

CUSTOMER APPROVAL & CAPABILITY MEMORANDUM

To: Whomever It may applicable to.

Subject: Approved Laboratory Testing & Metallurgical Capabilities

Scope of Approval

This memorandum is issued to formally document the approved laboratory testing and metallurgical capabilities maintained by Element Materials Technology – Charlotte in support of GE Vernova requirements.

All capabilities identified within this memorandum are performed within our active A2LA ISO/IEC 17025:2017 accredited laboratory quality system and are controlled in accordance with applicable industry standards, customer specifications, internal quality procedures, and ISO/IEC 17025:2017 accreditation requirements.

Element Charlotte maintains qualified personnel, calibrated equipment, validated laboratory procedures, and documented process controls necessary to support materials characterization, mechanical testing, metallurgical evaluation, and chemical analysis activities.

Accreditation Alignment

The approvals identified herein are maintained under the Element Charlotte A2LA ISO/IEC 17025:2017 accredited laboratory quality system.

These approvals support customer requirements associated with:

- Mechanical Testing
- Metallurgical Evaluation
- Chemical Analysis
- Hardness Testing
- Corrosion Testing
- Laboratory Heat Treatment Support Activities

Approved Customer (GE Vernova) Capabilities

Chemical Analysis

Standard / Method	Capability	Laboratory Method	Test Code	Status
ASTM E1019	Carbon Determination	Combustion / Carbon Determination	CA CD	Approved
ASTM E1447	Hydrogen Determination	Hydrogen Determination (IGF)	CA HD	Approved
ASTM E1019	Nitrogen Determination	Nitrogen Determination	CA ND	Approved
ASTM E1019	Oxygen Determination	Oxygen Determination	CA OD	Approved

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ASTM E415 / ASTM E1086	Spark/Arc Emissions	Optical Emission Spectroscopy (Spark/Arc)	CA OES	Approved
ASTM E1019	Sulfur Determination	Sulfur Determination	CA SD	Approved

Corrosion / Environmental Testing

Standard / Method	Capability	Laboratory Method	Test Code	Status
ASTM A262	Oxidation Testing	Oxidation Testing	CO OT	Approved

Metallurgical Evaluation

Standard / Method	Capability	Laboratory Method	Test Code	Status
Internal Procedure / Customer Specific Requirements	Alpha Case and/or Microstructure	Metallographic Evaluation – Alpha Case / Microstructure	ME AC	Approved
Internal Procedure / Customer Specific Requirements	Alloy Depletion	Metallographic Evaluation – Alloy Depletion	ME AD	Approved
ASTM E112 / ASTM E930	Grain Size	Grain Size Determination	ME GS	Approved
ASTM E3 / ASTM E407 / ASTM E45	Miscellaneous Metallography	Metallographic Evaluation – Misc. (as specified)	ME MIS	Approved
ASTM E384	Micro Hardness: Vickers and Knoop (<1 kgf)	Microhardness Testing – Vickers/Knoop	ME MVK	Approved

Mechanical Testing

Standard / Method	Capability	Laboratory Method	Test Code	Status
ASTM E23	Charpy	Impact Testing – Charpy	MT CH	Approved
ASTM E139	Creep	Creep Testing	MT CRP	Approved
ASTM E21	Elevated Temperature Tensile	Tensile Testing – Elevated Temperature	MT ETT	Approved
ASTM E8 / E8M	Room Temperature Tensile	Tensile Testing – Ambient Temperature	MT RTT	Approved
ASTM E139	Stress Rupture	Creep / Stress Rupture Testing	MT SR	Approved

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Hardness Testing

Standard / Method	Capability	Laboratory Method	Test Code	Status
ASTM E10	Brinell Hardness	Hardness Testing – Brinell	MT BH	Approved
ASTM E18	Rockwell Hardness	Hardness Testing – Rockwell	MT RH	Approved

Laboratory Support Processes

Standard / Method	Capability	Laboratory Method	Test Code	Status
Internal Procedure / Customer Specific Requirements	Heat Treatment of Specimens	Laboratory Heat Treatment (conditioning specimens)	MT HTS	Approved
Internal Procedure / Customer Specific Requirements	Low Stress Grinding	Specimen Preparation – Low Stress Grind	MT LSG	Approved
Internal Procedure / Customer Specific Requirements	Low Stress Grinding of Test Specimens	Specimen Preparation – Low Stress Grind & Polish	MT LSP	Approved

Quality Commitment

Element Charlotte remains committed to maintaining ISO/IEC 17025:2017 accreditation compliance, customer-specific approval requirements, technical competence, equipment calibration and traceability, and continuous quality improvement to ensure accurate, reliable, and technically compliant laboratory results supporting customer applications.

Controlled Approval Statement

GE Vernova approvals identified within this memorandum are maintained through the Element Charlotte A2LA ISO/IEC 17025:2017 accredited laboratory quality system and remain subject to ongoing accreditation compliance, internal quality surveillance, proficiency validation, and customer oversight requirements.

A2LA accreditation certificates and detailed scope information are available upon request.

Current Approval Status

Element Charlotte currently maintains APPROVED status for all capabilities identified within this memorandum supporting GE Vernova requirements under the applicable A2LA ISO/IEC 17025:2017 accreditation scope.

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Memo Approval



05-14-2026

Justin Nelson
General Manager



05-14-2026

Parth Patel
Quality Manager

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