

INDUSTRIAL LEED & AES DEPTH PROFILER

NANO-SCALE MEASUREMENTS OF ELEMENTAL COMPOSITION ON THIN FILMS AND ALLOYS

MODEL ADP200
WITH SAMPLE LOAD LOCK

ANALYTICAL SYSTEM BASED ON LEED & AUGER ELECTRON SPECTROSCOPY AND ARGON ION SPUTTERING FOR COMPOSITION AND THICKNESS DEPTH PROFILING OF THIN FILMS AND ALLOYS



FEATURES:

- SUB NANOMETER PRECISION FOR ATOMIC STRUCTURES, COMPOSITION AND THICKNESS
- ANALYSIS OF WIDE RANGE OF SAMPLES
- SEMI AUTOMATIC OPERATION

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SPECIFICATIONS FOR MODEL ADP200

AES ANALYZER

Analyzer Type..... retarding field analyzer with coaxial electron gun
Energy Resolution:..... less than 0.5%
Working Distance:..... 10 mm
Detector:..... channel Electron Multiplier with 1×10^7 - 10^8 gain range
Mounting Flange:..... 4.5" O.D. standard CF flange (NW63CF)
Electron Gun:
Type:..... double electrostatic lenses with adjustable focal length
and beam diameter
Beam Voltage:..... 0 to 3kV
Beam Current:..... up to 50 μ A
Beam Diameter:..... up to 800 μ m
Filament:..... tungsten hairpin wire
Magnetic Shielding:..... Mu-metal tube with front cover

ION SPUTTERING GUN

Ion Source.....	Electron impact ionization in magnetic field
Ionization Cathode.....	Tungsten - rhenium filament directly mounted on the 70 mm O.D. CF flange
Beam Current.....	up to 10 μ A
Beam Energy.....	0 - 3.0 keV
Beam Size.....	from 5 to 25 mm in diameter
Beam Uniformity.....	Less than 5%
Gas Input.....	Direct gas input to ion source via leak valve
Mounting.....	23/4" (70 mm) O.D. CF flange

SAMPLE HANDLING

Sample size.....	from 10 – 20 mm size
Sample loading.....	single sample loading
Sample transfer.....	linear magnetic sample transfer

VACUUM SYSTEM

Chamber.....	UHV compatible 100 mm welded chamber (304L stainless steel)
Vacuum Pumps.....	60 l/sec ion pump and 50 l/sec turbomolecur pump backed by fore pump
Gauging	wide range gauges
Vacuum Compatibility:.....	all UHV materials
Bakeability.....	under vacuum - 250 °C max.

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