



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

IMR KHA – PORTLAND

Portland, OR

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 28th day of July 2011.

A handwritten signature in black ink, appearing to read "Peter M. Meyer".

President & CEO
For the Accreditation Council
Certificate Number 1140.07
Valid to September 30, 2013

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

IMR KHA – Portland
5687-A SE International Way
Portland, OR 97222
Alexis Puerta Phone: (503) 653 2904

MECHANICAL

Valid To: September 30, 2013

Certificate Number: 1140.07

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on aluminum alloys, brass & bronze, carbon steel, cast iron, cobalt alloys, copper alloys, fasteners, low alloy steel, nickel alloys, stainless steel, super alloys, titanium alloys, for the following industries: aerospace, automotive, nuclear, medical device, consumer products and industrial goods, metal production, general manufacturing, utilities, petrochemical and power generation:

<u>Test</u>	<u>Test Methods</u>
<u>Physical Testing</u>	
Charpy Impact ¹	ASTM A370, E23
Creep ¹	ASTM E139
Ductility (Bend)	ASTM A370, E190, E290
Fastener Proof	ASTM F606 / F606M; SAE J429
Hardness	
Brinell ¹	ASTM A370, E10
Rockwell ¹ (A, B, C, 15N, 30N, 45N, 15T, 30T, 45T)	ASTM A370, E18
Hydrogen Embrittlement	ASTM F519
Jominy Hardenability	ASTM A255
Microhardness	
Knoop & Vickers ¹	ASTM E384
Rotating Beam Fatigue	MPP-008
Stress Rupture ¹	ASTM E139, E292
Tensile	
Elevated Temperature ¹ (up to 2000 °F)	ASTM E21
Room Temperature ¹ (TS, YS, EL, RA) (up to 120,000 lbs)	ASTM A370, B557, E8 / E8M, F606 / F606M; SAE J429

<u>Test</u>	<u>Test Methods</u>
<u>Physical Testing (continued)</u>	
Weld Operator and Procedure Qualification Testing	ASME Section IX; AWS D1.1, D1.2, D1.5, D1.6
Young's, Tangent and Chord Modulus ¹	ASTM E111
<u>Metallographic Evaluation</u>	
Preparation of Specimens	ASTM E3
Alpha Case ¹	ASTM E407; GE P3TF19, GE P3TF32; PWA E142
Carburization / Decarburization	ASTM E384, E1077
Effective Case Depth	ASTM E384
Grain Size ¹	ASTM E112, E930, E1181; GE E50TF133
Inclusion Content	ASTM E45 (Method A & D)
Intergranular Attack	ASTM A262 (Practice A & E), G110; AMS-H-6088, AMS 2772
Macroetching	ASTM E340, E381
Microetching	ASTM E407
Microstructure	ASTM A247, E1268; ASM Metals Handbook Volume 9
<u>Chemical Analysis</u>	
Combustion Analysis ¹ (C, O, H, S, N)	ASTM E1019, E1409, E1447, E1941
Atomic Emission Spectroscopy – Inductively Coupled Plasma ¹ (ICP) (Ferrous and Non-Ferrous Metals)	CPP-014
Optical Emission ¹ (OES) (Carbon, Low-Alloy, and Stainless Steel)	ASTM E415, E1086, A751

¹This accreditation includes an evaluation of the GEAE S-400 requirements for the tests listed above using the GE AC1.1 checklist.