

# MAXXI 6

Robust / Flexible / Total Reliability / High Precision



## High performance, non-destructive, rapid coating thickness and materials analysis

- Ensures consistent production and high product quality
- No sample preparation
- Delivers highest accuracy and best precision
- Provides high versatility and best price-performance ratio

**OXFORD**  
INSTRUMENTS

*The Business of Science®*

## MAXXI 6

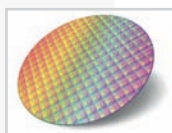
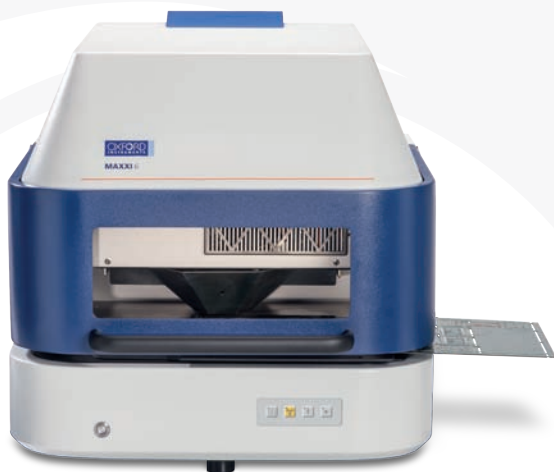
### For consistent production and high product quality

Coating thickness measurement, based on X-ray fluorescence (XRF), is a widely accepted and industry-proven analytical technique, offering easy to use, fast and non-destructive analysis, requiring little to no sample preparation, capable of analysing solids or liquids over a wide element range from  $^{13}\text{Al}$  to  $^{92}\text{U}$  on the periodic table.

With superior resolution and high efficiency SDD, the **MAXXI 6** is the ideal instrument for measuring the thinnest coatings and element composition at trace level.

#### Key features

- Micro-focus Be window X-ray tube combines high precision, short measurement time with field-proven high reliability, outstanding product life expectancy and low cost of ownership
- Superior resolution Silicon Drift Detector (SDD) offers optimal efficiency at all energy levels with improved limits of detection (LOD)
- Multi collimator optimizes flux generation, enhancing measurement throughput
- Giant slotted chamber design with generous interior volume, ideal for a big variety of standard and oversized samples
- The "USB easy choice" allows operation using a standard computer through USB connection with no additional hardware or firmware
- Made in Germany to the highest engineering standards, robust design for long term reliability
- Approved by PTB (Physikalisch Technische Bundesanstalt), ensures highest level of radiation safety



# MAXXI 6

Where every mil or micron counts

## Performance and compliance

- Made-In-Germany ensures the highest quality and reliability
- PTB approval ensures the highest level of radiation safety
- Measurement methods according to ISO 3497, ASTM B568, DIN 50987, IEC 62321

## Giant slotted chamber

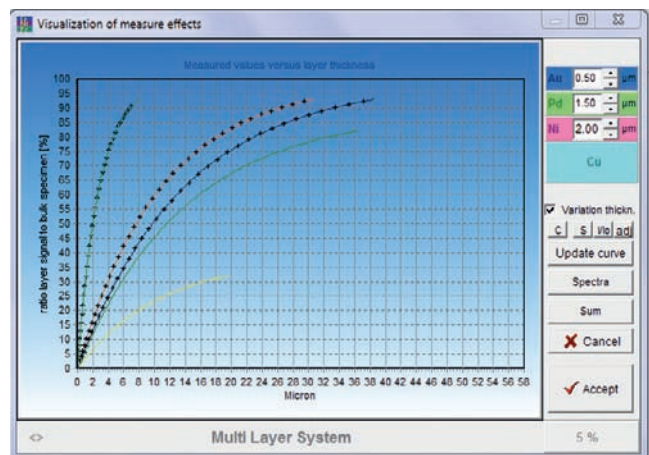
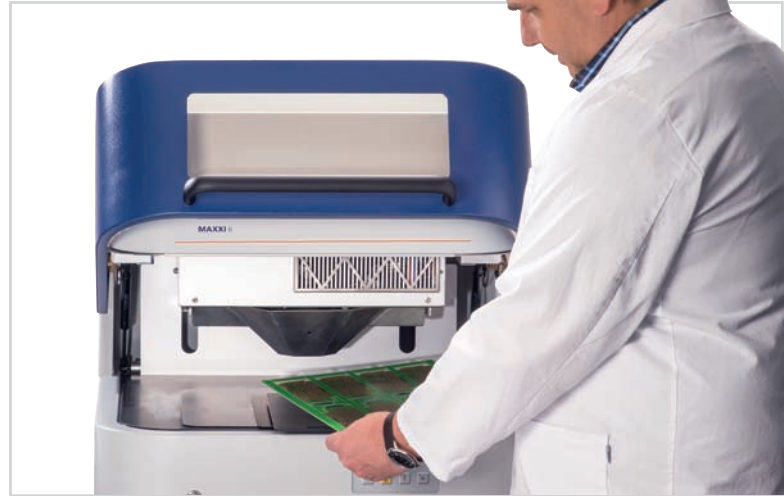
- Programmable XY stage
- Internal volume (w x d x h): 500 mm x 450 mm x 170 mm
- Innovative crash protection design

## Programmable stage

- Easy load feature with prepositioning laser
- Maximized table travel range and speed
- Automated measurement

## Software and calibration

- Intuitive Windows™ 7 based MaxxControl software
- Choice of empirical calibrations for highest accuracy or FP model for easy calibration
- Free selection of elements for composition analysis and free definable layer structure for thickness analysis
- Factory preloaded calibration for RoHS and precious metals (optional)





# Coating Thickness Analysis

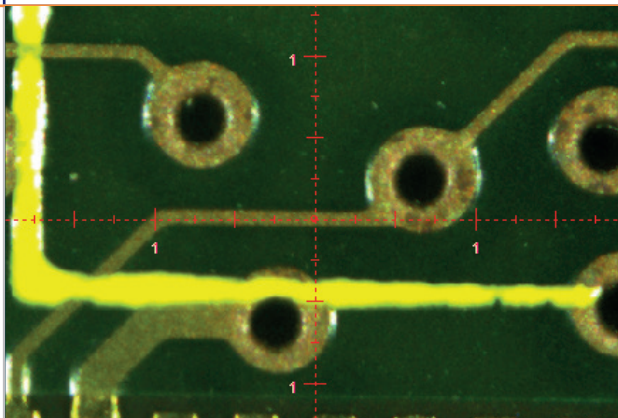
As easy as...

## 1 Place samples in large analysis chamber



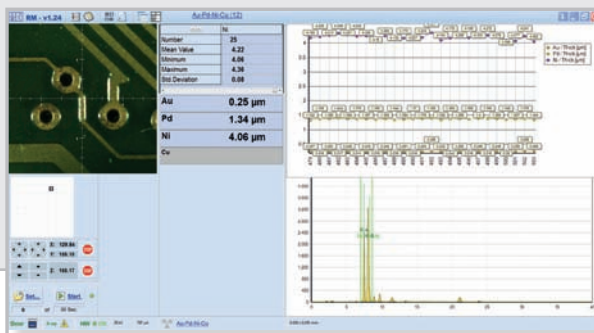
- Non-destructive analysis: no sample preparation
- Easy sample introduction – large door and slot for large flat samples
- Safe and secure operation
- Side window design provides easy observation of the sample during measurement

## 2 Select sample point to measure



- Clear pin-point accuracy — high resolution colour video camera with high magnification
- Rapid and simple sample positioning using a joystick or mouse
- Single or multi point analysis with customer defined analysis patterns
- Unattended operation using optional programmable XY stage

## 3 Press Start



- Results displayed in seconds
- Clear, large colour graphics for clarity and ease of use
- Simple “One click reporting” for results transfer into Word, Excel, HTML, PDF format
- Customised reports for total flexibility

# MAXXI 6: Application optimised solutions



## Metal Finishing

	Cr		
	Zn	NiP	Corrosion resistance
Fe	Fe	Fe	
TiN	TiAlN	Cr	Wear/heat resistance
Tool-steel	W-carbide	Fe	
	Cr		
	Ni	AuCuCd	Cosmetic finish
	Cu	Ni	
Brass	Al	Cu	

Minimise production cost of the plating process and maximise production output



## Compliance Testing

ppm Pb		
ppm Hg		
ppm Cd		
ppm Cr		
ppm Br		
	ppm Pb	Hazardous materials
Au	SnPb	Au
Ni	Ni	NiPPb
Cu	Cu	Cu

## High Reliability

### RoHS/WEEE/ELV compliance testing

Improve quality control to ensure products meet specifications



## Electronics

SAC	Au		
Ni	Ni	Ag	
Ag	Cu	Cu	
Ceramic	Epoxy	Epoxy	Solderability
	Au/Ag		
Au	PdNi		
Ni	Ni	Ni	Electrical contact
Cu-alloy	Cu	Cu	
NiP			
Al			Surface finish

Increase productivity with better process control



## Metal Alloy

% Au	% Cr	% Au
% Ni	% Fe	% Ag
% Cu	% Ni	% Cu
% Zn	% Mo	% Zn

## Assay and ID

### Metal alloy composition and identification

Rapid, non-destructive analysis of jewellery and other alloys



## Alternative Energy

% Cu	% Cu	% Cd
% In	% In	% Te
% Ga	% Ga	
% Se		
Mo		
Glass	Ceramic	Glass

## Photovoltaic Cells

### Solar panels and fuel cells

Ensure product efficiency and uniformity

<b>SAC</b>	<b>Top layer:</b> SAC (SnAgCu) alloy composition and coating thickness
<b>Ni</b>	<b>Second layer:</b> Ni coating thickness
<b>Ag</b>	<b>Third layer:</b> Ag coating thickness
<b>Ceramic</b>	<b>Bottom layer:</b> Substrate

# Oxford Instruments: The only supplier who offers a complete range of coating thickness analyzers



## Mag/Eddy gauges

Coating thickness systems for metal finishing, galvanizing and electroplating



## Handheld XRF

Portable XRF solution for single or double layer coating thickness measurement



## Benchtop XRF

Fast, reliable, high performance non-destructive coating thickness measurement and materials analysis



## Inline system

Inline coating thickness measurement, custom designed and integrated into the production process

## 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
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