

## ELEMENT MATERIALS TECHNOLOGY - CHARLOTTE

1200 Westinghouse Blvd Ste A  
NC 28273 Charlotte  
USA

*FOR THE ATTENTION OF*

Brian BECERRA Quality Assurance Manager  
Chris PIPER General Manager

*CERTIFICATE PREPARED BY*  
NUNEZ Cesar

*YOUR QTML FOCAL POINT*  
NUNEZ Cesar

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*DATE*  
08/12/2020

*OUR REFERENCE*  
SUR2020.0309 Ind. B

*ARP-ID of the External Shop*  
310769

*TYPE of External Shop*  
Independent

### Attestation letter for Qualification on Test Methods

Dear Madam, Dear Sir,

We herewith inform that the couples <Test Methods / External Shop> as detailed in the Appendix have been either registered or modified in the Official Airbus Qualified Test Methods List (QTML).

The latest valid status of all qualified <Test Methods / External Shop> couples is published by regular QTML reports:

- On Airbus homepage for Suppliers (<https://www.airbus.com/be-an-airbus-supplier.html>) - Only Independent Labs.
- On Airbus Supply Portal A2QS - All External Shops.

A qualified couple is not linked to a specific product. It is the proof that the External Shop is meeting the requirement of the M20691.2: Perform Couple <Product/Supplier Site> Compliance and Maturity's Activities for Material Products Suppliers and/or M20691.3: Perform Couple <Product/Supplier Site> Compliance and Maturity's Activities for Aerostructure Parts Suppliers.

- On a quality aspect: we kindly ask you to indicate us any modification which could have a quality impact.
- Concerning technical requirements:
  - \* We kindly ask you to participate at least every 2 years to the PTP for the tests you perform on Airbus Products (see Appendix for details on next PTP participation requirements).  
You can find all necessary information about PTP participation process on the website: <https://ptpscheme.com>.  
In case of PTP results out of tolerances, the couples qualification can be downgraded to an authorisation to proceed or withdrawn and the PTP participation frequency is reduced to one year, subject to acceptance by Airbus of your Root Cause Analysis and associated Corrective Actions.
  - \* On the other hand, you shall supply at least every 2 years the results of your Internal Homogeneity Studies per Test Families.

Airbus reserves the right to withdraw or suspend the qualification at any time for specific reason, e.g.

- Any major incident(s) detected on one or several Test processes
- Lack in quality
- Evidence non-compliance with the M20691.2 and/or M20691.3
- Loss of Airbus Supplier Approval
- Stop of the Business

Yours faithfully,

**NUNEZ Cesar**

**Airbus Test Methods Auditor POMDS – CE**

**Your QTML Focal Point**



**SAUX Alexandra**

**Test Methods Coordinator POMDS– CE**

**Your Quality Responsible**



Appendix: Matrix of qualified Couples <Test Methods / External Shop>

## APPENDIX: Matrix of qualified Couples <Test Methods / External Shop>

We hereby declare the External Shop:

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Qualified or Authorised to proceed for the following Test processes:

| Test Standard(s) *    | Test label   | Complex. | Qualif. Status             | Next PTP part. ** | QCS Ref. | Remark  |
|-----------------------|--|----------|----------------------------|-------------------|----------|---|
| AITM 4-0002           | Microstructural characterization of welded aluminium structures  | Low      | Qualified                  |                   |          |   |
| AMS 2315              | Determination of delta ferrite content   | Low      | Qualified                  |                   |          |   |
| ASTM A262             | Standard practices for detecting susceptibility to intergranular attack in austenitic stainless steels | Low      | Disqualified               |                   |          |   |
| ASTM A604             | Standard Practice for Macroetch Testing of Consumable Electrode Remelted Steel Bars and Billets        | Low      | Qualified                  |                   |          |   |
| ASTM B117             | Standard practice for operating salt spray (Fog) apparatus   | Low      | Disqualified               | 2020              |          | Disqualified on 26/03/2020                                |
| ASTM E112             | Determining average grain size   | Low      | Qualified                  | 2021              |          |   |
| ASTM E139             | Creep, creep-rupture, and stress-rupture tests of metallic materials                                   | Low      | Qualified                  | 2021              |          | Fe, Ni, Ti  |
| ASTM E18              | Standard Test Methods for Rockwell Hardness of Metallic Materials                                      | Low      | Qualified with limitations | 2022              |          | HRC only  |
| ASTM E3               | Standard guide for preparation of metallographic specimens   | Low      | Qualified                  |                   |          | Cu, Ni, Sn  |
| ASTM E340             | Macroetching metals and alloys   | Low      | Qualified                  |                   |          |   |
| ASTM E384             | Microindentation hardness of materials   | Low      | Qualified                  | 2022              |          |   |
| ASTM E407             | Microetching metals and alloys   | Low      | Qualified                  |                   |          |   |
| ASTM E45              | Determining the inclusion content of steel   | Low      | Qualified                  | 2021              |          | Fe  |
| ASTM E8               | Tension testing of metallic materials  | Low      | Disqualified               | 2020              |          | Disqualified on 26/03/2020                                |
| ASTM E92              | Vickers Hardness and Knoop Hardness of Metallic Materials  | Low      | Qualified                  | 2022              |          |   |
| EN 2002-1 (ASTM B557) | Tensile testing at ambient temperature   | Low      | Disqualified               | 2020              |          | Disqualified on 26/03/2020                                |
| EN 2002-2             | Tensile testing at elevated temperature  | Low      | Disqualified               | 2020              |          | Disqualified on 26/03/2020<br>Young modulus not included. |

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## APPENDIX: Matrix of qualified Couples <Test Methods / External Shop>

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|------------------------|--|----------|----------------|-------------------|------------|--------|
| EN 2002-6              | Metallic materials: Bend testing   | Low      | Qualified      |                   |            |        |
| EN 3114                | Microstructure of ( $\alpha + \beta$ ) titanium alloy wrought products   | Low      | Qualified      |                   |            |        |
| EN 3683                | Titanium alloy wrought products - Determination of primary $\alpha$ content - Point count method and line intercept method | Low      | Qualified      |                   |            |        |
| EN 3684                | Titanium alloy wrought products - Determination of $\beta$ transus temperature - Metallographic method                     | Low      | Qualified      |                   |            |        |
| ISO 148-1 (low temp.)  | Charpy pendulum impact test (low temperature)  | Low      | Qualified      | 2022              | Fe, Ni, Ti |        |
| ISO 148-1 (room temp.) | Charpy pendulum impact test (ambient temperature)  | Low      | Qualified      | 2021              | Fe, Ni, Ti |        |
| ISO 4516               | Metallic and other inorganic coatings - Vickers and Knoop microhardness tests  | Low      | Qualified      |                   |            |        |
| NASM 1312-12           | Fastener test methods - Method 12: Thickness of metallic coatings  | Low      | Qualified      |                   |            |        |
| NASM 1312-6            | Fastener test methods - Method 6: Hardness   | Low      | Qualified      |                   |            |        |
| QVA-Z10-53-00          | Metallographic test - Macroscopic examination - General information  | Low      | Qualified      |                   |            |        |
| Z_Metal. Spec. prep    | Metallic specimen preparation (for mechanical testing)   | None     | Qualified      |                   |            |        |

\* Unless otherwise specified, last issue of the standard shall apply.

\*\* Next PTP participation year is given for information - It is the External Shop's responsibility to check every year on the PTP Website (<https://ptpscheme.com/>) which kits are proposed.