

# X-MET5000

Lightweight, hand-held XRF analyzer  
for quality control and material verification



Certified  
IP54 splash  
and dust  
proof!

Battery  
lasts for one  
working  
day!

*The Business of Science®*



# Positive Material Identification (PMI) is an indispensable method for modern metal fabrication and construction process plants



PMI ensures that the right metal is used in process systems where corrosive conditions, extreme temperatures and high pressures meet.

PMI is a mandatory process conducted by major companies in the process industry and in all companies which supply process system components such as valves and pipes.

## **X-MET5000 – the analyzer of choice in all conditions**

- IP54 (NEMA 3) certificated as both splash and dust proof
- Compact, robust, built to withstand the harshest conditions
- Battery operating time of one working day
- Integrated heat shield allows the measurement of surfaces up to 400°C / 750°F for extended periods
- Analyses narrow weld seams down to 2 mm
- Ideal for dusty and humid conditions over extended periods
- Convenient for difficult to reach samples



# Accurate and faster verification of critical materials with the **NEW X-MET5000**

The PMI testing process along the whole metal manufacturing supply chain – inspection of incoming goods, testing during production and manufacturing of goods – has increased in importance with global supply chains.

## Field conditions are tough on PMI tools!

- Robust and easy to use, the **X-MET5000** measures alloying elements at very low concentrations (e.g. Ti in stainless steels at the level of 0.05%)
- In all applications speed and accuracy are assured and calibrations are traceable

For these reasons, EDXRF is the preferred measurement technique when concentrations of light elements such as Carbon are not of interest.

## Data storage and reporting couldn't be easier:

- Virtually unlimited data storage and reporting, automated as desired
- Name samples by touch screen input or optional barcode reader
- Easy data transfer to PC via SD card, WiFi, Bluetooth or USB cable. No additional software needed
- Optional PC Report Generator is available for easy, versatile formatting of final QC reports (Excel compatible)

## Accessories

- Holster
- Weld adapter
- Wireless printer



## Precise point and shoot analysis

- Routine Identification in seconds
- 304/321 separation or Grade 7/CPTi in less than 5 seconds



## Three modes of operation

### Assay and Grade library ID

uses two synchronized analytical modes which automatically select the correct mode to give the best analytical result.

*Empirical Assay Calibration* mode produces fast, accurate analysis even at low concentrations. Traceable reference standards establish the calibration. This method is useful when all main elements present in a sample cannot be analyzed such as in metallic carbides.

*Fundamental Parameters (FP)* is a universal standardless calibration where practically any combination of measurable elements can be analyzed accurately. FP can measure up to 30 elements between Ti-U regardless of concentration. The elements analyzed can be customized for specific applications.

These two modes run smoothly together even when the user has no information about the material's composition.

1

### Direct spectral identification

is based on the comparison of known standard spectra and the measured spectrum of the sample. Material can be identified even when no analytical assay data is available.

2

### PASS/FAIL

mode offers a convenient, fast way to sort material, e.g. during delivery inspection.

3

## Extensive and open grade library

In most cases, users need to know the grade name of an alloy (with or without assay readings). Tens of thousands of metal grades are defined worldwide and many of these definitions are specifically local.

The **X-MET5000** allows easy editing of grade libraries to add new alloys or rename alloys. In addition the precision of the grades can be adjusted to prevent false alarms which may occur during short measurement times.

The **X-MET5000** integrated grade library contains:

- Nickel Alloys • Stainless Steels • Cobalt Alloys
- Low Alloy Steel • Tool Steels • Copper Alloys
- Titanium Alloys • Zirconium Alloys
- Aluminum Alloys (heavy alloying elements)

The **X-MET5000** is capable of storing thousands of grade identifications. It's easy to add new elements and to create a unique library.



Splash and dust proof cover



## Analyze large or small sample structures like bolts, thin tubes or honeycomb in seconds - just point and shoot!

- **X-MET5000** compensates for the shape of a sample
- Inspect pipes and welds for corrosion resistance conformance and pressure equipment for alloy composition
- Wires of less than 1mm diameter can be identified in seconds

### Short learning curve

- Intuitive user interface makes it possible to learn basic functions in a few minutes.
- Our network of specialists is ready to provide training for the more advanced features of the analyzer

### X-ray tube for optimized performance and maximum safety

No isotope means:

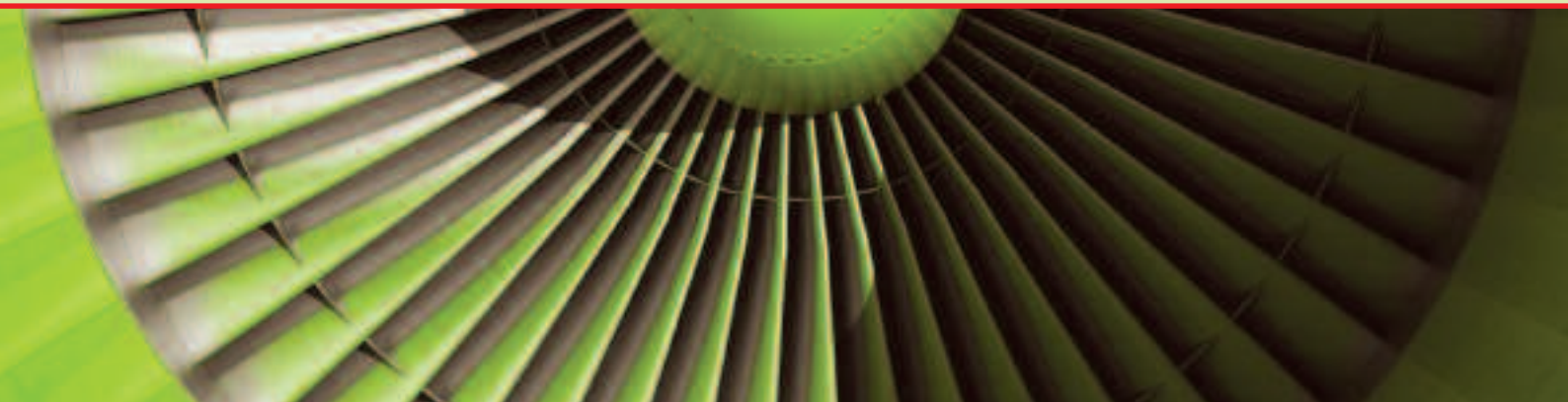
- Low cost registration
- Non-regulated shipping
- No leak testing required
- Easy, low cost disposal

### Certified for confidence

- CE, cCSAus
- IP54 splash and dust proof verified by third party (NEMA 3)

### PDA based technology for flexibility and simplicity

- Bright color touch screen display visible in any lighting condition
- Easy-to-use menu system
- Full Microsoft Windows® compatibility
- Memory card for easy data transfer and back-up (no additional software necessary)
- WiFi and Bluetooth wireless data transfer





# X-MET5000 with PentaPIN™ inside

**X-MET5000 with PentaPIN™ inside.** Oxford Instruments has incorporated its patented **PentaFET®** technology into the hand-held **X-MET5000**.

The **PentaPIN™** detector provides faster analysis and lower detection limits for all elements.

For example, a 10 second analysis produces the equivalent result to that of a 30 second analysis made using a standard Si-PIN detector. It will even separate the small amounts of Hf and Ta in Nickel alloys, usually too difficult to analyze.

## Our global network provides support in local languages

- Technical phone support
- Factory trained personnel
- On-site repair services
- Training services
- Application support
- Global spare parts warehousing
- Re-certifications and recalibrations
- Post warranty local service contracts



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Certificate No FM29142

Part no: OIIA/040/A/0308

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