



**Perryman company**  
 213 Vandale Drive, Houston, PA 15342, USA  
 phone: 724-746-9390 fax: 724-746-9392

**Certified Test Report**

Customer: PTD56169  
 Heat No: PVD3625  
 Melting Source: Perryman Company, USA  
 Work Order No: 095616  
 Date: 02/09/2016  
 Quantity: 584 Lbs

Customer Order No: PTD56169  
 Product: Ti 6Al-4V .24951.2505" Dia. CG Bar X 10-12" R/L

Specification: AMS 4928B, AMS 4967L, ASTM B348 gr 5 rev 13,  
 AMS 6931C, AMS T-9047, NC, MIL-T-9047G Am 2,  
 ASTM F1472-14, AMS 2241R, EN 10204 3.1 (2004),  
 ASME SB-348 (2007), MIL-H-81200 Rev B,  
 AMS-H-81200 Rev D, AS6279

Chemistry: Wt%  
 Post Processing Hydrogen Determination H: .0017

Metallographic Examination: ASTM E407: Equiax alpha-beta  
 Surface Contamination - ASTM E 407: No alpha case

Mechanical Properties: Tensile Strength ksi

ASTM E8/EN 2002-001:2005 E	Tensile Strength ksi	0.2% Yield Strength ksi	Elongation 4D %	Reduction of Area %
As Shipped	150.6	135.8	19	44
Solution treated and aged 1750 F 1 hr WQ	150.5	135.4	19	45
1000 F 4 hr AC	183.9	172.9	12	54

Ultrasonic inspection to AMS 2631D Class AA, MIL-STD-2154 Type 1 Class AA, and AMS-STD-2154 Type 1 Class AA - Passed  
 This is to certify that all test results conform to the specifications listed above and that all tests required were performed by Perryman Company.  
 The material did not come in contact with Mercury or radioactive contamination at Perryman.  
 Attached is a copy of the Ingot Chemistry.  
 The test results relate only to the lots tested and are contained in the records of Perryman Company. The Certified Test Report cannot be reproduced except in full, without written approval.

*Zachary S. Dragan*  
 02/09/16  
 Zachary S. Dragan  
 Laboratory Manager



# Perryman company

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**Perryman Company**  
213 Vandale Dr  
Houston, PA 15342

## CERTIFICATE OF TEST For TITANIUM INGOT

WORK ORDER  
**018341**

HEAT NUMBER  
**PVD3625**

QUANTITY <b>12595 Lbs</b>		PCS <b>1</b>										
DESCRIPTION <b>Grade: Ti6Al4V</b> <b>Size: 30"</b> <b>Form: Ingot</b>												
SPECIFICATION CAPABILITY <b>P-101 Rev 5</b>												
<b>Chemistry (WT%) Top</b>												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.15	.006	.021	.16	6.33	3.98	.016	.004	<.002	<.001	.0006	<.001	<.001
<b>Chemistry (WT%) Bottom</b>												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.16	.006	.024	.16	6.26	4.04	.015	.003	<.002	<.001	.0006	<.001	<.001
<b>Comments</b>												
Melting Process: EBCHR-VAR												
Calculated Beta Transus T/B: 1820F/1821F												
Calculated Beta Transus T/B C: 993C/994C												
Residual Elements, each < .10%												
Residual Elements, total < .30%												
Balance Titanium.												
Melted in the United States of America.												
The material is free of radioactive and mercury contamination.												
Oxygen/Nitrogen tested in accordance with ASTM E1409.												
Carbon tested in accordance with ASTM E1941.												
Hydrogen tested in accordance with ASTM E1447.												
B, Y, Pd, Ru tested in accordance with ASTM E2371.												
Metallics Tested By Spark-AES.												
<b>Elements not required by specification are included in Others(each) and Others(Total)</b>												



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This material conforms to the chemistry and quality system requirements of the specifications referenced. The results relate only to the lot tested and the results are contained in the records of Perryman Company. The certificate of test cannot be reproduced except in full without the written approval of the laboratory, and the recording of false, fictitious, or fraudulent statements or entries on this document may be punished as a felony under federal law.

**Terrance J. Marth**  
Laboratory Supervisor

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