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INOVA

Process and Laboratory Analyzers: Types of Process and Laboratory Analyzers

1. Gas Analyzers

1.1 Gas Chromatographs

Designed for natural gas and other mixture analysis, allowing a complete characterization of components, including C6+/C9+, hydrogen, CO_2, H_2S, and dew point. They are essential for energy measurement and gas quality determination and are available in explosion-proof designs for safe operations in hazardous environments.

1.2 Moisture / Dew Point Analyzers

Continuously monitor the dew point, determining the amount of moisture present in a gas and establishing its condensation temperature.

1.3 Oxygen Analyzers

Provide precise and reliable oxygen monitoring for natural gas applications, chemical plants, and process gases. Available with electrochemical, paramagnetic, zirconia, and other sensor technologies.

1.4 Sulfur and Total Sulfur Analyzers

Measure H_2S and total sulfur compounds to prevent equipment and pipeline corrosion. Available with UV fluorescence and lead acetate tape detection.

1.5 Infrared Gas Analyzers (NO, SO_2, CO_2, CO, O_2, CH_4)

Use infrared absorption to accurately measure gas concentrations.

1.6 Nitrogen (N_2) Analyzers

Detect nitrogen traces in argon or helium gas systems using field emission spectroscopy.

1.7 Nitrogen Oxides and Ammonia Analyzers (NO, NO_2, NOx, NH_3)

Utilizan detección por quimioluminiscencia para monitoreo ambiental y de procesos.

1.8 Analizadores de Sulfuros y Azufre Total

Use chemiluminescence detection for environmental and process monitoring.

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2. Liquid Analyzers

2.1 Total Organic Carbon (TOC) Analyzers

Utilize advanced oxidation methodologies to measure total organic carbon content in liquid samples, essential for online monitoring in water treatment, wastewater, and industrial applications.

2.2 Colorimeters

Use light absorption techniques to determine the concentration of specific substances in liquid solutions, providing precise and continuous measurements for water treatment and industrial processes.

2.3 H_2S in Liquids Analyzers

Measure hydrogen sulfide in various liquids such as condensate, crude oil, diesel, and fuel oil. These analyzers are essential for ensuring product quality and safe handling of H_2S-containing liquids.

2.4 Hydrocarbon (VOC) in Water Analyzers

Use flame ionization detection (FID) to detect volatile organic compounds (VOCs) in water, ensuring compliance with environmental regulations.

2.5 Alkalinity Analyzers

Use automated titration to measure water's ability to neutralize acids.

2.6 Chlorine and Chlorine Dioxide Analyzers

Monitor chlorine levels in drinking water, cooling systems, and industrial processes.

2.7 Oil and Hydrocarbons in Water Analyzers

Use FID technology to detect C1 - C9+ hydrocarbons in refineries, offshore platforms, and power plants.

2.8 Water Cut Meters

The Teledyne Model 5650 Water Cut Meter is designed to provide superior water-in-oil measurement in various operational environments. It incorporates decades of expertise in capacitance probe engineering, delivering reliable monitoring of water content in petroleum.

2.9 Vapor Pressure Analyzers

The BARTEC RVP-4 Vapor Pressure Process Analyzer measures vapor pressure in petroleum products, ensuring compliance with ASTM standards and suitability for high-pressure applications like LPG and viscous samples such as crude oil.

2.10 Rapid Distillation Analyzers

The BARTEC rapiDist-4 provides quick distillation curve analysis for products like gasoline and diesel, with cycle times of 10 to 15 minutes, meeting ASTM D86 requirements.

2.11 Moisture in Gases and Liquids Analyzers

The BARTEC HYGROPHIL F 5674 is a high-quality fiber-optic hygrometer that measures moisture or trace moisture at low dew points in gases and liquids, suitable for high-pressure applications up to 20 MPa.