



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

LAMBDA RESEARCH INC.
5521 Fair Lane
Cincinnati, OH 45227
Karen Buffington Phone: 513 561 0883
E-mail: kbuffington@lambdatechs.com

MECHANICAL

Valid To: November 30, 2024

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-784¹; GE 4013195-991¹; ASTM E915¹,
ASTM E2860; BS EN 15305

Elastic Constant

ASTM E1426

Retained Austenite

ASTM E975; SAE SP-453

Hydroxylapatite Content

ASTM F2024

Crystallite Size

3P1080², 3P1105²

Texture Analysis, Including Pole Figure
Determination, Orientation Distribution Function
(ODF) and Inverse Pole Figure Analysis

ASTM E81

Qualitative Phase Analysis

3P1015²

Quantitative Phase Analysis

3P1043²

X-Ray Fluorescence (XRF):

Energy Dispersive X-ray Spectroscopy (EDS)

3P1124²

Residual Stress:

Ring Core Method

3P1051^{1,2}, 3P1129^{1,2}

Tests

Test Methods

Residual Stress (cont.):

Hole Drilling Method
Slotting Method

ASTM E837¹
3P1137^{1,2}

Strain Gage Monitored Stress Relaxation

3P1002^{1,2}

Preparation Techniques:

Installation of Bonded Resistance Strain Gages
(Strain Gage Application)

ASTM E1237¹

Electropolishing for Subsurface Analysis

3P1003^{1,2}

Hardness Testing:

Rockwell Hardness

ASTM E18

Microhardness

ASTM E384/E92

¹ This laboratory performs field testing activities 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 17025:2017 *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 April 2017).



Presented this 3rd day of August 2022.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0138.01
Valid to November 30, 2024

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