

APPLUS BARCELONA (LGAJ)

Campus UAB
Apartado de correos,18
8193 BELLATERRA
Spain

FOR THE ATTENTION OF

Miguel DESCALZO Structures Test Laboratory
Luis GUELBENZU Quality Manager
Oscar Hernandez Structural Test Leader
Marc MARTIJA ORTIZ Business Unit Manager

CERTIFICATE PREPARED BY
NUNEZ Cesar

YOUR QTML FOCAL POINT
NUNEZ Cesar

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DATE
22/07/2019

OUR REFERENCE
SUR2019.0042 Ind. E

ARP-ID of the External Shop
286347

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In case of PTP results out of tolerances, the couples qualification can be downgraded to an authorisation to proceed or withdrawn and the PTP participation frequency is reduced to one year, subject to acceptance by Airbus of your Root Cause Analysis and associated Corrective Actions.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 1-0007-A / B / C / D	Fibre reinforced plastics - Determination of plain, open hole and filled hole tensile strength	Low	Qualified with limitations	2019		Limited to Type A3 & A4
AITM 1-0008-A3	Fiber reinforced plastics - Determination of plain compression strength (Thick specimens, < 500 kN)	High	Qualified		130469	
AITM 1-0009-1 / 2	Fibre reinforced plastics - Determination of bearing strength by either pin or bolt bearing configuration	High	Authorised to Proceed September 2019	2019	141174	
AITM 1-0010 (EN 6038)	Fibre reinforced plastics - Determination of compression strength after impact	High	Qualified	2019	131074	
AITM 1-0018	Fibre reinforced plastics - Sandwich flexural test - Four-point bending	Low	Qualified			
AITM 1-0025	Fiber reinforced plastics - Flatwise tensile test of composite sandwich panel	Low	Qualified	2019		
AITM 1-0029	Fibre reinforced plastics - Determination of tensile strength of a tapered or stepped joint	Low	Qualified			
AITM 1-0058	Mobile hardness testing	Low	Qualified			
AITM 1-0065	Fiber reinforced plastics - Determination of joint strength of mechanically fastened joints	High	Authorised to Proceed December 2019	2017	181306	
AITM 1-0066	Fibre reinforced plastics – Determination of pull-out / pull-through strength on riveted joints	Low	Qualified			
AITM 1-0067	Determination of tension through the hole strength on fastened joints	Low	Qualified			
AITM 4-0002	Microstructural characterization of welded aluminium structures	Low	Qualified			
AITM 4-0005	Macroscopic and microscopic examination of fiber reinforced plastics	Low	Qualified			
ASTM A604 (EN 2003-7)	Macroetch testing of consumable electrode remelted steel bars and billets	Low	Qualified			
ASTM B117	Standard practice for operating salt spray (Fog) apparatus	Low	Disqualified	2019		
ASTM B769	Shear testing of aluminium alloys	Low	Qualified			

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ASTM C273	Shear properties of sandwich core materials	Low	Qualified			
ASTM C365	Flatwise compressive properties of sandwich cores	Low	Qualified			
ASTM E111	Young's modulus, tangent modulus, and chord modulus	High	Authorised to Proceed December 2019			
ASTM E112	Determining average grain size	Low	Qualified	2020		
ASTM E21	Standard test methods for elevated temperature tension tests of metallic materials	Low	Qualified	2021		
ASTM E340	Macroetching metals and alloys	Low	Qualified			
ASTM E384	Microindentation hardness of materials	Low	Qualified	2019		
ASTM E399	Linear-elastic plane-strain fracture toughness K _{IC} of metallic materials	High	Qualified	2020	171305	qualified 10/04/2019
ASTM E407	Microetching metals and alloys	Low	Qualified			
ASTM E407	Microetching metals and alloys	Low	Qualified			
ASTM E45	Determining the inclusion content of steel	Low	Authorised to Proceed September 2019	2019		
ASTM G110	Evaluating intergranular corrosion resistance of heat treatable aluminium alloys by immersion in sodium chloride + hydrogen peroxide solution	Low	Qualified			
ASTM G112	Standard guide for conducting exfoliation corrosion tests in aluminium alloys	Low	Qualified			
ASTM G34	Exfoliation corrosion susceptibility in 2XXX and 7XXX series aluminum alloys (EXCO Test)	Low	Qualified			
ASTM G66	Visual assessment of exfoliation corrosion susceptibility of 5XXX series aluminium alloys (ASSET test)	Low	Qualified			
ASTM G67	Determining the susceptibility to intergranular corrosion of 5XXX series aluminium alloys by mass loss after exposure to nitric acid (NAMLT test)	Low	Qualified			

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ASTM G85	Modified salt spray (fog) testing	Low	Qualified			
EN 2002-1 (ASTM B557)	Tensile testing at ambient temperature	Low	Qualified	2020		
EN 2002-6	Metallic materials: Bend testing	Low	Qualified			
EN 2003-9	Titanium and titanium alloys - Part 9: Determination of surface contamination (method A: Micrographic examination / Method B: Hardness testing)	Low	Qualified	2019		Method B only
EN 2243-4	Structural adhesives - Part 4: Metal-honeycomb core flatwise tensile test	Low	Qualified	2019		
EN 2378	Fibre reinforced plastics - Determination of water absorption by immersion	Low	Qualified			
EN 2667-2 (PRen)	Foaming structural adhesives - Part 2: Compressive tube shear	Low	Qualified			
EN 3114	Microstructure of ($\alpha + \beta$) titanium alloy wrought products	Low	Qualified			
EN 3114	Microstructure of ($\alpha + \beta$) titanium alloy wrought products	Low	Qualified			
EN 3615	Fibre reinforced plastics - Determination of the conditions of exposure to humid atmosphere and of moisture absorption	Low	Qualified			
EN 3683	Titanium alloy wrought products - Determination of primary α content - Point count method and line intercept method	Low	Qualified			
EN 3684	Titanium alloy wrought products - Determination of β transus temperature - Metallographic method	Low	Qualified			
EN 6018	Determination of density according to displacement method	Low	Qualified			
EN 6072	Constant amplitude fatigue testing (HCF)	High	Authorised to Proceed December 2019	2020		QCS Pending
ISO 1519	Paints and varnishes - Bend test (cylindrical mandrel)	Low	Qualified			
ISO 2178	Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method	Low	Qualified			

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ISO 3651-1	Determination of resistance to intergranular corrosion of stainless steels - Part 1: Austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in nitric acid medium by measurement of loss in mass (Huey test)	Low	Qualified			
ISO 3651-2	Determination of resistance to intergranular corrosion of stainless steels - Part 2: Ferritic, austenitic and ferritic-austenitic (duplex) stainless steels - Corrosion test in media containing sulfuric acid	Low	Qualified			
ISO 3887	Steels - Determination of depth of decarburization	Low	Qualified	2019		
ISO 4516	Metallic and other inorganic coatings - Vickers and Knoop microhardness tests	Low	Qualified	2019		
ISO 4624	Paints and varnishes - Pull-off test for adhesion	Low	Qualified			
ISO 6270-1	Paints and varnishes - Determination of resistance to humidity - Part 1: Continuous condensation	Low	Qualified			
ISO 643	Steels - Micrographic determination of the apparent grain size	Low	Qualified	2020		
ISO 6506 (ASTM E10)	Brinell hardness test	Low	Qualified	2019		
ISO 6507 (ASTM E92)	Vickers hardness test	Low	Authorised to Proceed September 2019	2019		
ISO 6508 (ASTM E18)	Rockwell hardness test	Low	Qualified	2019		
ISO 9227 (ASTM B117)	Corrosion tests in artificial atmospheres - Salt spray tests	Low	Disqualified	2019		
Z_Duqueine window A350	FPQ Mechanical Tests for Duqueine Window Frames on A350 XWB	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.