

THE WORLD'S FIRST ALL-DIGITAL AEROSPACE & DEFENSE COMPONENT MANUFACTURER



We use generative design to simulate, additively manufacture, post-process, test, and certify a new generation of complex mechanical components for lead systems integrators and OEMs globally.



AS9100 **ISO9001** **ISO14001**
CERTIFIED CERTIFIED CERTIFIED
OASIS **ITAR** **ISO/IEC17025** **ANAB**
REGISTERED REGISTERED ACCREDITED ACCREDITED

SINTAVIA IN-HOUSE CAPABILITIES

Rev. 03/26

Design & Simulation

- Thermodynamic Component Design
- Computational Fluid Dynamics Analysis
- Heat Transfer Analysis
- Mechanical/Structural Analysis
- Topology Optimization
- Vibration Analysis
- Fatigue Analysis
- Thermal Performance Testing
- Flow Testing

Printing

- Laser Powder Bed Fusion
 - 1 x SLM 280HL Dual
 - 2x SLM NXG XII 600
 - 5 x EOS M290
 - 2 x EOS M400-1
 - 8 x EOS M400-4
 - 3 x AMCM M4K-4
 - 1 x AMCM M290 FLX
- Base alloys include Nickel, Aluminum, Stainless Steel, Copper, Titanium, and Niobium

Surface Finishing

- Wet and Dry Blasting
- Multi Vibration Finishing
- Vibratory Polishing
- Belt Sanding
- Extrude Hone Abrasive Flow Machine Finishing
- Centrifugal Barrel Finishing
- Low-Stress Grinding

Mechanical Testing

- Ambient High Temperature Fatigue
 - Fracture Toughness
- Ambient and High Temperature Tensile
- Charpy Impact Testing
- Creep Testing

Lab Services

- Chemistry Analysis
 - ICP-OES
 - Interstitial Element N, O, H, C, S
 - Sub-ppm Elemental Analysis
- True Density Testing
- Metallographic Evaluation
- Particle Size Distribution Analysis
- Scanning Electron Microscope (SEM) with Energy Dispersive X-Ray Analysis (EDS)
- Morphology Evaluation
- Failure Analysis
- Hardness Testing
- Powder Flow Testing
- Tap Density Testing

Post Processing

- CNC and Manual Milling
- CNC and Manual Lathe Turning
- Wire EDM Cutting
- Band Saw Cutting
- 5- and 3-Axis VMC
- Build Plate Grinding
- Ultrasonic Cleaning
- Depowdering
- Chemical Etching

Thermal Processing

- Vacuum Heat Treatment
- Air Furnaces
- Binder Ovens

Operational Testing

- Cold Flow Testing
- Shock and Vibrational Testing
- Burst Testing
- Proof Testing
- Environmental Testing
- Strength Testing

Quality & Inspection

- CT Scanning
- Radiographic Scanning
- Blue Light Scanning
- Fluorescent Penetrant Inspection
- Coordinate Measurement Machine
- Surface Roughness Profilometer Testing
- Eddy Current
- Digital X-Ray
- Ultrasonic Testing
- Magnetic Particle Testing
 - Magnaflux
- Welding Inspection
- Formtrace
 - Fine Profile and Radii Measurement



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