

Coal Slagging Characteristic Tester Clinkering Property Determination Apparatus

Item Number: KE-TE31



Introduction

Optimize fuel evaluations with our precision coal slagging characteristic tester. Engineered to standard testing protocols, this heavy-duty system delivers accurate clinkering propensity analysis, high-output airflow control, and dependable thermal performance for industrial gasification, combustion, and metallurgical fuel testing laboratories worldwide.

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Application	Description	Key Benefit
Coal-Fired Power Generation	Evaluation of thermal coal feedstock clinkering characteristics prior to pulverization and utility boiler firing.	Prevents water-wall slagging, maintains boiler thermal efficiency, and reduces emergency outage frequency.
Industrial Coal Gasification	Determination of ash agglomeration tendencies in fixed-bed and moving-bed coal gasifiers.	Eliminates bed defluidization and clinker bridging, securing continuous syngas production.
Metallurgical Coking & Sintering	Screening of blend coals for blast furnace injection (PCI) and cupola thermal generation.	Maximizes injection rates while preventing tuyere blockage and excessive slag volume inside blast furnaces.
Commercial Fuel Testing Laboratories	Third-party verification and standard validation of commercial coal shipments for compliance with quality agreements.	Delivers defensible, repeatable test reports adhering to standard clinkering index protocols.
Combustion Research & Development	Academic and industrial study of mineral matter transformation, fluxing agents, and synthetic ash behavior.	Provides standardized experimental conditions to formulate novel anti-slagging chemical additives.
Synthetic Fuel & Chemical Synthesis	Assessment of feedstock suitabilities for coal-to-liquids (CTL) and coal-to-chemicals conversion reactors.	Identifies optimal operational thermal windows to avert ash fusion within high-temperature reaction zones.

Specification Parameter	Standard Requirement	Unit / Tolerance (KE-TE31)
Product Identification	Clinkering Determination Apparatus	KE-TE31
Governing Test Standard	GB/T 1572 (Coal Clinkering Determination)	Standard Compliance Verified
Sample Granularity Requirement	Crushed and classified coal particles	3.0 mm to 6.0 mm
Ignition Charcoal Granularity	Standardized hardwood charcoal	3.0 mm to 6.0 mm
Retort Loading Capacity	Calibrated combustion volume	400 cm³
Minimum Blast Air Delivery	Forced-draft centrifugal blower system	≥ 12 m³/h
Blast Static Pressure Rating	Aerodynamic delivery pressure	≥ 49 hPa (≥ 500 mmH2O)
Maximum Blast Blower Pressure Capacity	High-pressure blower configuration	≥ 1000 mmHg
Clinker Threshold Sieve Dimension	Post-combustion separation boundary	6.0 mm square aperture
Gasification Crucible Alloy	High-temperature oxidation-resistant alloy	Sustained exposure > 1200°C
Thermal Insulation Matrix	High-purity composite refractory	Minimal exterior cabinet skin dissipation
Primary Power Supply	Industrial laboratory single-phase / multi-phase	220V AC, 50/60 Hz (as configured)