (FeMn, SiMn) Offgas
Temperature Range	100°C – 1200°C
Detection Temperature Range	100°C – 600°C
Dust Loading	In Excess of 80 g/Nm ³
Pressure Range	-25kPa - +25kPa
Gas Components	40-60% CO, 10-30% CO ₂ , 0 – 5% O ₂ , 0 – 20% H ₂

Detection System

Instrumentation	Siemens LDS6 or ABB LS25
Measurement Range	0 – 50% H ₂ O Concentration
Accuracy	1-2% of Range
Sensitivity	1-2%
Sample Time	1 – 10s
Compensation	Temperature via K thermocouple & transmitter Pressure via gauge pressure transmitter
Path Length	Depends on installation TEMCO installations 150mm – 350mm
Purge System	Low Flow Purge – N ₂ 1-2L/min High Pressure Purge – N ₂ @ 120min intervals (650kPa)
Mounting Alignment	DN65 316SS, Horizontal alignment
Mounting Location	For Electric SAF Horizontal in wet scrubber offtake or Horizontal in wet scrubber preconditioner Horizontal in main gas duct
Cleaning Interval	Min 8 Weeks
SPQC Technique	Shewart run chart, EWMA, CUMSUM
SPQC Detection Limit	3-10% Water concentration (depending on size of leak)

Instrument Suppliers

Instrument	Siemens LDS6
Contact	Local Siemens Analytical Supplier
Contact (Australia)	Mr Brendan Welsh Sensors & Communication Siemens Ltd. Industrial Automation & Control Phone: +61 (0)3 9721-2711 E-mail: brendan.welsh@siemens.com

Instrument	ABB LS25
Contact	Local ABB Reseller
Contact (Australia)	Mr Frank Jacono POGC Sensor Technology Pty Ltd Ph: +61 2 9432 7300 Mobile: +61 408 676535 E-mail: fjacono@halmel.com.au

System Integrator

Contact (Australia)	Mr Frank Jacono POGC Sensor Technology Pty Ltd Ph: +61 2 9432 7300 Mobile: +61 408 676535 E-mail: fjacono@halmel.com.au
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BHPBilliton Contact

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