

GKN AEROSPACE COWES MATERIALS & PROCESSES SPECIAL PROCESS AUDIT REPORT

AUDIT DETAILS

COMPANY	ELEMENT MATERIALS TECHNOLOGY - CLEVELAND	
ADDRESS	5405 E SCHAAF RD,	
	CLEVELAND,	
	OH44134-1337	
TIPQA SUPPLIER CODE	ST0058	
GKN PRIMARY CONTACT	SHANE RIGBY	
TYPE OF AUDIT	DESKTOP / SITE	
AUDIT DATE	MARCH 2024	
ATTENDEE LIST		
AUDITOR(S)	SHANE RIGBY	
AUDITEE CONTACT	ANDREW KEARNS	

PURPOSE AND OBJECTIVES OF AUDIT

This audit was conducted as part of GKN Cowes' 2024 External Special Process Audit Schedule. The objectives of this audit are to verify Element Materials Technology - Cleveland's capability to undertake the process listed below and ensure conformance to the relevant specification.

SCOPE AND CRITERIA

SPECIFICATION	PROCESS	CONTRACT	COMMENTS
ASTM E112	Standard Test Methods for	HTF	
ASTIVIETIZ	Determining Average Grain Size	ПІГ	
ASTM E18	Standard Test Methods for	HTF	
	Rockwell Hardness of Metallic Materials	ПІГ	
ASTM E8/E8M	Standard Test Methods for	HTF	
	Tension Testing of Metallic Materials	ПІГ	

AUDIT FINDINGS

ACTION NUMBER	CRITERIA	DESCRIPTION	
-	-	-	-



CONCLUSIONS

Element Materials Technology - Cleveland have historically been used as a sub-tier processor to Wyman-Gordon Forgings.

Andrew Kearns, Quality Manager at Element, was contacted and confirmed that Element are still process parts for Wyman-Gordon Forgings (however, not currently as a sub-tier for GKN Aerospace), this shows that Element are still currently processing parts and therefore along with the below recognised accreditations are permitted for continuation of their approvals.

This audit has been carried out and approval will be granted based on the Element Materials Technology – Cleveland's A2LA and Nadcap approvals.

APPROVALS

Following this audit, the aforementioned supplier is hereby approved to conduct the following processes, subject to the timely closure of corrective actions:

SPECIFICATION	PROCESS	RESTRICTIONS
ASTM E112	Standard Test Methods for	
ASTWEETZ	Determining Average Grain Size	
ASTM E18	Standard Test Methods for	
ASTIVICIO	Rockwell Hardness of Metallic Materials	
ASTM E8	Standard Test Methods for	
ASTIVIEO	Tension Testing of Metallic Materials	

DISCLAIMER

Please note that any conclusions made as to the compliance of Element Materials Technology – Cleveland to the aforementioned audit scope is based on the conditions at the time of audit, and this audit only evaluates the sample observed.

AUDIT REPORT APPROVAL

ROLE	PRINT NAME	SIGNATURE	DATE
Author	SHANE RIGBY	Shane Rigby	
GKN Primary Contact	SHANE RIGBY	Shane Rigby	
Approval – Processes	MATTHEW WOODFORD		

CIRCULATION

AQqiT

External Special Process folder

Andrew Kearns, Quality Manager, Element Materials Technology - Cleveland



AUDIT OBSERVATIONS

COMMON AUDIT REQUIREMENTS

QUESTION		WER	REMARKS
Does the supplier hold current NADCAP, ISO17025 or other relevant third party approvals? If so record approvals.	YES	NO	Supplier is approved to Nadcap Materials Testing Laboratories (Expiry 30 November), and ISO 17025 approved (Expiry 30 September 2024)
Does the supplier hold current AS9100 approval, or equivalent? If so record approvals.	YES	10	See attached
Does the supplier have an internal special process schedule?	YES	0	This requirement must be met to satisfy Nadcap approvals as above
Does the supplier have an effective corrective action process in place? Review at least one closed corrective action.	YES	NO	Corrective action review was not undertaken during this audit.
Does the supplier hold current issues of all applicable processing specifications, including any deviations and WAIS documents?	YES	NO.	Supplier approvals are to ASTM specifications only. Check of current issues would have been undertaken for Nadcap/A2LA approvals.

SPECIFIC AUDIT REQUIREMENTS



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

Element Cleveland

5405 E Schaaf Rd Cleveland, OH 44131-1337 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: 4344209911 Expiration Date: 30 November 2024 Accreditation Length: 24 Months

Jay Solomond

Executive Vice President & Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527





Accredited Laboratory

A2LA has accredited

ELEMENT CLEVELAND

Cleveland, 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).



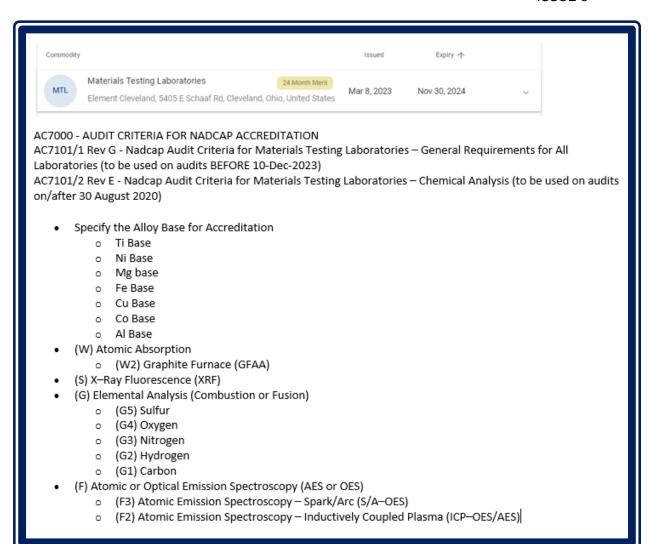
Presented this 24th day of August 2022.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council

Certificate Number 0100.01 Valid to September 30, 2024

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





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

- (XN) Bend Testing
- (XA) Creep
- (P) Fracture Toughness
- (N) Impact
- (C) Stress Rupture
- (B) Elevated Temperature Tensile
- (A) Room Temperature Tensile

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

- (XL) Macro Examination
- (L9) Near Surface Examinations Alpha Case: Cast Titanium
- (L8) Near Surface Examinations Alpha Case: Wrought Titanium
- (L7) Near Surface Examinations IGA, IGO
- (L6) Near Surface Examinations Nitriding
- (L5X) Near Surface Examinations Microindentation (Surface) (Chord Method ARP1820)
- (L5) Near Surface Examinations Microindentation (Surface–Case Depth)
- (L3) Near Surface Examinations Oxidation/Corrosion
- (L2) Near Surface Examinations Alloy Depletion
- · (L12) Inclusion Rating
- (L11) Grain Size
- (L10) Near Surface Examinations Carburization / Decarburization
- (L1) Microindentation (Interior)
- (L0) Metallographic Evaluation



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
- (M1) Brinell Hardness

AC7101/6 Rev D - Nadcap Audit Criteria for Materials Testing Laboratories – Corrosion (to be used on/after 1 July 2018)

- . (Q1) Detecting susceptibility to intergranular attack in austenitic stainless steel
 - o (Q1-4A) Copper-Copper Sulfate- 16% Sulfuric Acid Test "Strauss test" (bend test)
 - o (Q1-1) Oxalic Acid Etch Test

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)

- (Z3) Cast Specimens
- (Z) Standard Specimen Machining

AC7101/9 Rev C - Nadcap Audit Criteria for Materials Testing Laboratories – Specimen Heat Treating (to be used on/after15 January 2017)

AC7110/13 Rev B - Nadcap Audit Criteria for Evaluation of Welds (to be used on audits BEFORE 05-May-2024)

- NOTE: IF YOU ARE SELECTING THE AC7110/13 CHECKLIST YOU MUST ALSO SELECT AC7101/4 Nadcap Audit Criteria for Materials Testing Laboratories — Metallography and Microhardness. You must also select AC7110/13S
 - Supplement C Metallurgical Evaluation of Electron Beam / Laser Welds (identify if this process is used)
 - o Supplement B Metallurgical Evaluation of Fusion Welds (identify if this process is used)
 - Supplement A Metallurgical Evaluation of Welder / Welding Operator Qualifications (identify if this
 process is used)

AC7110/13S Rev D - Nadcap Supplemental Audit Criteria for Evaluation of Welds to be used on audits ON OR AFTER 11 January 2015)

- U2 Pratt & amp; Whitney
- U10 GE Aviation

Lab Type - Lab Type

Independent