

Intelligent Integrated Sulfur Analyzer Automatic Coulometric Determinator For Coal And Combustible Materials

Item Number: KT-TE13

Introduction

Discover our intelligent integrated sulfur analyzer featuring automated coulometric titration high precision silicon carbide heating and rapid endpoint determination delivering compliant total sulfur testing for coal coke and petrochemical laboratories worldwide.

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Application	Description	Key Benefit
Coal-Fired Power Generation	Routine verification of incoming steam coal, pulverized fuel blends, and boiler combustion feedstocks to verify sulfur specifications.	Prevents boiler tube corrosion, optimizes flue gas desulfurization (FGD) reagent consumption, and ensures strict sulfur dioxide emission compliance.
Commercial Coal Washing & Mining	Rapid screening of raw run-of-mine coal, washed clean coal fractions, tailings, and coal gangue across mine-site laboratory trailers.	Accelerates commercial grade classification and payment settlement disputes with real-time, highly repeatable dry-basis sulfur figures.
Metallurgical Coke & Steelmaking	Quality assurance of blast furnace metallurgical coke, needle coke, petroleum coke additives, and pulverized coal injection (PCI) grades.	Protects blast furnace refractory lining integrity and prevents harmful sulfur migration into molten pig iron and premium alloy steels.
Chemical & Petrochemical Refining	Quantification of total sulfur in petcoke byproducts, heavy hydrocarbon residues, catalysts, and synthetic carbon materials.	Delivers reliable elemental tracking to prevent downstream catalyst poisoning and ensure commercial byproduct marketability.
Environmental & Commercial Testing Labs	High-throughput commercial inspection of mixed solid combustibles, refuse-derived fuels (RDF), and standard analytical calibration check samples.	Drastically decreases cost-per-test through automated 3-to-9-minute turnaround and automated dry-basis reporting conforming to GB/T 214-2007.
Industrial Cement Clinker Manufacture	Analysis of high-sulfur alternative fuels, scrap tires, and raw meal limestone kiln feeds utilized in high-temperature rotary kilns.	Avoids excessive sulfur-to-alkali imbalances, preventing unwanted kiln ring formation and maintaining stable clinker burnability.

Technical Parameter	Specification / Metric Value (KT-TE13)
Product Item Number	KT-TE13
Measurement Principle	High-Temperature Combustion Coulometric Titration
Applicable Standard	GB/T 214-2007 (Determination of Total Sulfur in Coal)
Sulfur Measuring Range	0.00001% to 99.99% (0 - 99.99%)
Measurement Resolution	0.00001 (1/100,000 / 0.001%)
Sample Combustion Analysis Time	3 to 9 minutes per determination (intelligent automated endpoint return)
Furnace Operating Temperature	1150°C ± 5°C (user-adjustable to target thermal profiles)
Temperature Measurement Accuracy	Grade 0.5 (±0.5% full scale)
Heating Element Type	Premium Silicon Carbide (SiC) Tube
High-Temperature Constant Zone Length	≥ 90 mm
Heating Ramp Rate	25°C to 30°C/min (attains 1200°C in approximately 35 minutes)
Thermal Warm-up to Stable Operational State	≤ 1 minute from power initialization (once at operating temperature)

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Electrolytic Cell Volume	450 mL
Electrode Construction	High-Purity Platinum (Pt) Metal Electrodes
Carrier Gas Flow Rate	1000 mL/min
Interface & Display	Integrated LCD Display with Dedicated Parameter Keyboard
Data Storage Capacity	Power-off memory retaining the latest 30 historical records
Calculation Functions	Automated dry-basis total sulfur conversion based on manual moisture input
Reporting	Built-in thermal micro-printer for automated parameter and result output
Electrical Power Supply	220V $\pm$ 20%, 50 Hz
Total System Power Consumption	$\leq$ 2.2 kW