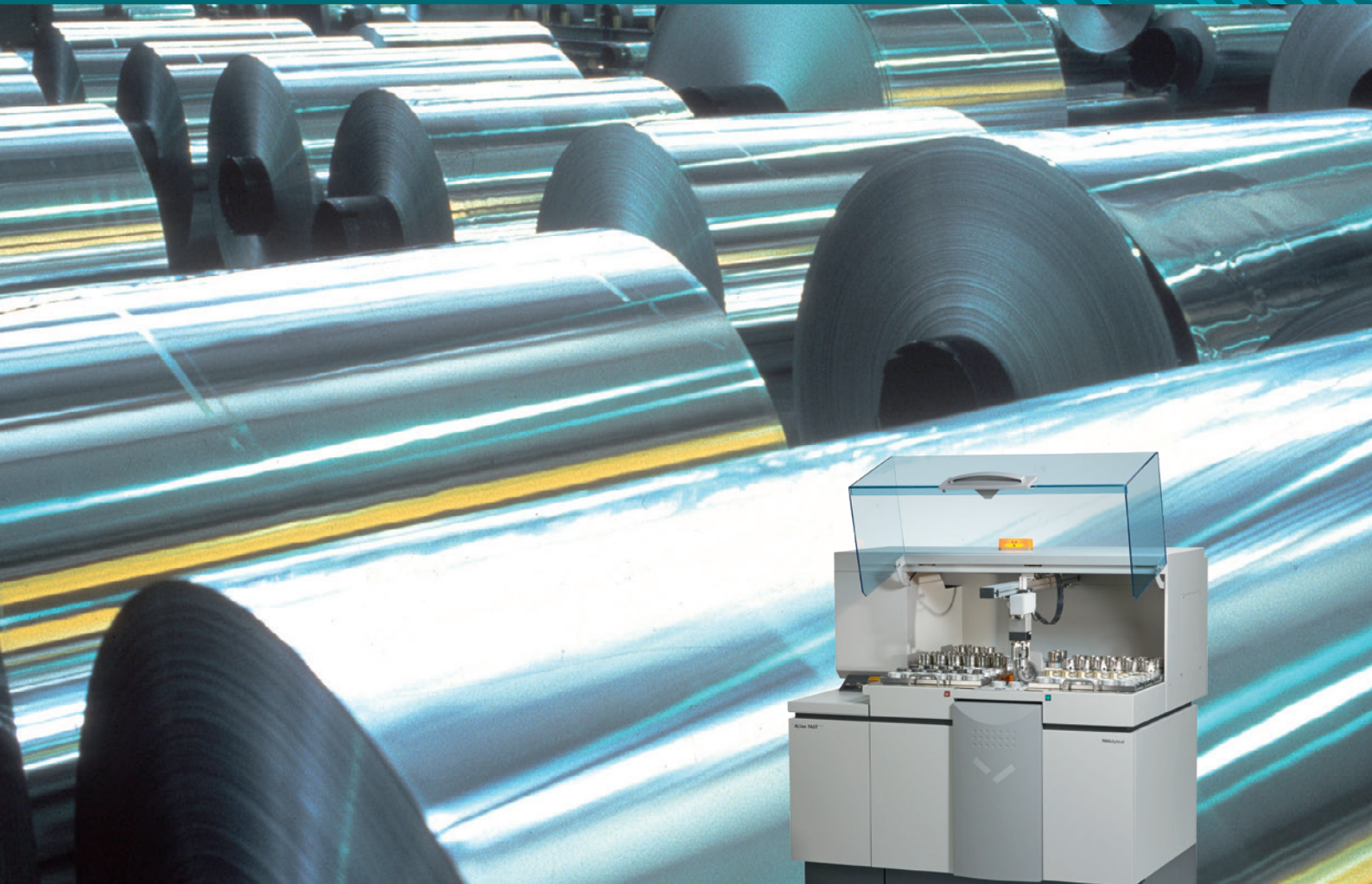




**Malvern
Panalytical**
a spectris company

AXIOS FAST

Unrivalled speed and throughput for
process-critical analysis





ADVANTAGES OF XRF SPECTROSCOPY

- Non-destructive method
- Suitable for use with solid, liquid or powdered samples
- Simple, fast and safe sample preparation
- Highly accurate and reproducible measurements
- Wide dynamic concentration range

PROCESS-CRITICAL ANALYSIS

When there is a need for speed

Elemental analysis with XRF is firmly established as the key to controlling a wide range of quality and production processes in numerous industries. Advanced, rapid, and easy to use, the Axios FAST stands for the highest levels of accuracy and precision, excellent detection limits, rapid throughput and maximum uptime.

Axios FAST has the flexibility to operate in a wide range of industrial applications and processes where speed, turnaround time and throughput are important, such as for routine analysis in service laboratories and process control.

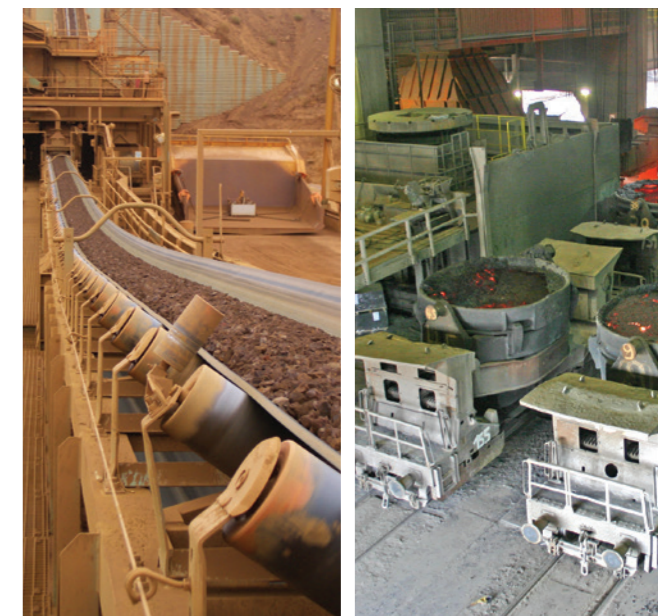
Malvern Panaalytical's Axios FAST is the fastest X-ray fluorescence (XRF) spectrometer available on the market. The Axios FAST simultaneous spectrometer excels in speed by allowing simultaneous fixed-channel measurements of up to 28 elements, giving extremely rapid routine analysis for real-time process control.

The system includes the state-of-the art 4 kW SST-mAX X-ray tube with ZETA-technology that delivers the most stable tube output over time.

Industry example

In the steel making process, the complete value chain can benefit from rapid, high quality results:

- In the iron ore mining industry, large numbers of samples must be analysed to support exploration and mining. On-site or service labs must deliver high throughput. Axios FAST can process more than 1,000 samples in a 24 hour period.
- Subsequently, the iron ore is used for making steel. Here, the control and monitoring of the process, and the manufacturing of high-, low- or speciality-alloy steels, demands that the time between taking the sample and having the results should be as short as possible. Typically, Axios FAST will complete the analysis of a steel sample in 20 seconds. For high throughput and rapid turnaround times in the mining and metals industry - Axios FAST is the solution.



PERFORMANCE AND POWER

High throughput

The Axios FAST simultaneous XRF spectrometer is the first choice for high-speed analytical control, with fast sample handling and outstanding operational reliability.

The sample loading turret mechanism ensures high throughput - new samples can be introduced even while a measurement is in progress.

An optional sample changer on top of the spectrometer cabinet allows unattended batch analysis. In addition, the system can be easily integrated into extensive custom-designed automation setups.

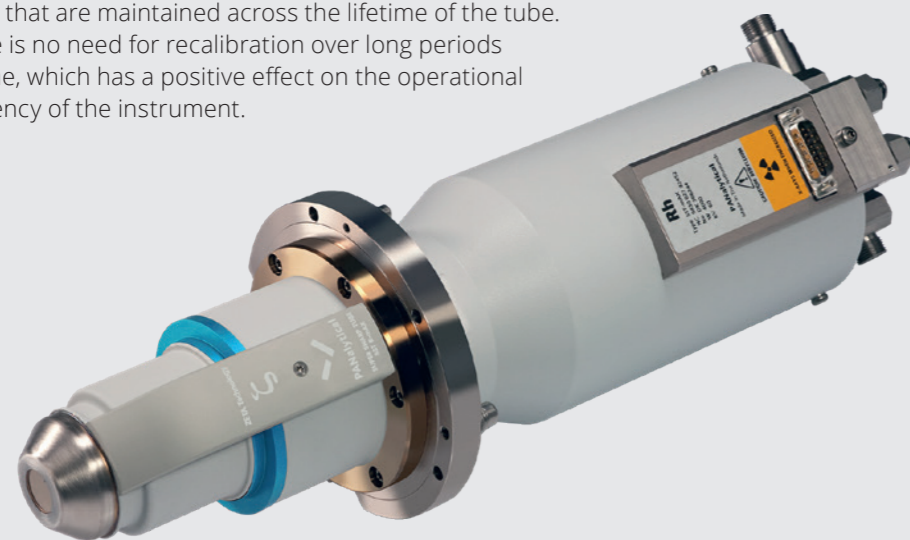


ZETA TECHNOLOGY

The Axios FAST spectrometer is equipped with the latest X-ray technology, including Malvern Panalytical's advanced SST-mAX X-ray tube. SST-mAX has a 4 kW output and can be operated at a high constant current of 160 mA, giving the highest sensitivity and lowest detection limits for light elements.

SST-mAX features groundbreaking ZETA technology, which eliminates the effects of X-ray tube aging - by far the largest contributor to instrument drift. This ensures that 'new tube' performance is maintained throughout the tube's lifetime. Together with the high sensitivity, this results in high speed of analysis and short measurement times that are maintained across the lifetime of the tube. There is no need for recalibration over long periods of time, which has a positive effect on the operational efficiency of the instrument.

ZETA Technology



Maximum operational efficiency for unrivalled productivity

To ensure high operational efficiency, an essential requirement for a process control system, Axios FAST is designed to allow optimum control of all components and ease of maintenance.

Measuring channels are mounted externally on a compact measuring chamber so that access is simple for routine maintenance, addition or removal of channels and initial alignment. Evacuation, or switching to and from vacuum and helium, is accomplished rapidly because of this compact chamber. Furthermore, by having all electrical connections and counting gas lines located outside the optical chamber the risk of vacuum leakage and therefore downtime is minimized.



Global support

Axios FAST is equipped with extensive self-monitoring facilities for remote diagnostics. Furthermore, the instrument's performance and proven reliability are guaranteed by Malvern Panalytical's global support and maintenance network. This enables quick service assistance, even at remote locations, minimizing system downtime.

EXTENDED ANALYSIS

The primary role of Axios FAST is to perform high-speed routine measurements, but it is also capable of addressing additional analytical requirements. The instrument can be fitted with up to four programmable goniometers, giving additional flexibility to a dedicated fixed channel configuration. All four goniometers measure simultaneously with the fixed channels and are ideal for trace element analysis since backgrounds can be measured. Furthermore the goniometers can serve as back-up in the event that the fixed channels require maintenance.

Made for automation

Designed to be fully adaptable to automated analysis, Axios FAST features dedicated software and hardware interfaces. This allows flexible connection to sample transport devices and host computers.

The TEAMworks (Total Element Analyzing Module) solution integrates two powerful analytical techniques – X-ray fluorescence and optical emission spectroscopy (OES). The system is based on the Axios FAST, integrated with an OBLF spark-based optical emission spectrometer and an industrial manipulating robot.



PROVEN AND DEDICATED SOFTWARE

Axios FAST is operated using the latest version of Malvern Panalytical's proven SuperQ software. Renowned for its highly intuitive interface and menu, even inexperienced personnel can carry out routine analysis with a minimum of instruction.

SuperQ has a modular design and functionality can be extended to meet specific application requirements. For example, SuperQ can automatically monitor process parameters with the optional SPC module: powerful APS (Automatic Program Selection) automatically selects the correct analytical program based on user-defined criteria.

AXIOS FAST ADVANTAGES

Speed of analysis

- Simultaneous analysis
- Up to 28 user-defined elements
- Most precise results within short measurement times

Highest throughput

- Unattended batch analysis
- Minimum sample loading time

Maximum operational efficiency

- No need for recalibration
- State-of-the-art Zeta technology: minimal drift
- Easy maintenance
- Global support and maintenance network





WHY CHOOSE MALVERN PANALYTICAL?

We are global leaders in materials characterization, creating superior, customer-focused solutions and services which supply tangible economic impact through chemical, physical and structural analysis.

Our aim is to help you develop better quality products and get them to market faster. Our solutions support excellence in research, and help maximize productivity and process efficiency.

Malvern Analytical is part of Spectris, the productivity-enhancing instrumentation and controls company.

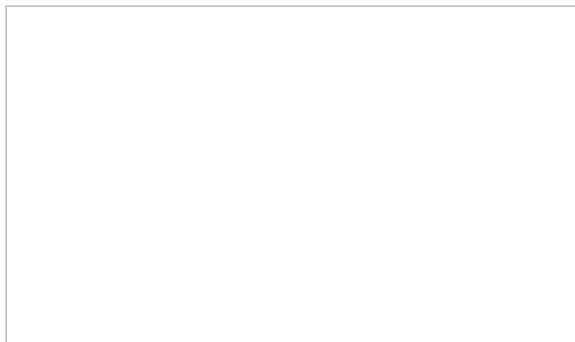
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SERVICE & SUPPORT

Malvern Analytical provides the global training, service and support you need to continuously drive your analytical processes at the highest level. We help you increase the return on your investment with us, and ensure that as your laboratory and analytical needs grow, we are there to support you.

Our worldwide team of specialists adds value to your business processes by ensuring applications expertise, rapid response and maximum instrument uptime.

- Local and remote support
- Full and flexible range of support agreements
- Compliance and validation support
- Onsite or classroom-based training courses
- e-Learning training courses and web seminars
- Sample and application consultancy



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