

This certificate is granted and awarded by the authority of the Nadcap Management Council to:

Metcut Research Associates Inc.

3980 Rosslyn Dr Cincinnati, OH 45209-1196 United States

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Materials Testing Laboratories

Certificate Number: 3511227751 Expiration Date: 30 November 2026 Accreditation Length: 24 Months

Jay Solomond

Executive Vice President & Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing Laboratories

Metcut Research Associates Inc. 3980 Rosslyn Dr Cincinnati, OH 45209-1196

This certificate expiration is updated based on periodic audits. The current expiration date and scope of accreditation are listed at: www.eAuditNet.com - Online QML (Qualified Manufacturer Listing).

In recognition of the successful completion of the PRI evaluation process, accreditation is granted to this facility to perform the following:

AC7000 Rev A - AUDIT CRITERIA FOR NADCAP ACCREDITATION

AC7101/1 Rev H - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on audits on/AFTER 10-Dec-2023)

AC7101/3 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing (to be used on audits on/after 4 December 2016)

- (A) Room Temperature Tensile
- (B) Elevated Temperature Tensile
- (O) High Cycle Fatigue
- (P) Fracture Toughness
- (XE) Crack Propagation/Crack Growth Testing
- (Y) Low Cycle Fatigue

AC7101/7 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing Specimen Preparation (to be used on audits on/after 15 May 2016)

- (Z) Standard Specimen Machining
- (Z1) Low Stress Grinding
- (Z2) Low Stress Grinding and Polishing
- (Z3) Cast Specimens

AC7101/14 Rev NA - Nadcap Audit Criteria for Materials Testing Laboratories – Proficiency Testing and Internal Round Robin Requirements for ALL Laboratories (to be used on audits on/AFTER 10-Dec-2023)

Lab Type - Lab Type

Independent



This certificate is granted and awarded by the authority of the Nadcap Management Council to:

Metcut Research Associates Inc.

1775 Carillon Blvd. Cincinnati, OH 45240 United States

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Materials Testing Laboratories

Certificate Number: 28921237475 Expiration Date: 30 November 2026 Accreditation Length: 24 Months

Jay Solomond

Executive Vice President & Chief Operating Officer



SCOPE OF ACCREDITATION

Materials Testing Laboratories

Metcut Research Associates Inc. 1775 Carillon Blvd. Cincinnati, OH 45240

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AC7000 Rev A - AUDIT CRITERIA FOR NADCAP ACCREDITATION

AC7101/1 Rev H - Nadcap Audit Criteria for Materials Testing Laboratories – General Requirements for All Laboratories (to be used on audits on/AFTER 10-Dec-2023)

AC7101/3 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Mechanical Testing (to be used on audits on/after 4 December 2016)

- (C) Stress Rupture
- (XA) Creep
- (Y) Low Cycle Fatigue

AC7101/4 Rev F - Nadcap Audit Criteria for Materials Testing Laboratories – Metallography and Microindentation Hardness (to be used on/after 14 August, 2016)

- (L0) Metallographic Evaluation
- (L1) Microindentation (Interior)
- (L11) Grain Size
- (L12) Inclusion Rating
- (L2) Near Surface Examinations Alloy Depletion
- (L5) Near Surface Examinations Microindentation (Surface–Case Depth)
- (L7) Near Surface Examinations IGA, IGO
- (L8) Near Surface Examinations Alpha Case: Wrought Titanium
- (L9) Near Surface Examinations Alpha Case: Cast Titanium
- (XL) Macro Examination

AC7101/5 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Hardness Testing (Macro) (to be used on audits BEFORE 07-May-2023)

(M2) Rockwell Hardness

AC7101/14 Rev NA - Nadcap Audit Criteria for Materials Testing Laboratories - Proficiency

t-frm-0004 29-May-20

Testing and Internal Round Robin Requirements for ALL Laboratories (to be used on audits on/AFTER 10-Dec-2023)

AC7109/5 Rev H - Nadcap Audit Criteria for Coating Evaluations (Laboratory) (Req'd for all Coatings audits - except suppliers using Nadcap approved AC7109/5 labs) (to be used on audits on/AFTER 13-Feb-2022)

Bond Strength – Bend
Bond Strength – Tensile
Coating Composition by Electron Microscopy
Erosion – Ambient
Hardness – Rockwell
Metallography/Microstructure
Microindentation Hardness – Vickers
Oxidation

ISO/IEC - Currently accredited by an ILAC approved source

Lab Type - Lab Type

Independent