

Gas type	Purpose	Application	Features	Solution
O2	Improving combustion	Measure O2 concentration in high-temperature exhaust gases from furnaces, heating furnaces, incinerators, and melting furnaces	Can measure in high temperature environments of 1500°C and dusty environments.	Reduce CO and CO2 through combustion
	Quality management	Measure low O2 concentrations in process gases in the production line, including impurities and by-product gases	Can be measured indirectly without interference from interfering substances	Manage impurity gases during measurement
	Explosion prevention	Monitor O2 concentration to prevent fire and explosion	Can measure low concentrations (ppm)	Management to prevent fire and explosion
CO	Improving combustion	Measure the amount of CO in high temperature gas at the outlet of furnaces, heaters, incinerators, furnaces, etc.	Can measure in high temperature environments of 1500°C and dusty environments.	Reduce CO and CO2 through improved combustion.
	Quality management	Measure low concentrations of CO in process gases, impurities and by-products on the production line.	Can be measured indirectly without influence.	Management to prevent fire and explosion
	Explosion prevention	Continuously monitor O2 concentrations for the purpose of preventing fires or preventing explosions.	Measurable at low concentrations (ppm).	Explosion control management
NH3	Quality management	Measure small ammonium leaks at the NOx removal system outlet (at the NOx removal system outlet) and the EP outlet.	Measurable at low concentrations (ppm).	Avoid generation of sulfuric acid.
	Quality management	Continuous monitoring of NH3 before and after the removal of oxidized ammonium in COG gas	Can be measured indirectly without influence.	Management of impurity gases in the production process.
	Air pollution	Monitor low concentrations of NH3 in exhaust gases from biological heat sources	Can measure NH3 at high temperatures.	Management to prevent fire and explosion
H2O	Improving combustion	Measure the amount of H2O in high temperature gas at the outlet of furnaces, heaters, incinerators, furnaces, etc.	Can measure in high temperature environments of 1500°C and dusty environments.	Reduce CO and CO2 through improved combustion.
	Quality management	Measure low H2O concentrations in process gases in production lines, including impurities and by-product gases	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Measure low H2O concentrations in chlorine gas in electrolysis lines	Can be measured indirectly without being affected by interfering substances	Measure H2O concentrations in chlorine gas using infrared spectroscopy
H2S	Quality management	Measure low H2S concentrations in exhaust gases of petroleum and chemical industry processes	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Continuous monitoring of H2S after desulfurization of COG and biogas	There is development of corrosion.	
	Quality management	Measure the H2S concentration in the exhaust gas from the combustion process	Can be measured indirectly without influence.	Measures to reduce corrosive gases.
HCl	Quality management	Measure low HCl concentrations in petroleum and chemical industry process emissions	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Measures low HCl concentrations in VOC gases	The concentration of a substance can be measured in a water-rich environment without interference from water.	
	Air pollution	Measure the HCl concentration in the combustion exhaust/stack, before the precipitator	There is development of corrosion.	Emissions management
HF	Quality management	Measure low HF concentrations in process gases in the production line, including impurities and by-product gases	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Measurement of HF concentration in corrosive gases during glass production	Can be measured indirectly without causing interference.	
	Air pollution	Measuring trace HF concentrations after treating exhaust gases from aluminum smelters and recycling lithium-ion batteries	There is development of corrosion.	Emissions management
HCN	Quality management	Measurement of HCN in acrylonitrile production line	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Measuring HCN on a cyanide soda production line	Can be measured indirectly without causing interference.	
	Air pollution	Measure small amounts of HCN after treating air pollutant emissions without causing corrosion	There is development of corrosion.	Emissions management
H2	Improving combustion	Measure the unburned H2 concentration after combustion or combustion of a hydrogen mixture	Measurable at low concentrations (ppm).	Management of impurity gases in the production process.
	Quality management	Measure low H2 concentrations in chlorine gas in an electrolysis line	Can measure in wet system also.	
CO2	Improving combustion	Measure CO2 concentration in high-temperature exhaust gases from furnaces, heating furnaces, incinerators, and melting furnaces	Can measure in high temperature environments of 1500°C and dusty environments.	Reduce CO and CO2 through combustion
	Quality management	Managing CO2 emissions during the quicklime burning process	Can be measured indirectly without influence.	Manage impurity gases during measurement
	Air pollution	Measure CO2 in the atmosphere	Measurable at low concentrations (ppm).	Measure CO2 in the air
CH4	Improving combustion	Measure CH4 concentration in high-temperature exhaust gases from furnaces, heaters, incinerators, and smelters	Can measure in high temperature environments of 1500°C and dusty environments.	Improves combustion process
	Quality management	Measuring CH4 concentration in process gas at a biogas plant	Can be measured indirectly without influence.	Manage impurity gases during measurement
	Quality management	Measurement of impurities during hydrogen purification at the refinery	Measurable at low concentrations (ppm).	
C2H2	Quality management	Measure the C2H2 (acetylene) concentration at the outlet of the ethylene tower	Can be measured indirectly without influence.	Manage impurity gases during measurement
	Quality management	Checking for acetylene leaks at a rubber factory	Measurable at low concentrations (ppm).	Measures to prevent leaks