SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

LAMBDA RESEARCH INC.
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MECHANICAL

Valid To: November 30, 2018 Certificate Number: 0138.01

In recognition of the successful completion of the A2LA evaluation process (including compliance to R223 – Specific Requirements – GE Aviation S-400 Accreditation Program), accreditation is granted to this laboratory to perform the following tests on metallic, polymeric, and ceramic samples:

Tests	Test Methods
X-Ray Diffraction (XRD):	
Residual Stress Measurement	SAE HS-784[1]; GE 4013195-991[1]; ASTM E915[1], ASTM E2860; BS EN 15305
Elastic Constant	ASTM E1426
Retained Austenite	ASTM E975; SAE SP-453
Hydroxylapatite Content	ASTM F2024
Crystallite Size	3P1080[2], 3P1105[2]
Texture Analysis, Including Pole Figure Determination, Orientation Distribution Function (ODF) and Inverse Pole Figure Analysis	ASTM E81
Qualitative Phase Analysis	3P1015[2]
X-Ray Fluorescence (XRF):	
Energy Dispersive X-ray Spectroscopy (EDS)	3P1124[2]

Tests	Test Methods
Residual Stress:	
Ring Core Method	3P1051[1, 2], 3P1129[1, 2]
Hole Drilling Method	ASTM E837[1]
Strain Gage Monitored Stress Relaxation	3P1002[1, 2]
Preparation Techniques:	
Installation of Bonded Resistance Strain Gages (Strain Gage Application)	ASTM E1237[1]
Electropolishing for Subsurface Analysis	3P1003[1, 2]

[1]On-site testing is available for these test methods. This laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these tests.

[2] Lambda Research, Inc. in-house method.

The laboratory is only accredited for the test methods listed above. The accredited test methods are used in determining compliance with the material specification listed below. The inclusion of the material specification on this Scope does not confer laboratory accreditation to the material specification nor does it confer accreditation for the method(s) embedded within the specification.

Standard Specification for Composition of Hydroxylapatite for Surgical Implants	ASTM F1185, paragraph 4.2

Accredited Laboratory

A2LA has accredited

LAMBDA RESEARCH INC.

Cincinnati, OH

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of R223 – Specific Requirements – GE Aviation S-400 Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 29th day of November 2016.

President and CEO
For the Accreditation Council
Certificate Number 0138.01
Valid to November 30, 2018

For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.