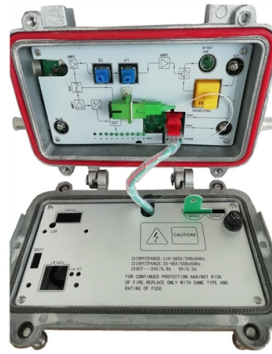


Cast Iron Spectrometer



AI Overview

Optical emission spectrometers (OES) like SPECTROMAXx, ARL easySpark, and ARL iSpark 8860 are highly effective for fast, precise elemental analysis of cast iron. Key Spectrometer Options

SPECTROMAXx (LMX10) The SPECTROMAXx is a tenth-generation arc/spark OES analyzer designed for metal production and foundries, including cast iron. It offers ultrafast analysis, improved limits of detection (30–40% better for iron matrices), and intuitive operation with workflow-based software. The analyzer dynamically adjusts measurement time based on sample properties and monitors spark stand maintenance needs. Optional remote monitoring ensures consistent performance and reduces downtime, making it suitable for high-throughput foundry environments.

ARL easySpark The ARL easySpark is a compact bench-top spectrometer with multi-grating CCD optics and argon-controlled operation. It provides full elemental coverage and high precision for critical elements in cast iron. Features include EComode for argon savings, temperature-controlled UV-resistant CCD detectors for stability, and rapid installation. The instrument ensures reliable, repeatable results with minimal drift, making it ideal for laboratories requiring quick, precise, and continuous analysis.

ARL iSpark 8860 The ARL iSpark 8860 is a high-performance OES analyzer for iron and steel, including cast iron. It uses a double current controlled spark source to optimize sample surface preparation and homogenization, ensuring accurate measurement of trace elements. The system collects and digitizes single spark signals for maximum precision and can operate continuously for 24/7 production monitoring. It is suitable for incoming material control, process QC, and final product certification.

Considerations for Cast Iron Analysis

Sample Preparation: Homogeneity of the sample is critical. Proper surface preparation ensures accurate elemental readings, especially for cast iron with variable metallurgical structures.

Elemental Coverage: Modern OES analyzers cover...

Article Content

Effect of cylinder liner cast iron microstructure on friction and wear ...

The diversified microstructure and complex composition of cast iron affect its friction and wear properties. In this work, three kinds of cylinder liner cast iron with different graphite morphologies

Exploring EDXRF Analysis for Cast Iron Composition

In the context of cast iron analysis, EDXRF offers several advantages, including rapid analysis, minimal sample preparation, and the ability to measure

Advanced Cast Iron Analysis Using Spark OES

This application report gives the brief idea about cast iron analysis using spark OES and how to get the best results.

A Guide to Perfect OES Carbon Analysis

Optical emission spectrometry (OES) is the perfect solution for analyzing elements at low limits of detection like carbon, boron, and sulfur. However, conventional

New spectrometer for cast iron analysis

In Fonderia di Castenedolo we purchased a new spectrometer for the chemical analysis of cast iron. The machine offers the possibility to analyze the

Hot Metal Sample Molds

These are primary used to cast aluminum samples, but can also be used for copper, zinc and magnesium samples. Each mold is equipped with a clasp that keeps

Cast Iron Analysis | Optical Emission Spectrometry

Approximately 20,000 foundries worldwide produce cast iron. The exact chemical composition of the alloy being manufactured needs to be checked throughout the

Cast iron analysis and investigation | Academy Zanardi

The microstructural and technological characteristics of cast irons and in general, of all metal alloys, depend primarily on their chemical composition. Even small

Material identification of metals using F-OES

SGS offers far-reaching analysis by means of spark emission spectroscopy (F-OES).

Carbon analysis in cast iron

This data sheet demonstrates that the Epsilon 4 – a benchtop energy dispersive X-ray fluorescence (EDXRF) spectrometer – is capable of quantifying 11 elements in cast iron, including carbon.

Precision Castings Spectro Analysis

Our two optical emission spectrometers can measure the elemental composition of any low alloy, high alloy, stainless steel, tool steel, or precipitation hardening

Analysis of Cast Iron Using the SPECTROMAXx Metal

The SPECTROMAXx enables the accurate analysis of cast iron. The instrument takes advantage of modern CMOS/CCD technology combined with the latest

OES Technology for Cast Iron Carbon Analysis

He said this approach precisely determines carbon in cast iron, even on suboptimal samples. SPECTRO ANALYTICAL INSTRUMENTS introduced

Analysis of cast iron

The wide spread use of cast iron is a result of its low cost and versatile properties. Speed, precision, stability, sensitivity and accuracy are important criteria applied by the cast iron

Standard Test Method for Cast Iron Analysis with ASTM E1999 Spark ...

Standard Test Method for Cast Iron Analysis with ASTM E1999 Spark Atomic Emission Spectrometer Developed by the American Testing and Materials Authority (ASTM), the ASTM E1999 standard

Exploring EDXRF Analysis for Cast Iron Composition

It was demonstrated that an EDXRF spectrometer can quantify a range of elements in cast iron, including C, Si, P, S, Cr, Mn, and Ni. Simple

IS 15338: Spectrometric Analysis of Cast Iron by Direct

Title of Legally Binding Document: Spectrometric Analysis of Cast Iron by Direct Reading Optical Emission Vacuum Spectrometer - Point to Plane

Whitepaper: Elemental Analysis of Carbon In Cast Iron

This paper explains a new analytical method for measuring carbon in cast iron that combines the exceptional measurement accuracy of the classic combustion

Analysis of Iron and Steel with ARL easySpark Optical Emission

The ARL easySpark is able to determine all the elements necessary in your current and future applications, in all possible qualities of iron and steel: white or grey cast iron, alloyed cast iron, low

Improved Determination of Carbon in Cast Iron

A new approach to cast iron analysis by optical emission spectrometry The development of ferrous metallurgy is inextricably linked to the advance of civilization. It can also be truthfully said that without

Cast Iron Production | Melt Analysis Guide | OES

Our experts explain how this can be achieved during melt analysis. Our guide for foundries about how to achieve optimal melt control in cast iron with OES spark

IS 15338 (2003): Spectrometric Analysis of Cast Iron by Direct

In this standard the condensed spark method is specified for determination of alloying elements in cast iron with the help of direct reading optical emission spectrometer having automatic print out

E1999 Standard Test Method for Analysis of Cast Iron by Spark

5.1 The chemical composition of cast iron alloys shall be determined accurately in order to insure the desired metallurgical properties. This procedure is suitable for manufacturing control

Standard Test Methods for Chemical Analysis of Cast Iron—All Types

1.1 These test methods cover the chemical analysis of pig iron, gray cast iron (including alloy and austenitic), white cast iron, malleable cast iron, and ductile (nodular) iron having chemical

Analysis of Cast Iron Using the SPECTROMAXx Metal

This application report describes the elemental analysis of cast iron using the SPECTROMAXx stationary metal analyzer.

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.tomor.eu>

Email: info@tomor.eu

Phone: +49 69 2381 5497

Address: Am Hauptbahnhof 10, 60329 Frankfurt am Main, Germany

This document is for informational purposes only. Specifications subject to change without notice.

