Americas XRF Agenda

3 Day Course Description
(Mahwah, NJ)

To further your education on XRF and to get the most out of your Orbis system, EDAX offers a training course twice a year. The course is specifically for Orbis users and covers the theory and physics of EDXRF, production and properties of XRF and effect of capillary optics on the primary tube radiation. Specific software topics include Qualitative and Quantitative analysis, fundamental parameters and intensity analysis. Imaging, mapping and linescan are also addressed. The course utilizes informative lectures along with hands on lab and computer demos and customer sample analysis.

The XRF training course is directed towards Orbis users. If an Eagle customer would like to enquire about receiving XRF training, do NOT fill out the registration form. Please contact the applications department at edax.training@ametek.com to make an arrangement.

3 Day XRF Course Agenda
9:00 AM to 5:00 PM Tuesday - Thursday

Tuesday Morning
Welcome and Introduction to EDAX
Lecture - Production & Properties of XRF
- Quantum Aspects of X-rays
- X-ray Tube Continuum
- Characteristic Line Excitation
Lecture - Orbis Hardware and Setup
- X-ray Tube
- Capillary Optics and Collimators
- Primary Filters
- Detectors
Break
Lab Session
- Overview of Orbis system and Vision SW
- Basic spectrum collection, peak ID
- Automated analysis & stage table
Tuesday Afternoon
Lecture – Spectral Artifacts and Other Issues
- Escape and Sum Peaks
- Pulse pileup, dead time
- Diffraction, scattering
- Absorption & Matrix Effects
Break
Lab Session
- Qualitative Analysis
- Identification of Artifacts
Discussion & Close

Wednesday Morning
Review
Lab Session (continued)
- Using primary beam filters
- Optimizing conditions
Break
Lecture – Quantification Overview
- Intensities, weight percent, detection limits, penetration depth, normalization
- Fundamental Parameters, Trace Mode, Comb32, Coating Thickness
- Picking standards

Wednesday Afternoon
Lab Session
- Quantifying different samples
- FP-Standards and FP-Trace calibrations
- Empirical calibrations (Comb32)

Thursday Morning
Lecture – Review
Lecture – Mapping and Linescan
Break
Lab Session
- Collecting and processing spectral maps
- Collecting line-scans

Thursday Afternoon
Lab Session
- Open forum for analyzing participants’ samples
- Optional training on SW packages (i.e. Coating Thickness, Alloy ID)
- EDAM calibration
- Instrument maintenance
Closing discussion and feedback