

FM EXPERT

HITACHI
Inspire the Next

Best in class performance for metals analysis



PROCESS / QUALITY CONTROL



Low level nitrogen analysis

Seamless quality control is essential throughout the metals industry, from tramp element analysis of scrap metals to incoming materials inspection, melt process control and goods issue.

The FM EXPERT is the next level optical emission spectrometer, combining superior analytical performance with a compact size. Its large wavelength range is ideal for the analysis of all relevant elements in metals quality assurance and production process control. The FM EXPERT also allows for the analysis of nitrogen at low levels thanks to its compact CCD optics system.

The FM EXPERT combines our patented smart optics with an improved plasma view, guaranteeing excellent analytical performance with low detection limits over the entire wavelength range. The argon purged optics reduce maintenance intervals and the costs of ownership.

Unique in its class, the FM EXPERT's sealed argon system for optimised optical plasma view and the concentric electrode shielding argon flow ensure reliable nitrogen analysis down to a detection limit of just 30 ppm.



Importance of nitrogen analysis

High nitrogen content in steel may result in

- | Inconsistent mechanical properties
- | Embrittlement of heat affected zone of welded steels
- | Poor cold formability
- | Strain aging
- | Formation of pin holes during casting



A worker in a factory setting, wearing a cap, sunglasses, and a dark jacket, is pouring molten metal from a large ladle into a tray. The metal is glowing orange-red. The background shows industrial machinery and a dark environment.

Highlights and applications

Matching simplicity of use with high performance, the intuitive user interface and numerous features of the FM EXPERT make analysis work easy. Just place the sample on the spark stand, start the measurement and read the results.

- | Unrivalled price-performance ratio.
- | Analysis of nitrogen at low levels.
- | Maximum running time, minimum downtime.
- | Excellent long-term stability, precision and accuracy.
- | Low cost of ownership with optimised power and argon consumption.
- | Comprehensive metals database included, for fast and easy grade identification.
- | Optional floor stand model.

A unique spark stand, accessible from three sides, makes the FM EXPERT ideal for samples with complex and irregular shapes and sizes.

Our Service

Our global network of service hubs offers a full range of technical support to keep you up and running.

- | **Telephone help-desks**
For a fast response to your problem.
- | **Consumables and accessories**
From electrodes to spare part kits.
- | **Recertification and maintenance**
Ensures your analyser produces the right result year after year.
- | **Training**
Understand your analyser and its features.
- | **Extended warranties**
Avoid unplanned costs.
- | **Repairs**
Fast and efficient turnaround.

MORE INFORMATION

To find out more about our spark spectrometers visit: www.hitachi-hightech.com/hha



Grade database included

The largest metals database on the market for fast and easy grade identification is already installed on the FM EXPERT. The Hitachi GRADE Database offers more than 12 million records for over 339,000 materials from 69 countries and standards. You can update your instrument's grade database with a few clicks – no time consuming research in norms and grade catalogues.

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