

Approved Certificate

100 Titanium Way Toronto, OH, 43964

Telephone (740) 537-5694, Fax (740) 537-5653

Sample

Page

Hitanium S

CERT ID 24325DGE01

11-MAR-2021 12:47:28 GMT

SOLD TO CUSTOMER

1250 Interstate Drive, Wentzville, MO 63385 TIMET Service Center St. Louis

PURCHASE ORDER

HEAT NUMBER 24325DG

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Melle Process Location
Timet - Toronto, OH, USA

TEST NUMBER S19883

This material complies with the following specifications:

AMS 4911 P

AMS-T-9046 A AB-1 Cond A

ASTM B 265 -15 Gr. 5

ASTM F 1472-14

BS 2TA59 2009

BS 7252 PART 3 1997

DMS 1592 H

ISO 5832-3 7/1/96

MIL-T-9046 J AM 2

Additional Specifications

AMS 4911 R

ASTM B 265 -20a

ASTM F 1472 -20a

Melt Method

- OIL

EB+VAR

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5/28/21 THE THAMUM



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- Surface free from alpha case and product conforms to the other technical requirements of the referenced specification(s). Compliance Statements
- During the manufacturing process, this material has not come in contact with mercury or radioactive luminescent materials; as such, it is certified to be free of mercury and radioactivity.
- Microstructure examined and acceptable to the order specifications.
- Bend testing performed meets or exceeds the requirements of the ordered specifications.
- TIMET-Toronto is an approved supplier of this product per DMS QPL 1592 Issue 19. Ingot melted in accordance with DMS 2442E-R1; TIMET-Morgantown, PA, is an approved ingot source per DMS QPL-2442 Issue 20.
- No weld repair has been performed on this material.
- Material complies with DFARS 252.225-7008.
- Material certificate in compliance with EN 10204:2004 Type 3.1.
- The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes including federal law, Title 18, Chapter 47.
- TIMET-Toronto has complied with all metal stock producer requirements of AS6279 B.
- TIMET-Toronto has a Quality Management System that is in compliance with ISO 9001:2015, and AS 9100:2016 Revision D (AS9100 certificate is available at www.timet.com)
- Customer will accept TIMET EXCEPTION to microstructure requirements of BS 7252 PART 3 & ISO 5832-3.
- Material produced and controlled in accordance with PWA 300 Revision BR and BP.
- Material produced and controlled in accordance with PW-QA 6088 Revision 30.
- TIMET has a quality program which meets the requirements of United Technologies ASQR-01, Revision 11, Type 6
- Material processed in accordance with PWA MCL F-14 D.
- 17. Material produced and controlled in accordance with PWA MCL Manual Section F-22 Revision B.
- Material testing performed in accordance with PWA MCL Manual Section F-23 Rev G.
- This material is capable of the service center providing LCS compliance. 19.
- This revised certificate supersedes all previously issued certificates but does not in any way alter, amend, waive, or modify the terms and conditions of the original sale as contained on TIMET's sales acknowledgement.
- Material produced and controlled in accordance with CMMP015 Rev. E.

Ingot Chemical Analysis (Weight percent)

Unless otherwise noted, Ingot Chemical Analysis performed at Morgantown Process Lab, 900 Hemlock Road, Morgantown, PA, 19543, USA

Unless oth	erwise noted, Ingo	ot Chemical An	alysis performe	a di Biong-					
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20191240 PURCHASE ORDER

ritanium Samp **Product Analysis** (Weight percent)

Sert TMS Titanium S no, OH, Sample Cert inple cert with Unless otherwise noted, Product Analysis performed at Toronto Laboratory, 100 Titanium Way, Toronto, OH, 43964, USA itanium Sample MS Titanil

Sample ID

1114 56

- MS Titanium Hydrogen values reported in PPM. Hydrogen determined by inert gas fusion per ASTM E1447. Carbon determined by Chemistry Statements TWS Titanium Sample Cert combustion per ASTM E1941. Oxygen and Nitrogen determined by inert gas fusion per ASTM E1409. Henderson Melt: STM. STM. X-ray flux

 X-ray flux

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 reprodu Metallics determined by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES) per ASTM E2371. Morgantown Melt: Copper and Boron by atomic spectrometry (ingot only) and all other elements by x-ray fluorescence Sample Cert

 Sample Cert
- sample Cert This Titanium Sample Cert Residual elements each less than 0.10% maximum, 0.40% maximum total. itanium Sample Cert. TMS Titanium. itanium Sample Cert

- P.K

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TIMETO	Toronto, OH, 43964 Page 4 of 6
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1250 Interstate Drive, Wentzville, MO 63385 czvili Salilii S.65 Titanium Sample Cert

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Toronto, OH, 43964

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Tests on Other Material

Unless otherwise noted, testing performed at Toronto Laboratory, 100 Titanium Way, Toronto, OH, 43964, USA

Batch: 24338DGE01 (S19917)

Sample Cert

Cert This Titanium Sample Cert Date: 2021.03.11

TWS Titanium Sample

Michael Giovannone - Certification Specialist

Version History

v.1 18-FEB-2021

Original Version

Certificate revised to add CMMP015 Rev. E and PWA 300 BP Titanium Sar 11-MAR-2021

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