News Release
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HITACHI

Hitachi High-Tech launches FOUNDRY-MASTER Smart 2, enhancing performance and value of stationary optical emission spectrometers

Helping manufacturing industries turn high-precision analytical instruments into digitalized assets driving Lumada-based digital services

- Engineered for value, ease of use, and long-term reliability while maintaining trusted performance
- New scientific CMOS sensor and ultra-stable spark source deliver lab-level precision on-site
- Updated housing improves durability and serviceability

The FOUNDRY-MASTER Smart 2

Tokyo, January 13, 2026 Hitachi High-Tech Corporation ("Hitachi High-Tech", part of Hitachi, Ltd.'s Connective Industries Sector), launches the FOUNDRY-MASTER Smart 2, an enhanced stationary optical emission spectrometer ("OES") designed to deliver lab-grade precision in a compact, durable format designed specifically for Quality Assurance/Quality Control (QA/QC) and non-ferrous metal analysis. The instrument is manufactured by Hitachi High-Tech Analytical Science GmbH and sold worldwide by its group company, Hitachi High-Tech Analytical Science Ltd. ("Hitachi High-Tech Analytical Science").

Hitachi High-Tech provides analytical instruments as a digitalized asset that serves as the basis for providing advanced digital services using Lumada. With thousands of units installed globally over the past decade, our first-generation FOUNDRY-MASTER Smart earned a reputation for reliability in demanding industrial environments such as aluminum, non-ferrous metal foundries, metal fabrication, and recycling. This next-generation release continues that legacy, combining familiar dependability with modernized performance.

Building on this foundation, the FOUNDRY-MASTER Smart 2 introduces a series of targeted upgrades that improve analytical performance, enhance stability, and reduce long-term maintenance - all without increasing the price.

Hitachi, Ltd.'s Connective Industries Sector ("CI Sector"), to which Hitachi High-Tech belongs, is working to provide "HMAX Industry" which combines data from an abundant install base of products (Digitalized Assets), domain knowledge, and advanced AI. Through FOUNDRY-MASTER Smart 2 as a digitalized asset that acquires and generates data, Hitachi High-Tech as part of the CI Sector will focus on "Integrated Industry Automation" which aims to expand "HMAX Industry," a next-generation solutions for industrial field that embodies Lumada 3.0, into

growth industries horizontally, including research in the healthcare field and materials, and contributing to innovation for frontline workers.

Main features

OES can quickly analyze the composition and quantity of solid metals with minimal preparation. Compact stationary OES instruments are designed to fit seamlessly into the onsite laboratories of foundries, manufacturing sites and recycling sites, enabling rapid and reliable metal analysis. Improvements have been made, primarily to include a scientific CMOS sensor, to provide a more accurate and user-friendly analytical environment.

1. **Technology advancements**

   Among the key upgrades is a scientific CMOS[*1] sensor, typically found in high-end laboratory instruments. This sensor is complemented by the ultra-stable spark source[*2], previously exclusive to flagship models. Together, they deliver tighter detection limits and consistent, repeatable results, especially for critical elements in aluminum, zinc, and lead alloys that control strength, corrosion resistance, and compliance. The CMOS sensor captures faint emission lines with less background noise, while the stable spark source ensures identical excitation conditions from measurement to measurement. This reduces signal variation and makes low-level results more reliable.

*1 CMOS (Complementary Metal Oxide Semiconductor) sensor. A highly sensitive detector that captures even very faint light signals, improving accuracy for trace elements.
*2 ultra-stable spark source ensures identical excitation conditions from measurement to measurement.

   Supporting these advancements is an optimized readout design that minimizes EMI[*3], ensuring signal clarity and stability even in noisy industrial environments. By cutting interference and drift by EMI, the system maintains calibration and performance over time, increasing confidence in every result.

*3 EMI (electromagnetic interference) - unwanted electrical noise from surrounding equipment that can distort signals

2. **Built for industrial realities**

   The FOUNDRY-MASTER Smart 2 is designed for the practical demands of metal analysis in QA/QC and foundry settings. Its existing compact benchtop footprint continues to save space, while the updated housing introduces a more modern look and improves component integration, making routine access and servicing easier. Combined with our intuitive SpArcfire software, it is easy to operate, even for non-specialist users, making it a dependable tool for fast, accurate results.

3. **Application-driven support**

   Backed by Hitachi High-Tech Analytical Science's application-driven support, operators benefit from expert guidance, custom calibrations, and hands-on training to ensure seamless integration into routines. With a broad global installation base and a track record of responsive service, Hitachi High-Tech continues to be a reliable partner in stationary OES.

"*We have focused this update on the things our customers rely on most: dependable performance, a compact footprint, and strong value for money,"* said Michael Molderings, Product Manager OES at Hitachi High-Tech Analytical Science "*It's a practical evolution of a trusted system, built to support everyday QA/QC and foundry workflows*."

Website for FOUNDRY-MASTER Smart 2

https://hha.hitachi-hightech.com/foundry-master-smart-2

About Hitachi High-Tech Analytical Science

As part of the Hitachi High-Tech Group, Hitachi High-Tech Analytical Science specializes in a wide range of connected materials analysis products and services for use in the lab or in-field around the world. We operate globally with centers worldwide offering assembly, sales and support services to customers across Asia, America and EMEA. For more information, and to view our range of solutions please visit: https://hha.hitachi-hightech.com

About Hitachi High-Tech

Hitachi High-Tech provides cutting-edge technologies, products and services to society and customers with its corporate vision of "Changing the World and Future with the Power of Knowledge" to contribute to a sustainable global environment, healthy, safe and secure lives, and the sustained development of science and industry. We manufacture and sell clinical analyzers, biotechnology products and radiation therapy systems in the healthcare field, semiconductor manufacturing and inspection equipment in the semiconductor field, as well as analytical systems and electron microscopes used in environmental fields and materials research. We are also engaged in a wide range of business areas globally, providing high added-value solutions in battery, communication infrastructure, railway inspection, digital and other industrial and social infrastructure fields. We provide solutions through a deeper understanding of the issues facing society and our customers to contribute to realizing a sustainable society. The company's consolidated revenues for FY2024 were approx. JPY 756.5 billion.
For further information, visit https://www.hitachi-hightech.com/global/en/

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