HW-2002B High-Frequency Infrared Carbon and Sulfur Analyzer

➢ Primary purpose:

Applicable to: Determination of the mass fractions of carbon and sulphur in steel, new energy, metallurgy, machinery, ores, cement, graphite, coal, automotive, aerospace, ceramics, and other metallic and non-metallic materials.

➢ Key features:

- ◆ Circuit design: The entire unit employs a modular design with highly integrated electronic circuits, ensuring stability and reliability. Simultaneously, multi-level isolation is implemented to comprehensively eliminate high-frequency interference.
- ◆ Sampling: Utilises a 24-bit sampling chip from Analog Devices, Inc. of the United States, offering high speed and precision.
- ◆ Light source: Specially designed new platinum infrared light source, featuring high efficiency and stable spectral characteristics.

- Analytics Pool：1、Gold-plated carbon-sulphur analysis cell and high-precision pyroelectric infrared detector.
  2、Pool signal analysis with full-process tracking and automatic adjustment.
- High-frequency circuitry： Utilises a self-oscillating directional coupler for power feedback, ensuring consistent output power to achieve thorough sample combustion and excellent
- stability.military products：Ceramic high-power vacuum tubes and ceramic vacuum capacitors (100A).
- Automatic over-temperature/over-current alarm: Ensures the high-frequency furnace operates under normal conditions.
- A standalone infrared analysis software package, fully featured with over forty functions including channel selection, data statistics, breakpoint correction, result calibration, system testing, and system diagnostics.
- 100 carbon and sulphur release curves (50 each), stored at any time for immediate comparison of carbon and sulphur release curves.
- Full-range linearisation calibration technology, featuring single-point and multi-point calibration, enhances system linearity and the accuracy of analytical data.

➢ Principal Technical Parameters：

Measurement range	C：0.00001%～99.99999% S：0.00001%～99.99999%
Analytical precision	Carbon RSD ≤ 0.5%; Sulphur RSD ≤ 1.0%
Sensitivity	0.1ppm
Oscillation frequency	20MHz
Analysis time	Adjustable from 25 to 60 seconds; typically 35 seconds
Analytical error	Carbon content conforms to ISO 9556 standard Sulphur content conforms to ISO 4935 standard
Combustion power	2.5KVA—6.5KVA（Automatic adjustment）
Working environment	Room temperature: 10° C to 30° C, relative humidity: 75%
Voltage	AC220V±5%、frequency 50HZ±2%