

METALLURGICAL PREPARATION, IMAGING & ANALYSIS CAPABILITIES

Lucideon performs imaging and analysis on a wide variety of materials, including metals, welds, brazes, coatings, ceramics, composites and concrete. Services include macroetching, and characterization of microstructure, grain size, porosity, constituent distribution, phases, bonding interfaces, and dimensional measurements, all documented with high-quality photo macrographs and micrographs.

Metallographic Mounting	Thermoset/Epoxy	Mount sizes: ¾" to 8" diameter
Digital Photography	Micro Macro	1 to 1000X Color, Black & White
Welds/Brazes	Evaluation	Operator qualification Procedure verification
Evaluations	Alloy identification Grain size Microhardness Case depth Phase identification Welds, brazes, solders Inclusion content Porosity measurements Coating, Plating, Paint Oxidation and corrosion Corrosion susceptibility	SEM-EDS, ICP, Carbon/Sulfur ASTM E112 ASTM E384 ASTM, SAE, various others Microscopy, SEM-EDS, EPMA Integrity, Porosity, Dimensions Microscopy, Image Analysis Microscopy, Image Analysis Thickness, Integrity, Adhesion Identification, Documentation ASTM A262
Failure Analysis	Fracture surfaces Corrosion, erosion, wear Contaminants, residues	SEM-EDS, Microprobe Microscopy, SEM-EDS, EPMA FTIR, SEM-EDS, Microprobe
Specimen Preparation	In-house capabilities provide increased quality control & reduced turnaround time	Sectioning, Wire EDM CNC Lathe, Mill, Grinder Machining, Drill Press, Polishing

