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**DATE** Wednesday, June 6, 2018

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**FROM** Marie Piché

**SUBJECT** Universal Stainless & Alloy Products Inc. (Bridgeville) - Qualification of AMS 5629 in Precipitation Hardened Condition

**REFERENCE No** MP:18/3961 rev - -

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References:

- [1] RFSE#1000059283
- [2] AMS 5629H - Steel, Corrosion-Resistant, Bars, Wire, Forgings, Rings, and Extrusions 13Cr - 8.0Ni - 2.2Mo - 1.1Al Vacuum Induction Plus Consumable Electrode Melted Solution Heat Treated, Precipitation Hardenable
- [3] AMS 5629/H1000A - Steel, Corrosion-Resistant, Bars, Wire, Forgings, Rings, and Extrusions 13Cr - 8.0Ni - 2.2Mo - 1.1Al Vacuum Induction Plus Consumable Electrode Melted Solution Heat Treated, Precipitation Hardened (H1000)
- [4] PCD Method 0223 Rev 0 - 1 PH13-8Mo-Bombardier-Aged (1000F)\_Bloom\_Bar\_(≥ 1.00in Thick) dated June 6, 2018
- [5] Historical Data Bombardier PH13-8Mo H1000 Mechanical Test Data.xls

BOMBARDIER Aerospace Materials and Processes Engineering (BAMPE) has reviewed the qualification package submitted by Universal Stainless & Alloy Products Inc. (600 Mayer St., Bridgeville, PA, US, 15017-2705 SAP 108677 / EMCM 134) for

- AMS 5629 bars in H1000 condition

The documentation [5] meets the requirements of AMS 5629 [2] and AMS 5629/H1000 [3].


Universal Stainless & Alloy Products Inc. is approved for the production of AMS 5629 in precipitation hardened condition according to Method 0223 Rev 0 [4].

Please note that the Bombardier Aerospace system makes the Supplier of materials totally responsible for the conformance of the products supplied. This means that Bombardier will consider Universal Stainless & Alloy Products Inc. responsible for all the manufacturing processes of AMS 5629 stock. If these are performed by an outside supplier, then Universal Stainless & Alloy Products Inc. must ensure that the supplier's work is in conformity with the applicable industry specification, and records of any audits performed must be kept on file at Universal Stainless & Alloy Products Inc.

Note that Universal Stainless & Alloy Products Inc. is also listed in EMCM-001 for the following material specifications:

- AMS 5617 HI-RES CUSTOM 455 BAR
- AMS 5629 CRES PH13-8 Mo BAR & EXTRUSION, SOLUTION HEAT TREATED
- AMS 5643 CRES 17-4PH BAR/TUBE/RINGS
- AMS 5659 CRES 15-5 PH BARS SOLUTION HEAT TREATED
- AMS 5659 CRES 15-5 PH BARS PRECIPITATION HARDENED (H1025)
- AMS 5731 HT-RES A286 BARS / TUBING / RINGS
- AMS 6487 STEEL H-11 BARS

Regards,

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**Marie Piché**  
Bombardier Aerostructures and Engineering Services  
Materials and Processes Engineering

**Hasan Salek**  Digitally signed by Hasan Salek  
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**Hasan Salek**  
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