GE
Sensing & Inspection Technologies

Gas Analysis Solutions

Measuring Oxygen, Hydrogen and Flue Gas

Benefits

- Optimized reaction processes
- Improved efficiency and increased process up-time
- Greater safety assurance
- Reduced total cost of ownership
- Reduced installation cost for hazardous area locations
- Remote monitoring

Applications

- Petrochemical—O_2 blanketing/inerting
- Refinery—process gases where O_2 is a contaminant
- Marine terminals—marine vapor recovery
- Power generation—hydrogen cooled generators
- Steel—multiple analysis of O_2, H_2, H_2O and flue gas
- Industrial—trace O_2 in air separation and high purity gases

do you need oxygen too?

Contact us for all your oxygen analysis needs.

Thermoparamagnetic Oxygen Analysis

The Panametrics XMO2 thermoparamagnetic sensor provides the most stable and drift-free oxygen measurement available on the market today.

- % O_2 LEL for inerting
- % O_2 control for optimizing reaction processes

The Panametrics APX offers the enhanced performance in hydrocarbon gases of automatic compensation for background gas effects.

Galvanic Fuel Cell Oxygen Analysis

The Panametrics O2X1 with galvanic fuel cell oxygen sensor provides high accuracy and low cost. It is a versatile, intrinsically safe loop-powered transmitter for ppm or % measurement in acid gases or in non-acid gases.

- ppm O_2 in natural gas
- ppm O_2 in process gases
- % O_2 in inerting applications and process control

Nondepleting Electrochemical Oxygen Analysis

The Delta F oxygen cell is a nondepleting electrochemical sensor. With proper maintenance of the electrolyte solution, it will maintain its original calibration for years.

The nondepleting electrochemical sensor requires only infrequent calibration and provides high accuracy in low ppm and ppb measurements. It can be used with the multifunction MIS1 analyzer for simultaneous measurement of oxygen, moisture, temperature, and pressure. Optional auxiliary inputs can support H_2 measurement with the XTMC.

Zirconium Oxide Oxygen Analysis

Panametrics FGA311 and Panametrics OxyTrak 390 zirconium oxide analyzers for flue gas analysis and combustion control serve applications from low to high temperatures and from clean fuels to ones producing high particulate levels.

- The FGA311 uses the in-situ sample technique to measure % O_2 in flue/stack gas.
- The OxyTrak 390 uses the ex-situ sample technique to measure % O_2 and combustibles in flue/stack gas.

The Panametrics CGA351 zirconium oxide oxygen analyzer measures O_2 from 0.1 ppm to 100% in high-purity inert gases. Its advanced zirconium oxide sensor provides fast speed of response with drift-free performace and minimal maintenance requirements. It is ideal for applications such as:

- 0.1 to 10 ppm O_2 in high purity nitrogen or argon in air separation plants
- trace ppm O_2 in glove boxes
- heat treating processes
- gas generators
- welding applications

Thermal Conductivity Hydrogen Analysis

The Panametrics XMTC binary gas anaylzer measures gases such as H_2, CO_2, CH_4, He and argon by thermal conductivity. Typical applications include:

- %H_2 in hydrogen cooled electricity generation
- %H_2 in H_2/N_2 atmosphere gas in steel annealing/galvanizing
- %H_2 in hydrogen recycle gas in petrochemical reforming
- % CH_4 in CO_2 in biogas or landfill gas
- % CO_2 in fermentation processes

Start-up Assistance and Calibration Services

We have field service teams located globally to assist with start-up, regular maintenance and calibration. Contact us for services or for a custom service agreement.

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