

## X-MET8000

Trust but verify: ensure safety and compliance at plants world-wide



### Fast and reliable on-site testing for the:

- Rapid verification of alloys used in critical process components
- Quality control of pipes, valves, and reaction vessels materials
- Accurate determination of light elements, trace and tramp elements e.g. in hydrofluoric acid alkylation and sulfidation systems, FAC modelling
- Analysis of welds

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INSTRUMENTS

*The Business of Science®*

## X-MET8000

### Minimise laboratory testing and reduce costs

Failures at petroleum, petrochemical and power generation facilities can have catastrophic consequences. Positive Material Identification (PMI) programmes allow plants operators and maintenance professionals to test critical process components before and after they are put in service, so they do not have to just rely on the suppliers' certificates. This approach can potentially save lives by reducing the risk of serious accidents due to the failure of critical components. Handheld X-ray fluorescence (XRF) analysers are commonly used in PMI programmes as they offer rapid, on-site alloy analysis.

Capitalising on the success of its **X-MET7000** Series, Oxford Instruments has raised the bar with its latest handheld XRF analyser, the **X-MET8000**. The optimised combination of a high performance X-ray tube and Oxford Instruments' large area silicon-drift detector (SDD) delivers the performance required for the most demanding PMI applications.

### Ultimate performance for safety-critical applications

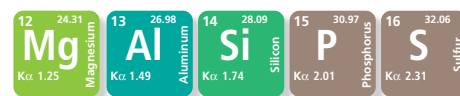
- Superior light elements (Mg to S) analysis for tight control of components and systems
- Low limits of detection, for accurate trace/tramp elements analysis
- Fast analysis and accurate grade identification, with the most comprehensive grade library
- Optimum efficiency: lightweight (1.5kg), small, ergonomic design, with up to 10-12 hours battery life
- Fast start-up: be up and running in seconds
- Optimised nose design to test material inside bends and corners (e.g. welds)



Main menu

C-1026			
GOOD MATCH (L2)			
ELEMENT	% T	%	LIMIT
Cu	0.21	0.026	
Ni	0.16	0.026	0.00 - 0.30
Cr	0.15	0.015	0.00 - 0.30
Fe	98.29	0.089	96.00 - 100.00
Mn	0.73	0.041	0.60 - 0.90
Si	0.28	0.036	
Pb	0.08	0.024	
Mo	0.02	0.004	0.00 - 0.10

Results screen



# On-site non destructive testing



Pre-installed  
grade  
libraries



## Extensive, customisable grade library for accurate alloy identification

The **X-MET8000** includes the most comprehensive grade library: the pre-installed, user-selectable AISI, DIN, JIS, and GB libraries include a total of over 1600 alloys. Users can modify the existing libraries, add new grades (such as manufacturer or location specific grades), or create their own library, for example specific welding material.

The pre-loaded grade libraries include:

- Nickel alloys
- Low alloy steels
- Stainless steels
- Tool steels
- Copper alloys
- Titanium alloys
- Aluminium alloys
- Zirconium alloys
- Cobalt alloys
- And more...



# Trust but verify

100% PMI with 100% confidence

## Optimised calibrations for results you can trust

The **X-MET8000** offers the best of both worlds with a robust fundamental parameters (FP) method, and empirical calibrations (traceable to certified reference materials) for superior precision and accuracy. Simply select the application that meets your requirements, and analyse alloys in seconds.



Superior  
precision &  
accuracy



## Powerful data management

- Store up to 100,000 results including spectra and sample image (if camera is fitted)
- Download results and reports directly to a USB memory stick, to a PC or a network share using Wifi or Bluetooth, in a CSV format or tamper-proof PDF for ultimate data integrity
- Create customised, professional looking reports using the **X-MET** report generator (no software installation needed): include company logo, sample image, results, spectra, additional sample information (e.g. description, location, batch number) etc.

PMI INSPECTION

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CERTIFICATE OF VERIFICATION

Name	Class	Date	Time	Duration				
West	A305LEFP	26/08/2014	15:14:25	10 s				
Element	Fe %	Mn %	Si %	Cu %	Ni %	Cr %	Pb %	Mo %
1	98.29	0.73	0.28	0.21	0.16	0.15	0.08	0.02
2	0.089	0.041	0.036	0.026	0.026	0.015	0.024	0.004

Grades: C-1026 (3.00)  
Reference:



# INSPECTION



**Compact  
and balanced  
design**

## Easy to use

- Intuitive, icon-driven user interface: minimal operator training required
- Large 4.3" colour touchscreen for excellent results visibility, even in direct sunlight. Easy operation, even with gloves on
- Customisable results screen for fast decision making: display information that is important to you, e.g. alloy grade, elemental composition, pass/fail messages, elements listed in your chosen order
- Compact and balanced design
- Quick-swap analysis window: no tool required to change the analysis window when broken or dirty
- Optional integrated camera for accurate measurement positioning



*Quick-swap  
window with  
shield*

## Rugged for low cost of ownership

- Designed for the toughest environments
- IP54 rating (equivalent to NEMA3) for superior protection against dust and water
- Impact-resistant housing with environmental sealing, and rubber bumpers around the screen, nose and battery for protection against shocks
- Large heat sink for optimum robustness and stability, even in hot environments
- Bright orange casing for high visibility in the field
- Optional shield to prevent detector and X-ray tube damage when testing small components and sharp objects

# Oxford Instruments: the only instruments supplier to meet all your alloy analysis needs

**Handheld LIBS:** For 1-second alloy identification, even of Al alloys, with no X-rays.



**Handheld XRF:** For fast, reliable, non-destructive identification and analysis of alloys.



**Mobile and portable OES:** For high performance analysis of alloyed and trace elements, nitrogen analysis in Duplex Steels; includes argon JET-STREAM technology.



## OiService - worldwide service and support

Oxford Instruments Customer Service recognises there are many decisions to make when choosing the right product and company with which to partner. It is not just about superb instrument functionality or the rugged design of the analyser. The **OiService** teams are aware of the necessity to demonstrate our depth of knowledge, skills, experience and expertise with regard to supporting our customers.

Oxford Instruments offers a range of support packages that provide you with the level of service you require:

- Technical help desk support
- World class training academy
- Rental analyser scheme on certain products
- Extended warranty contracts
- Genuine approved spare parts
- Service repair at **OiService** centre
- Tailored service plan agreements
- Consumable products Webshop

Please ask about details of our comprehensive range of products or visit our website at: [www.oxford-instruments.com/ia-customerservice](http://www.oxford-instruments.com/ia-customerservice)

visit [www.oxford-instruments.com/X-MET8000](http://www.oxford-instruments.com/X-MET8000) for more information or email: [industrial@oxinst.com](mailto:industrial@oxinst.com)

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