CISRI NCS

Sequential Wavelength Dispersive X-ray Fluorescence Spectrometer

CNX-808

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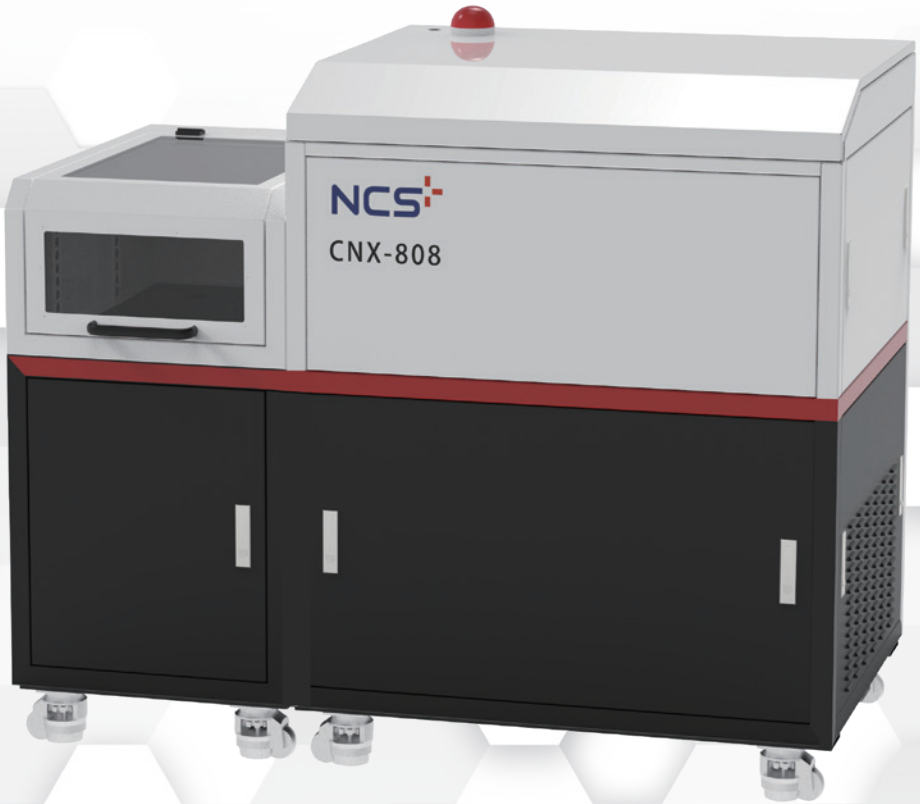

NCS Testing Technology (germany) GmbH

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! ”

CNX-808

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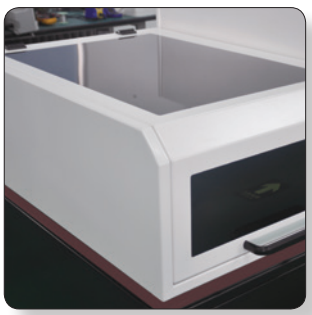


As one of the most important analytical and testing technologies featured with wide range of elements (B-U), wide dynamic range (ppm-100%), low detection limit, high accuracy, fast speed, automation, non-destructive testing, simple sample preparation, simultaneous determination of multi-elements, and many other advantages, X-ray fluorescence (XRF) technology is called as three pillars along with ICP-AES and ICP-MS in the inorganic and multielement testing technology.

Supported by the special funds for the development of major national scientific instruments & equipment under the Ministry of Science & Technology (2012YQ050076), NCS successively overcame key technical problems of X-ray source, spectroscopic system and detector, and successfully developed the sequential wavelength dispersive X-ray fluorescence spectrometer, i.e. CNX-808, in response with the demands of inorganic element analysis technology in metal, building materials, geology, environment, mineral and other fields.

Based on CNX-808, NCS cooperated with National Geological Test Center and several authoritative testing organizations to develop analytical testing methods suitable for various industries, and also established the methodological system for various types of samples in metal, geology, building materials, environment, minerals and other fields.

Performance

⊙ High Stability and High Precision X-ray Source

4kW high-power high-voltage generator ensures lower detection limit, faster analysis speed, and optimized power automatic adjustment program, which can quickly adjust power, monitor the status of X-ray tube and improve the service life. The integrated cooling water machine provides more reliable protection for X-ray tube.

⊙ Excellent Optical Path Design

The short optical path is beneficial to obtain higher count rate. The configuration featured with up to 10 groups of filters, 10 groups of diaphragms, 4 groups of primary collimators, and 10 groups of dispersive crystals can be provided.

⊙ Energy Dispersive Function (Optional)

Energy Dispersive Function can improve data quality and detection speed, and the optional SDD detector can provide more flexible analysis means, for the realization of in-depth composition between WD and ED. While conducting the distribution analysis, it is possible to choose one kind of detector according to the actual needs.

⊙ Reliable High Precision Goniometer

θ/2θ are driven separately, and the adoption of mature and reliable transmission and feedback technology in goniometer possess such characteristics as high reliability and long service life, while ensuring excellent performance.

⊙ Convenient and Powerful Software

Friendly interface, convenient operation, built-in multiple algorithms, automatic testing process, meeting the needs of quantitative and qualitative analysis.

Application Fields

⊙ Geology

For the two types of samples in the geological field, i.e. preforming and fuse piece, CNX-808 respectively developed application method systems, providing reliable detection data for geological research and prospecting.

⊙ Building Material

For the analysis needs of various building material samples, CNX-808 established an application method system corresponding to cement, paint and other samples, achieving the high-precision analysis of samples.

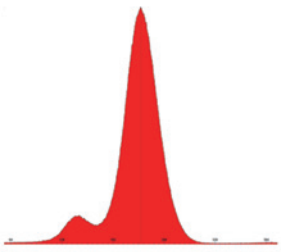
⊙ New Material

CNX-808 can solve the difficult problem of wide range, nondestructive and whole element distribution analysis in the research field of new materials.

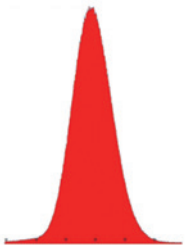
⊙ Ecological Environment

CNX-808 established an overall solution for the analysis of soil, plants, water sediments, airborne particulates and other samples in the ecological environment. By studying the distribution characteristics of harmful heavy metal elements in soil layers and sediment layers formed during different periods, it can provide reliable index parameters for environmental assessment.

Detector signal

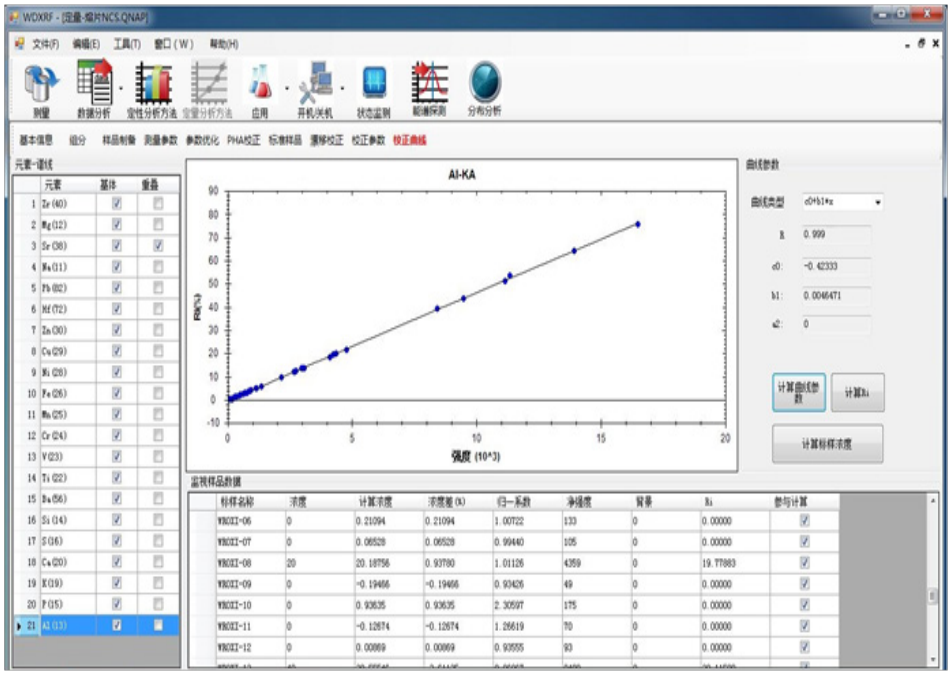


Flow-gas proportional counter (F-PC)



Scintillator counter (SC)

Software interface



Parameters

Hardware Configuration	High-voltage generator	Maximum voltage: 60kV
		Maximum current: 150mA (160mA optional)
		Maximum power: 4kW
		Long-term stability: 0.01%
	X ray tube	End-window
		Optional target : Rh
		Beryllium window thickness: 75um (≤75μm optional)
	Automatic sampler	1/48-bit optional, robotic autosampler system
	Sample size	Solid, maximum φ50mm*H30mm, a variety of specifications to collocate
	Sample Stage	Polar coordinate positioning with spin function
	Primary filter	Zr200, Zr100, Ti30, Al30, Cu50, a group of five pieces
	Diaphragm	Φ3, 10, 15, 20, 25mm (0.5, 1, 2mm, attenuator are optional)
	Primary collimator	150μm for high resolution; 450μm for routine analysis; 750/3000μm for high sensitivity (optional)
	Goniometer	θ-2θ independent drive
		Scan range: SC (1-118°), PC (10-148°)
		Step angle: 0.001 °, 0.002 °, 0.005 °, 0.01 °, 0.02 °, 0.05 °, 0.1 °
	Dispersive crystal	LiF200, PET, Ge, multilayer crystal; LiF220, LiF420 are optional
	Detector	Scintillator counter (SC), Flow-gas proportional counter (F-PC)
	Thermostat	36.5±0.1℃
	Vacuum system	Double Vacuum in Analytical Chamber and Sampling Chamber, vacuum degree is better than 15Pa
	Options and accessories	Analytical chamber filled with He gas system (the atmosphere of liquid sample)
		SDD detector can be used in combination with WD to improve detection efficiency
		CCD Photography System for Distribution Analysis.
Instrument index	Up to Class A of the Verification Regulations for JJG 810-1993 Wavelength Dispersive X-ray Fluorescence Spectrometer	

High-quality Creates Better Life

Commercial & Sales:

NCS Testing Technology (Germany) GmbH
Adress: Blindeisenweg 39, 41468 Neuss – Germany
Website: http://www.ncs-germany.com
E-Mail: info@ncs-germany.com

Manufactured:

NCS Jiangsu Testing Technology Co., Ltd
Adress: No. 158, Qianjin East Road, Kunshan Economic &Technological Development Zone, Jiansu Province, China

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