

COMPANY INTRODUCTION

Established in 1992, Jiangsu Skyray Instrument Co., Ltd specializes in the development, manufacture, sales and support of analytical and measuring instruments. The company is headquartered in the scenery Tsinghua Science Park, Kunshan, with two subsidiaries named Shenzhen Skyray Instrument Co., Ltd. and Beijing Bandwise Technology Development Co., LTD.

Skyray products include X-ray Fluorescence Spectrometer(XRF), Inductively Coupled Plasma Spectrometer(ICP), Atomic Fluorescence Spectrometer (AFS), Atomic Absorption Spectrometer (AAS), Optical Emission Spectrometer (OES), Gas Chromatography (GC), Liquid Chromatography (LC), Energy Dispersive Spectrometer of X-ray (EDS), High-frequency Infrared Carbon-Sulfur Analyzer (CS Analyzer), and On-stream Slurry Analyzer (OSA). As a leading company in R&D of analytical instruments, Skyray enjoys popularities in more than 50 countries and regions.

Skyray has been crowned with three World's No.1 titles in the field of XRF analysis: No. 1 in Sales Amount, No. 1 in Product Categories and No. 1 in Key Patented Technologies.

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CS-168 Type High-frequency Infrared Carbon-Sulfur Analyzer



INTRODUCTION

Skyray™ CS-168 High-frequency Infrared Carbon & Sulfur Analyzer performs rapid and precise determination of carbon and sulfur concentration in steel, non-ferrous metal alloy, cement, ore, coke, slag, pottery and porcelain, activator, casting core sand, iron ore, inorganic substance and other materials. The instrument consists of electronic balance, mainframe, computer, and printer and so on, by using China and overseas' advanced technology. This high-tech product integrated optical, machine, electric, computer and analytical technology. The instrument of high technology ranks the first in China and rivals imported products. The advantages are such as wide measuring range, anti-interrupt, multi-functions, easy operations and fast, accurate analysis.

MAIN FEATURES

- Design of high-power and high-frequency furnace, adoption of military high-power tube and unique auto-excitation oscillating circuit of adjustable power.
- Adoption of imported original-assembling high-stability infrared source and detection unit makes long working life and more precise detection.
- Unique electro-modulation light source increases the measuring precision greatly

INSTRUMENT PARAMETERS

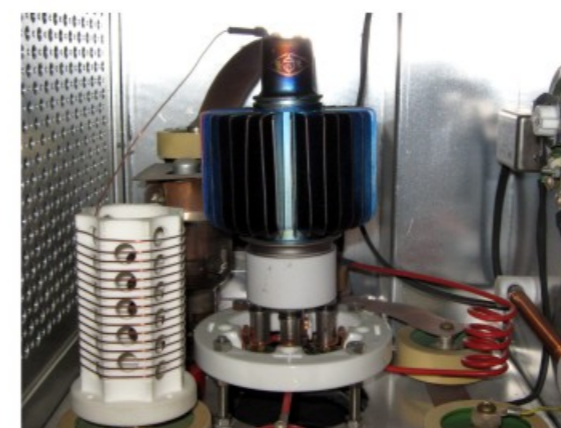
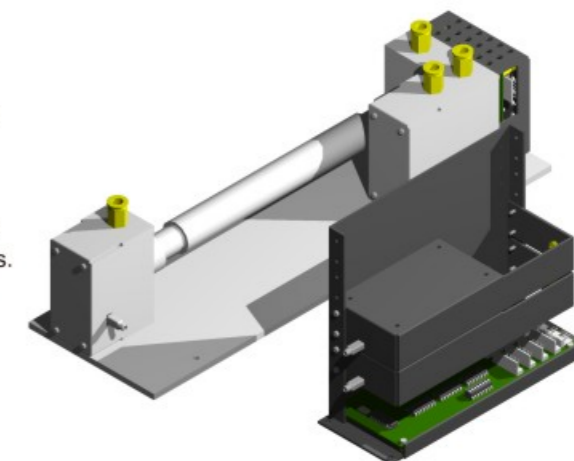
Measuring Range	Carbon	ω (C) 0.0001%-99.9999%
	Sulfur	ω (S) 0.0001%—99.9999%
Analysis Error	Carbon	ISO9556 standards-compliant
	Sulfur	ISO4935 standards-compliant
Analytical Precision	Carbon	RSD \leq 0.5%
	Sulfur	RSD \leq 1.5%
Testing Time	20~60 seconds (around 35 seconds usually)	
High-frequency Furnace	Power	\geq 2.5kVA
	Oscillating Frequency	27MHz
Electronic Balance	Type	Non-quantitative weighing
	Reading precision	0.0001g
Environmental Requirements	Temperature	15℃-30℃
	Relative humidity	35% ~ 70%
Working Period	24-hour continuous running	

SOFTWARE DESIGN

- Windows operation system in English language; easy to operate.
- Providing multi-user management system with different user right setting function by administrator.
- Entry and system set-up authorized function with preheating monitor helping operators check the instrument status protects the system safety and reliability.
- Abounding information with illustrating pictures can observe the system progression and sample analysis curve.
- One curve frame for both carbon and sulfur respectively dynamically shows every actual data and release curve of carbon and sulfur during analysis process.
- The switch has diagnosis function, and furnace end and air chamber sealing may be realized by software.
- Complete function of software provides system monitoring, channel selection, mathematical statistics, result correction, curve comparison, system detection and other functions.
- Strong data management function supports Microsoft Access data format, which is easy to index data and reappear analytical process.

THE INFRARED DETECTION SYSTEM

- The infrared source and CO₂, SO₂ transducer adopt imported parts.
- The infrared source adopts electro modulation, eliminating machinery photochopper to ensure a reliable, stable, low power consumed and long life working.
- CO₂ and SO₂ transducers with filter are installed with temperature compensation device. It ensures a long-time, stable and excellent working with a precise filter wavelength, narrow band-width and accuracy analysis.
- The amplifier has automatic balancing function, which adopts advanced data processing technology for alternating signals. The advantages are such as stable working, reliability, anti-interruption.



HIGH-FREQUENCY COMBUSTION SYSTEM

- High-frequency circuit: High frequency circuit with big power using national patent invention technology. 2.5KVA high-frequency power tube (actual power is more than 2.5KVA), and the feedback of auto-excitation-type directional coupler power ensure output consistence and guaranteeing full combustion and stability of samples.
- High-frequency parts: High-frequency power tube from military industry and vacuum capacity of ceramics.
- Control circuit: Auto detect electromagnetic valve; up and down the cylinder; high-frequency working.
- Power adjustment: Choose different power combustion curve according to different material to ensure sample full combustion.

ANALYSIS GAS CIRCUIT SYSTEM

- Gas circuit: Flow controller of high precision ensures the gas go into and out of gas circuit system stably. (electromagnetic valve, coupling, cylinder). In addition, it can detect automatically.
- Dust remove system: Advanced cleaning device for furnace end; the dust remove system of patent technology may lessen the dust influence on analysis.
- Filter device: Metal filter with ultra-micro pore, 0.4 micron, can ensure dust completely separated with gas. It can be used for a long time without ultrasonic wave cleaner.

