

World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

MATERIALS ENGINEERING, INC.

Virgil, IL

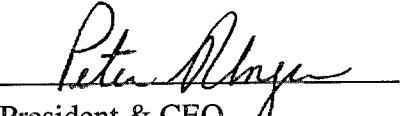
for technical competence in the field of

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 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 23rd day of March 2010.





President & CEO
For the Accreditation Council
Certificate Number 1523.01
Valid to March 31, 2012

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



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

MATERIALS ENGINEERING, INC.
47W605 I. C. Trail
Virgil, IL 60151
Bill Durako Phone: 630 365 9060

MECHANICAL

Valid To: March 31, 2012

Certificate Number: 1523.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on aircraft components, automotive components, ceramics, coatings, metals and alloys, and tools:

<u>Test</u>	<u>Standard Test Methods</u>	<u>In-house Test Methods</u>
Hardness		
Rockwell (A, B, C, N, T)	ASTM E18	Procedure 2.1.1
Brinell	ASTM E10	Procedure 2.1.6
Microhardness (Knoop, Vickers)	ASTM E384	Procedure 2.1.2
Plating Adhesion	ASTM B571 (Sec. 3.1, 10.1)	Procedures 2.5.2 & 2.5.3
Density	ASTM B311, B328	Procedure 2.6.4
Metallographic Evaluation		
Preparation	ASTM E3	Procedure 2.3.1
Grain Size	ASTM E112	Procedure 2.3.3
Depth of Decarburization	ASTM E1077; SAE J121	Procedures 2.1.5 & 2.3.4
Case Depth	SAE J423	Procedure 2.1.4
Inclusion Content	ASTM E45 (Method A)	Procedure 2.3.2
Coating Thickness	ASTM B487, B748	Procedures 2.2.1 & 2.2.2
Scanning Electron Microscopy (SEM)		Procedure 2.4.1
Energy Dispersive Spectroscopy (EDS)		Procedure 2.4.2
Surface Finish (RA)		Procedure 2.5.6
Pressure Testing		Procedures 2.6.1 & 2.6.2

<u>Test</u>	<u>Standard Test Methods</u>	<u>In-house Test Methods</u>
Shore Hardness (A & D)	ASTM D2240	Procedure 2.9.7
Specific Gravity or Density	ASTM D792	Procedure 2.9.6
Melt Flow Rate	ASTM D1238; ISO 1133	Procedures 2.9.1 & 2.9.2
Differential Scanning Calorimetry	ASTM D3418	Procedure 2.8.1
DSC OI Time	ASTM D3895	Procedure 2.8.2
DSC OI Temperature	ASTM D3350	Procedure 2.8.3
Thermogravimetric Analysis	ASTM D6370, E1131	Procedure 2.8.4
Carbon Black by TGA	ASTM D5805	Procedure 2.8.5
Ash Analysis	ASTM D5630	Procedure 2.9.4
Ignition Loss	ASTM D2584	Procedure 2.9.5
FTIR ATR	ASTM E1252	Procedure 2.7.1
FTIR Microscope	ASTM E334	Procedure 2.7.2
FTIR Rubber Analysis	ASTM D3677	Procedure 2.7.3
Brookfield Viscosity	ASTM D2196 (A & B)	DV.E ASTM
Electrical Conductivity	ASTM E1004	Procedure 2.6.5
Taber Abrasion	ASTM D4060; Mil-A-8625F (Section 4.5.5)	Procedure 2.6.6
Failure analysis, using all or part of the above test methods		
Chemical Composition (OES)		
Low-alloy Steel (C,Si,Mn,P,S,Cr,Mo,Ni,Al,Co, Cu,Nb,Ti,V,W,Pb,Sn,Zr,Ca,Ce,Ta,B)	ASTM E415	Procedure 2.4.4
Stainless Steel (C,Si,Mn,P,S,Cr,Mo,Ni,Al,Co, Cu,Nb,Ti,V,W,Sn,B)	ASTM E1086	Procedure 2.4.4
Aluminum Alloys (Si,Fe,Cu,Mn,Mg,Zn,Ni,Cr, Pb,Sn,Ti,Be,Cd,Co)	ASTM E1251	Procedure 2.4.4
Tool and High Alloy Steel (C,Si,Mn,P,S,Cr,Mo,Ni,Al, Co,Cu,Nb,Ti,V,W,As)		Procedure 2.4.4