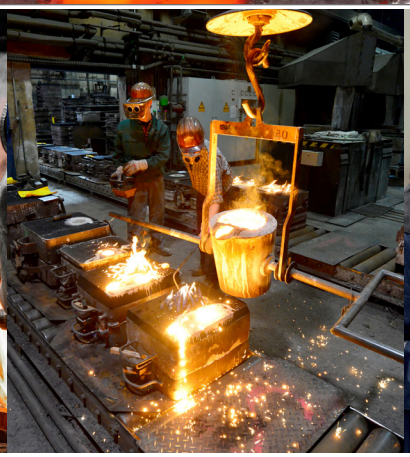
SPECTRO
AMETEK

Presenting the

SPECTROMAXx

ARC/SPARK OES ANALYZER



Analytical improvements and more for next-generation leadership in foundry analysis

Best-selling analysis for the foundry floor

SPECTROMAXx

Foundries demand fast, accurate elemental analysis of metals — from incoming materials to in-process testing to final quality inspection. Iron, nonferrous, and processing or casting operations alike require productivity, traceability, and profitability at every step. One analytical instrument delivers all that for foundries worldwide.

With outstanding repeatability, reproducibility, and reliability, SPECTROMAXx is perhaps the industry's best-selling arc/spark optical emission spectrometry (OES) analyzer. Its fast, accurate, cost-effective measurements add certainty to critical supply chains.

Users get ultrafast information on changing process conditions. Plus drastically reduced cost of ownership — with lower consumables, plus advanced diagnostics and easy maintenance to prevent expensive downtime. And this tenth-generation SPECTROMAXx responds to evolving customer requirements with a host of new improvements, as shown below.

FAST, SIMPLE STANDARDIZATION WITH iCAL 2.0

Using conventional analyzers, standardization can take 30+ minutes, demand multiple samples, and require reruns whenever site conditions change. By contrast, in most cases SPECTRO's proprietary iCAL 2.0 calibration logic needs only 5 minutes and a single sample per day. Plus it automatically compensates for most changes in environmental temperature or pressure. So SPECTROMAXx delivers outstanding stability, productivity, and savings, time after time.

NEW ANALYTICAL PERFORMANCE

SPECTROMAXx features completely new factory calibrations, with extended calibration ranges and element selections; optimized source excitation parameters; and improved limits of detection (LODs). Example: for iron (Fe), aluminum (Al), and copper (Cu) matrices, the analyzer surpasses its already impressive performance with 30% to 40% better LODs.

NEW ARGON COST SAVINGS

Previous SPECTROMAXx models significantly decreased their consumption of expensive argon (Ar) gas. A brand-new feature now allows total shutdown of argon flow during standby, for periods configurable by the operator. Users save more consumables costs than ever!

NEW EASE OF USE

SPECTROMAXx now provides routine, trouble-free analysis of 10 matrices, 65 methods, and 59 elements — via convenient controls for operation; easy access for use and maintenance; and enhanced software features such as quick-check programs, virtual type standards, and spectrum scans.

SPECTROMAXx
flexibility, stability, and ease of use for foundry operations

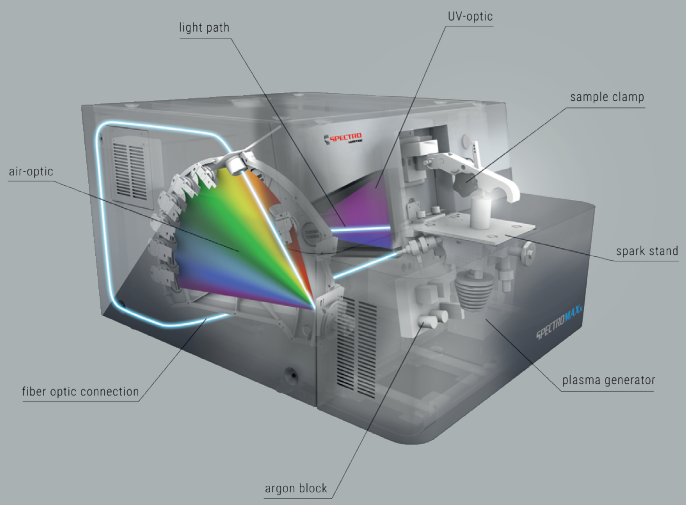
SPECTROMAXx AND SPECTROMAXx ADVANCED

The new generation offers two models, differing only in their optical systems.

Basic SPECTROMAXx features a single air optic, with state-of-the-art CMOS sensors proven in the flagship SPECTROLAB S. It extends the relevant and applicable elemental wavelength range from 233 nanometers (nm) to 670 nm. A new option analyzes relevant wavelengths to 766 nm, covering potassium (K).

SPECTROMAXx Advanced utilizes the same high-resolution CMOS technology, with the air optic covering the same wavelengths as the basic model, from 233 nm to 670 nm. But an added UV optic handles a lower spectral range, from 120 nm to 235 nm. This includes a new capability to analyze oxygen (O) in copper. And again, a new option analyzes relevant wavelengths to 766 nm, covering potassium.

HIGH-PERFORMANCE HARDWARE



HARDWARE NOTE:

The latest SPECTROMAXx eliminates a magnesium fluoride (MgF_2) window at the spark stand — saving costs and maintenance replacement efforts.

EASY-TO-USE SOFTWARE

Even for less experienced personnel, SPECTRO's SPARK ANALYZER Pro software provides effortless operation. Favorites include application profiles tailored to preset user requirements; automatic program selection of sub-methods for given materials; spectra storage for later recalculations; multiple data export formats; and software-only upgrades for new lines, methods, or matrices.

Newest software highlights:

- **Backup tool —** for easy backups to network, other drives, etc.
- **Virtual type standards —** to improve accuracy by combining optimal element samples for type correction
- **Extended grade library —** for iron, aluminum, copper
- **Quick-check programs —** to identify & analyze main elements in under 12 seconds: for iron & aluminum materials, & now including analysis of copper
- **Spectrum scan (optional) —** to compare spectral lines of multiple samples in the same view
- **Shift change protocol (optional) —** to summarize all activities in a given shift: for handover to next operator, or QA optimization

SPECTROMAXx
additional advantages

CARBON IN NODULAR CAST IRON CAPABILITY

SPECTRO Analytical Instruments has developed an analytical solution that combines the accuracy of the combustion method with the speed and ease-of-use of OES. Incorporated in its SPECTROMAXx systems, this advanced OES technology now makes it possible to precisely detect and analyze samples containing free graphite, with results comparable to those achieved by combustion analysis.

SPECTROMAXx instruments can monitor carbon during the pre-spark phase to detect the presence of free graphite, and select analytical conditions that minimize its effects. This approach also uses a statistical method to detect bad samples automatically.

COMPLETE LINE OF METAL ANALYZERS

This next-generation SPECTROMAXx model takes its place among today's most comprehensive suite of advanced stationary metal analyzers. It stands beside SPECTRO's flagship SPECTROLAB S, a market leader for ultra-precise analysis, plus the entry-level SPECTROCHECK, offering high performance and dependability at a low, very competitive price.

Complementing these are SPECTRO's mobile metal analyzers: the SPECTROTEST mobile analyzer, the SPECTROPORT portable metal analyzer, and the SPECTRO xSORT XRF handheld analyzer.

AMECARE PERFORMANCE SERVICES
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SUPERIOR SERVICE AND SUPPORT

AMECARE Performance Services maximize uptime for all the world-class elemental analyzer products and services from SPECTRO Analytical and associated companies. The program is staffed by hundreds of experienced service engineers in 50 countries. They provide high-value, customized support designed to ensure optimum performance plus the longest possible equipment life.

Ask about AMECARE virtual or on-site demos, SPECTRO PROTEKT secure global remote monitoring, proactive performance maintenance, performance upgrades, applications solutions, consultation, targeted training, and ongoing support.

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