

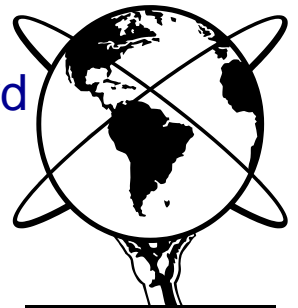
Laboratory Accreditation for Testing Labs (Ask the Assessor?)

Presented to RI-ASQ on
10/16/14 by Tom Doggart, P.E.
Director & Principal Engineer
Nomad Metallurgy, LLC



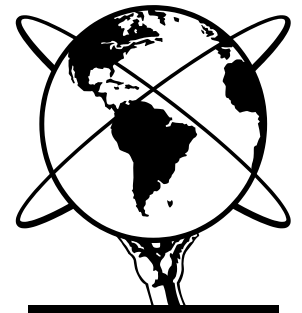
Who Am I? (Tom Doggart P.E.)

- Owner of Nomad Metallurgy, LLC
- 20+ years of experience solving materials and materials testing problems, ranging from materials selection, design for manufacturability, process improvement, failure analysis and litigation support
- As part of the business I perform >20 3rd party lab audits per year for A2LA



Nomad Metallurgy, LLC

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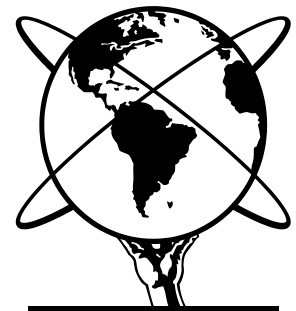
Nomad Metallurgy, Inc.

- **Industrial Support**
- **Failure Analysis**
- **Reverse Engineering**
- **Material & Component Testing**
- **Product & Process Support**
- **Welding Design and Testing**
- **Material Selection, not just *Metals***
- **Process Optimization (DOE)**
- **Personnel Training**
- **Laboratory, Industrial & Aerospace Quality Systems**
- **Expertise in: Material Testing, Mechanical Seals, Fasteners, Hand Tools**

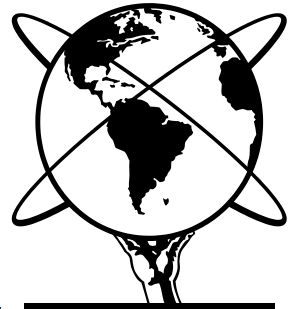


Why am I here?

Audit Type	Auditee	Auditor
ORSE	X	
MIL-STD Systems	X	X
ISO 900X Internal	X	X
ISO 900X External	X	
NADCAP Internal	X	X
NADCAP External	X	X
ISO 17025 Internal	X	X
ISO 17025 External	X	X



Why Seek Lab Accreditation?



Nomad Metallurgy, Inc.

- **Legal requirements** - Government legislation might require accreditation, such as in the areas affecting health, safety, environment in order to provide confidence in essential services
- **Customer requirements** - Customers may require the use of only accredited laboratories to reduce their risk of taking actions based on invalid testing/calibration results
- **Marketing advantage** – The LAB might be able to gain a market advantage by having an independent third party evaluate their competency (provides more assurance than self-declaration)
- **International Trade** - The LAB may want to ensure that testing they provide for a product/material does not have to be repeated in another country before the product can be sold

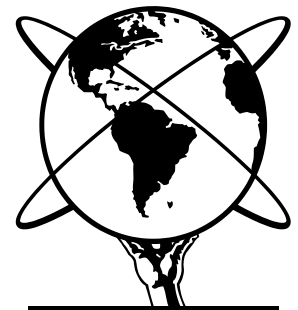
Benefits to Accreditation

- Perception that data is more valid
- Entry in to markets previously closed
- Inherently self improving functions (IAPW)
- Comparison advantage (bragging rights)
- Better lab operation (IAPW)
- Reduced administrative load



Steps to Accreditation

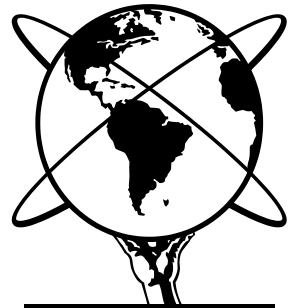
- LAB decides accreditation to ISO 17025 is worth the cost(s)
- LAB reviews requirements and ensures compliance
- LAB identifies desired scope of accreditation
- Submit application and fees to A2LA or other Accreditation Body
- Assigned assessor performs document review
- On-site assessment by technical experts
- Resolve deficiencies within required time frame



What is A2LA?

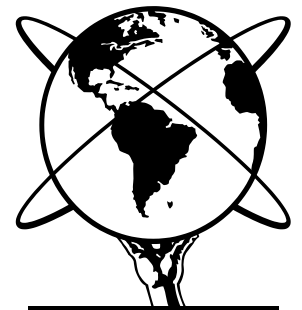
American Association for Laboratory Accreditation

- Established in 1978
- Largest U.S. multi-discipline Conformity Assessment Body (CAB) Accreditation system
 - **2552 CABs (LABs) (certificates) currently accredited (2700 active certs in our system)**
- Fourth largest system in the world



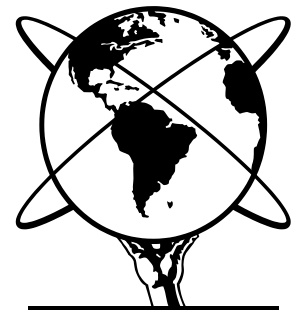
A2LA Programs

- Laboratory Accreditation – testing and calibration (ISO/IEC 17025)
- Inspection Body Accreditation (ISO/IEC 17020)
- Proficiency Testing Providers (ISO/IEC 17043)
- Reference Materials Producers (ISO Guide 34)
- Product Certification Body Accreditation (ISO/IEC 17065)
- Medical Testing Laboratory Accreditation (ISO 15189)
- LAB quality & related training



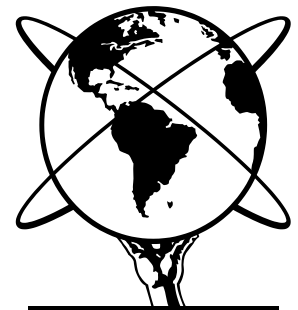
Fields of Laboratory Accreditation

- Acoustics & Vibration
- Calibration
- Construction Materials
- Environmental
- Geo-technical
- Mechanical
- Non-destructive
- Thermal
- Biological
- Chemical
- Electrical
- Forensic
- Information Technology
- Medical
- Sustainable Energy



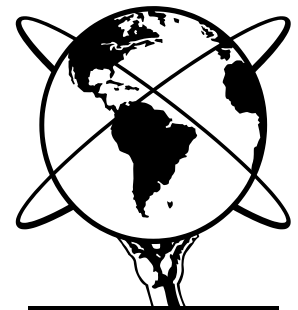
Accreditation Bodies in North American (common)

- ILAC MRA (Mutual Recognition Authority)
- A2LA – Non profit, Non governmental (MRA)
- NVLAP - Non profit, Governmental (MRA)
- IAS - Non profit, Non governmental (MRA)
- Perry Johnson (PJLA) – For profit, Non governmental (MRA)
- ACLASS – Non profit, Non governmental (MRA)
- LAB – For profit, Non governmental (MRA)
- NADCAP – Non profit, Non governmental (Not 17025)



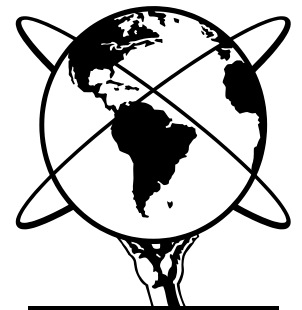
Common *BIG* issues with Labs new to accreditation

- 6-9 months from first call to accreditation
- Cost: both cash and internal labor
- QM too restrictive (17025 verbatim)
- QM too loose
- Definitions of *POLICY* and *PROCEDURE*
- QM just for accreditation, not life
- Measurement Uncertainty
- Using ASTM etc as internal procedure



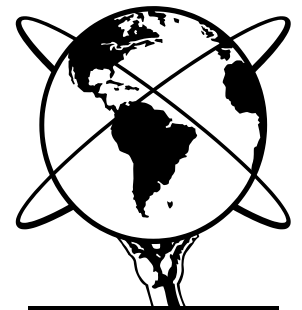
Common *SMALL* issues with Labs new to accreditation

- Proficiency Testing (PT)
- Management Review
- Normative and external document control
- Reviews and QC checks, and the lack of documentation
- Not following your own procedures
- Not understanding the AB symbol use requirements
- Calibrations/RM/RS from unaccredited vendors



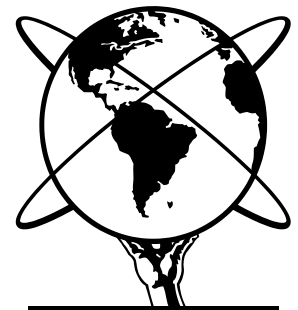
More common *SMALL* issues with Labs new to accreditation

- Purchasing policies, especially in the error of the credit card
- Not having a critical eye compare testing procedures with industry standards occasionally or when they are updated
- Not having all tooling and measuring equipment calibrated
- Internal audits are paper drills
- CARs are paper drills
- Inadequate training/authorization records
- Paper document distribution
- “Knobology” procedures



Horror stories from the field

- 45 page QM that is line and verse of 17025 (really?)
- A 400+ page QM with every procedure since 1945
- Big lab with a major procedural finding in nearly every test, >45 findings, accreditation suspended
- QM abandoning assessor for final day due to VP demands
- Confrontational Verbal abuse of the assessor
- Serious stalling during the assessment
- Lab expecting audit to be the Internal Audit
“Oops you find it, Go ahead and write me up”



Questions???

Or:

Ask an Assessor without
any fears (of findings)!

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