

OES

FOUNDRY-MASTER Xpert

Benchtop spectrometer for materials analysis in all metals processing



OXFORD
INSTRUMENTS
The Business of Science®



FOUNDRY-MASTER Xpert

Accurate and precise identification of materials

Metals analysis without compromises

Seamless quality control is essential for any metalworking, starting with tramp element analysis for scrap, inspection of in-coming materials, QS / QA in the foundry process and goods issue.

The **FOUNDRY-MASTER Xpert** is the ideal cost-effective solution for all metal processing industries. There is virtually no restriction on the element selection. The highest levels of accuracy and precision of the analytical results and a powerful yet easy-to-use software package covers almost every application.

This robust benchtop optical emission spectrometer analyses even critical trace tramp and inoculating elements with low detection limits.

Product highlights

- Low detection limits of a wide range of elements
- Highest analytical performance using robust yet reliable technology
- New CCD readout design provides superior precision of results
- High resolution Multi-CCD optics for best spectral line separation
- Widest spectral range from 130 to 750 nm, covering nearly all interesting elements, including nitrogen in steel
- Excellent long-term stability, ensured by peak position alignment (PPA)

Vacuum optical system

- Highest UV light transparency for excellent analytical performance
- Stable conditions: no peak shifts caused by ambient pressure changes
- Cost saving due to less argon consumption
- Minimal and easy maintenance:
 - No contamination caused by impurities in the purge gas
 - No oil contamination
 - Cleaning of windows and lenses without opening the vacuum system



Typical applications

- Analytical mode / identification
- Majority of metals and their alloys
- Virtually all relevant elements
- Fe: alloys, cast-iron alloys
- Al: alloys, cast alloys,...
- Cu: bronze, brass, CuNi alloys...
- Ni: hastelloy / inconel / monel,...
- Ti: Ti pure, Ti.6-4 / Ti.8-Mn,...
- Mg-, Zn alloys, solders and more,...
- Calibration extendable & customisable

Ease of use

and low operating costs

Ease-of-use

The intuitive user interface and numerous features make analysis work easy and simple. Just place the sample on the sample stand, start the measurement and read the results.

- Daily routine functions easily performed and monitored
- Special protected user levels for untrained personnel ensure integrity of data and results
- Familiar Windows® based user interface
- Fully integrated system self-diagnostics

Low operating costs

The argon consumption is remarkably lower compared to gas purged optical systems. The concentric electrode shielding Argon flow technology reduces air gaps and optimises the gas flow, which means:

- Lowest operating costs in its class
- Easy cleaning of the work surface

Sample adaptors



Unique sample stand

The spark stand is accessible from three sides, suitable for samples with complex and irregular shapes and sizes.



Results at your fingertips

- A wide variety of result forms available: concentration, grade ID, intensity and statistical data
- Automatic storage, printout, transmission to remote devices
- Direct output of results to productivity tools such as word processors and spreadsheets
- Flagging beyond calibration range or out of material specs

GRADE Database included

The largest metals database for fast and easy grade identification is already installed. It offers more than 10 million records for over 320,000 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.

OIES

Technical specifications

| | | | |
|------------------------|---------------------------|----------------|----------------|
| Height / width / depth | 380 mm / 15.0" | 740 mm / 29.1" | 880 mm / 34.6" |
| Weight | 100 kg / 220 lbs | | |
| Power | 90 - 250 V AC, 50 / 60 Hz | | |
| Operating / standby | 600 W / 70 W | | |

Optical System

| | |
|---------------------|---|
| Multi-CCD | In Paschen-Runge mounting, optimised pixel resolution |
| Wavelength range | 130 - 780 nm |
| Focal length | 350 mm |
| Holographic grating | 3000 grooves / mm |

Solid state source

| | |
|-----------|--|
| | Computer controlled parameters, DSP 160 MHz 16 bit |
| Frequency | 50 - 500 Hz |
| Voltage | 250 - 500 V |
| | High energy pre spark (HEPS) |

Readout system

| | |
|-------------------------|--|
| External PC workstation | Microsoft® Windows® user interface |
| | 18 inputs for CCDs |
| | DSP controller 600 MHz / High speed 16 bit ADC |

Environmental conditions

| | |
|-------------|----------------------------|
| Temperature | 0 - 40 °C / 50 - 104 °F |
| Humidity | 10 - 90 % not condensating |

Options

| | |
|------------------|--|
| Wire adapter set | Sample preparation devices |
| Spare parts kit | All-in-one computer system with wireless desktop |
| Consumables kit | |

OiService

Our global network of service hubs provides a full range of technical support:

- Telephone help-desk
- On-line diagnostic
- Rental instrument
- Maintenance
- Training
- Extended warranty
- Consumables and accessories
- Repair service

Please ask about details of our comprehensive range of products or visit our website at:

www.oxford-instruments.com/ia-customerservice

Visit www.oxford-instruments.com/foundry-master for more information or contact industrial@oxinst.com

This publication is the copyright of Oxford Instruments plc and provides outline information only, which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contract or regarded as the representation relating to the products or services concerned. Oxford Instruments' policy is one of continued improvement. The company reserves the right to alter, without notice the specification, design or conditions of supply of any product or service. Oxford Instruments acknowledges all trademarks and registrations. © Oxford Instruments plc, 2016. All rights reserved. Part no: 63*13



The Business of Science®



348399 QM08