CISRI NCS

Full-spectrum Spark OES

SparkCCD 7000

Full spectrum Spark OES (CCD)

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NCS Testing Technology (Germany) GmbH

About Us

Company Overview

NCS Testing Technology Co., Ltd. (hereinafter referred to as NCS) (Stock Code: 300797) is a wholly owned subsidiary of China Iron & Steel Research Institute Group (CISRI). It is a New and High-tech Enterprise and found by the business integration of National Analysis Center for Iron and Steel, China National Center for Quality Supervision and Testing of Iron and Steel, Analysis and Testing Institute of Central Iron & Steel Research Institute, National Nondestructive Testing Center for Steel Products, Analysis and Testing Training Center of Central Iron & Steel Research Institute, Qingdao Marine Corrosion Institute of Central Iron & Steel Research Institute and Beijing NCS Analytical Instruments Co., Ltd.

The main business of NCS involves third-party testing services (including the chemical composition testing, mechanical property testing, material failure analysis, nondestructive testing and measurement calibration), development and sales of analysis and testing instruments, nondestructive testing equipments, anti-corrosion products and related engineering, certified reference materials, proficiency testing and other fields. It possesses many qualifications such as ISO9001, NADCAP, Rolls-Royce, RMP, ISO/IEC 17025 accreditation, CMA, CAL, CMC and PTP. Meanwhile, it is also the “State-Level Testing Organization for Appraisal of Science and Technology Achievements of the People's Republic of China” and “Personnel Training Centre for Analysis Technology Research and Arbitration Analysis ” authorized by Ministry of Science and Technology; the Testing Laboratory accredited by China Quality Certification Mark; the location of production license examination department of bearing steel products of the National Industrial Product Production License Office of State General Administration of the People's Republic of China for Quality Supervision and Inspection and Quarantine (AQSIQ); the open laboratory authorized by Zhongguancun High-Tech Park. NCS also provides technical support for commercial aircraft, China emergency analysis and production safety accident investigation in Beijing.

NCS owns two wholly owned subsidiaries including Beijing China NIL Research Co., Ltd. for Proficiency Testing and Qingdao NCS Testing and Protection Technology Co., Ltd. It also has two solely-owned companies in Beijing and Shanghai.

NCS is the pioneer and the leader of metallurgical analysis, material testing and related product development in China. It is also the location of secretariat of International Committee of Analysis for Steel and Iron Industry, and the secretariat of Chemical Composition Testing Technical Committee Member for Steel and Alloy of National Steel Standardization Committee. NCS has undertaken many projects of National Development and Reform Committee and The Ministry of Science and Technology of the People's Republic of China. There are more than 300 people, led by Wang Haizhou, an academician of the Chinese Academy of Engineering (CAE), in scientific research team, including 18 professors, 101 senior engineers and 36 doctors. They wholeheartedly engage in the exploration and development of industry leading technologies and products. In addition, NCS has undertaken some key projects in rapid transit railway, commercial aircraft and Beijing Olympic Games.The headquarters of NCS is located in Haidian District, Beijing. There are several R&D and production bases in Beijing, Shanghai, Hebei and Shandong. Moreover, it owns 23 directly subordinated marketing and after-sales service sites covering the whole country to supply most perfect and convenient service for users.

“ **NCS is constantly aiming to** completely and constantly promote products and services quality, realize the maximization of all-round values, and become a guilder and impeller in metal material testing fields. **Looking ahead,** NCS will build on current success to make further progress and work with all the stakeholders for a more splendid future! ”

Full-spectrum Spark OES

SparkCCD 7000

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SparkCCD 7000 is widely used for production process control and finished product lab testing in such fields as metallurgy, casting, machinery and metal processing. It can be used for chemical composition analysis of Ferrum, Aluminum, Copper, Nickel, Cobalt, Magnesium, Titanium, Zinc, Lead, Stannum, Silver and other metals and alloys.

Overview

SparkCCD 7000 Spark Optical Emission Spectrometer uses high-resolution linear CCD (Charge-coupled Device) to perform full-spectrum detection. Using an intelligent control argon-flushed light chamber system, instrument performance more stable and have a longer service period. The abundance of spectral lines supplies more chioce and better results. The curve can jump automatically subsection, making seamless connection between different spectral lines of the same element, Expanding the scope of analysis. The third element interference correction makes the element analysis more accurate. Its advantages include unrestricted by the photomultiplier arrangement, ability to test any elements without changing the hardware, and easy maintenance. Its excitation light source is a full digital solid-state light source with excitation continuously adjustable energy and frequency, suitable for various materials. NET-based acquisition is fast with better adaptability.

Characteristics

01 Full-digital solid-state light source with continuously adjustable excitation energy and frequency, suitable for various materials

02 A full spectrum detection by using a multi-chip staggered layer of linear array CCD with special coating. Single plate lens holder, greatly reducing contamination to light chamber during cleaning the lens.

03 Net-based acquisition and control fast and versatile

04 Programmable control Argon-flushed chamber technology designed to improve long-term stability

05 Copper spark stand base with better heat dissipation and durability

06 Low consumption of argon, no pressure fluctuation, no noise, and short cold startup time

Technical specifications and advantages

Optical system

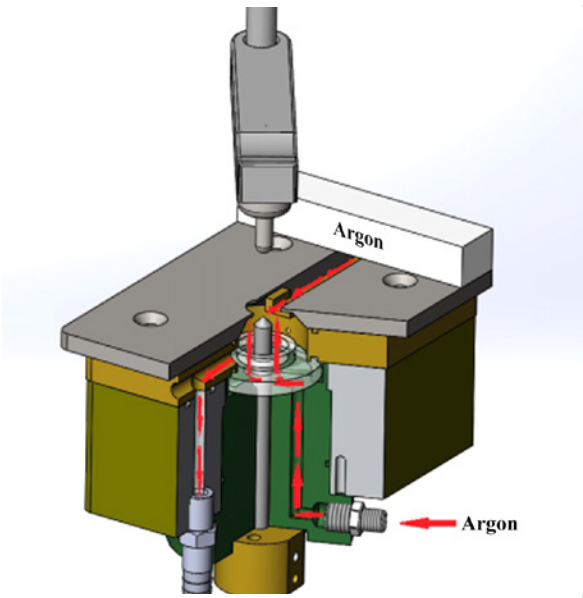
- Paschen-Runge mounting
- High luminous holographic grating, focal length: 500mm ,2700 grooves/mm;
- Spectral line range: 130-800 nm
  (N, Li, Na and K elements can be analyzed)
- Dispersive power:
  First order dispersive rate: 0.74nm/mm;
  Second order dispersive rate: 0.37nm/mm
- Resolution: better than 0.01nm
- Detector with multiple CCDs, no testing channel limits
- Adoption of brand new cast optical chamber with extremely low thermal expansion coefficient and high instrument stability
- Constant temperature system, temperature control accuracy ±0.1℃
- Cold machine (shut down for 12 hours) start 30min, hot machine start 5min

CCD Detector

- High resolution CCD detector
- 3648 pixels per chip
- Single pixel size is only 8μm

New Monitoring System

- Brand new system monitoring of instrument status that displays the instrument status and work progress at bottom of the software
- Operation simple and quick, easy to maintenance and debugging.



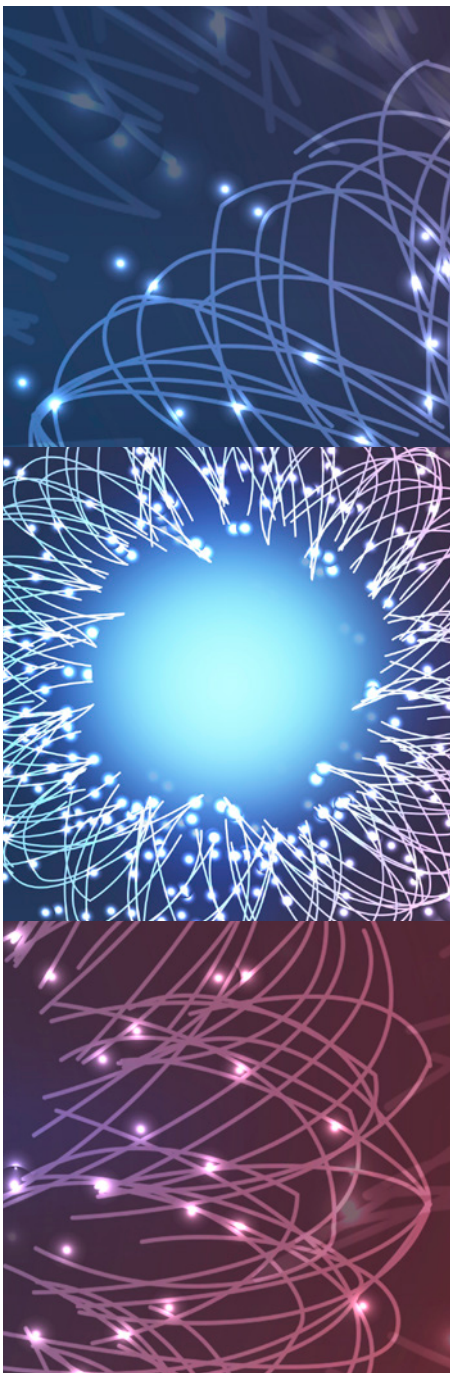
Spark stand

- Maximum weight of sample: 50kg.
- Newly designed coaxial spark stand with optimized internal gas circuit to greatly reduce argon consumption. Self-purging function that keeps the cavity clean.
- Specially-designed discharge chamber to ensure discharge under optimal conditions.

Technical specifications and advantages

Spark excitation source

- Discharge parameters protected by passwords.
- Continuously adjustable light source frequencies, energy and other parameters.
- Maximum discharge frequency: 1000Hz.
- MTBF ＞ 5000 hours



Integral acquisition

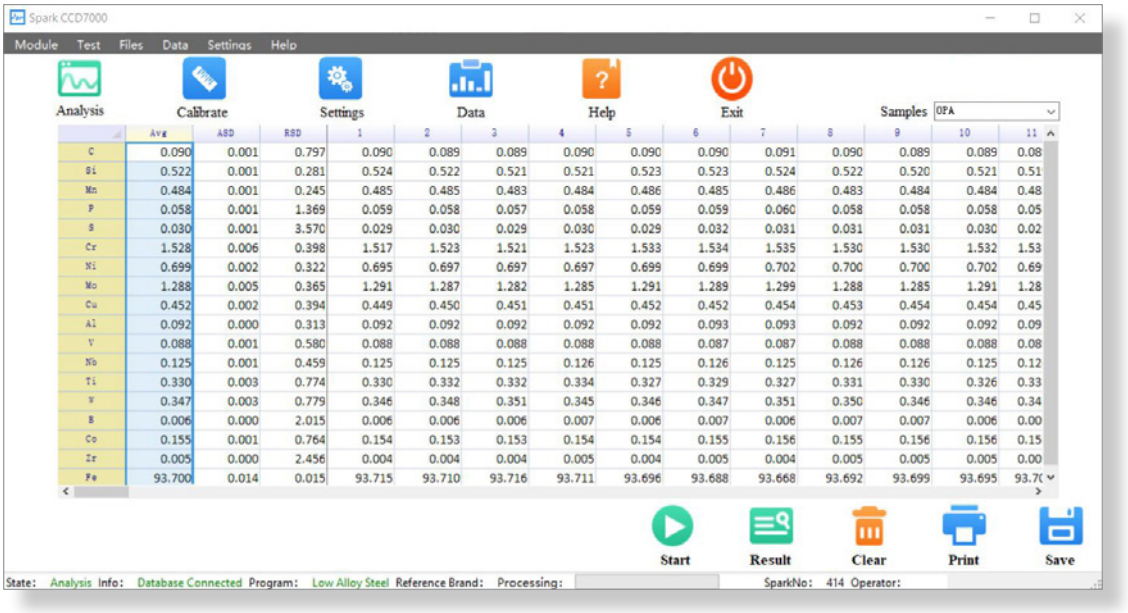
- NET-based port data acquisition for stable data transmission and low configuration
- Multi-thread data acquisition to improve the stability of the software and data reliability.

Argon gas consumption

- Programmable argon-flushed system with short argon-flushing time and low consumption
- Brand new argon gas utilization system
- Ultra-low standby flour rate: 60ml/min, a bottle of argon can be used for 70 days for 24 hours standby

Analysis software

- Calculation of same elements in various matrixes with different curves ;
- User-friendly multi-language software;
- Self-developed burden proportioning software for automatic generation of burden proportioning plans based on testing results.
- Material identification
- Automatic function calculation such as carbon equivalent



Communication device

A variety of communication modes to meet different user needs and data transmission to remote terminals or printers for online analysis, remote monitoring, diagnosis and maintenance.

Basic parameters of instrument

Power supply	220V±10%, single-phase 10A, 2.5KVA
Outline dimensions	870(L)×470(W)×440mm(H)
Weight	About 100Kg
Operating environment	Temperature: 20-25℃ Humidity: less than 70%
Argon purity	≥99.999%

High-quality Creates Better Life

Commercial & Sales:

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E-Mail: info@ncs-germany.com

Manufactured:

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