

Certified Test Report

Revision: 1
 Date: 6/8/2023
 Quantity: 131.09 KGS

Customer Order No: 80006386

Product: Ti 6Al-4V ELI 2.50 mm h8 +0/-0.014 mm
 (0.0984" +0/-0.00055") Dia. Fine Wire Bar X 3000 mm - 3100 mm lengths (118.1" - 122")
 Specification: ASTM F136-13, ASTM B348 Gr 23 (2021), ISO 5832-3 (2021),
 EN 10204 3.1 (2004), B-ELI-001 Rev 5, EN 4267 (2002),
 EN 2002-1-
 Condition: Annealed
 Part No: T105BL002.5

Chemistry	WT. %	ASTM E 1447:	Post processing Hydrogen Determination	H: .0015
Metallographic Examination:		ASTM E407:	Microstructure - Equiax alpha-beta	ASTM E 407: Surface Contamination - No alpha case
Etchant: PER1 & PER2				ASME B46.1: Surface Texture - 0.35 µm
Mechanical Properties				
ASTM E8/EN 2002-001:2005E			ETTIC2/ISO 20160:Photo Micrograph	Transverse: A1
Condition		Tensile Strength	2% Yield Strength	Elongation 2"
As Shipped		Mpa	Mpa	%
		1007	880	17
				49

Tensile Test also in accordance to ISO 6892:2016

100% Eddy Current Inspection at Input diameter according to EN10277-1: Passed
 Stress Relieved, Roughness < 0.8 microns, circularity and straightness acceptable
 100% Visually Inspected

With Exceptions accepted by M. Ouchefi 7/25/2019

This is to certify that all test results conform to the specifications listed above and that all tests required were performed by [redacted]
 The material did not come in contact with Mercury or radioactive contamination at Perryman.
 Attached is a copy of the Ingot Chemistry. All testing performed at room temperature unless otherwise noted.
 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. Made in USA.

CERTIFICATE OF TEST For TITANIUM INGOT

WORK ORDER
041147

HEAT NUMBER
PVD7516

QUANTITY		PCS										
12290 Lbs		1										
DESCRIPTION	FORM: Ingot, Grade: Ti6Al4V Eli, Size: 30											
SPECIFICATION CAPABILITY P-104 Rev 3												
Chemistry (WT%) Top												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.11	.006	.011	.18	6.05	3.81	.018	<.008	<.002	<.002	.0003	<.002	<.003
Chemistry (WT%) Bottom												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.12	.006	.012	.18	6.16	3.92	.019	<.008	<.002	<.002	.0003	<.002	<.003
Comments												
Melting Process: EBCHR-VAR Calculated Beta Transus T/B: 1796F/1802F Calculated Beta Transus T/B C: 980C/983C Residual Elements, each < .05% Residual Elements, total < .20% 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 tested in accordance with ASTM E2994. Metallics Tested By XRF in accordance with ASTM E539. Elements not required by specification are included in Others(each) and Others(Total)												

This material conforms to the chemistry and quality system requirements of the specifications and/or Purchase Order 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.

MATERIAL CERTIFICATION

EN10204 TYPE 3.1

MADE IN CHINA

CUSTOMER: [REDACTED]

MTC NO: JZ241106TH

ORDER NO.: RM202411006

DATE: 6-Nov.-2024

Commodity: TI BAR GR.23(ti-6al-4v ELI)	Finish: ANNEALED
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Specification: ASTM F136

Size[mm]	Quantity[pc]	Net Weight[kg]	Ingot No.
O.D 4.0X3000L, h8	599	100.0	MTR24-153#

Chemical Composition (wt.%)

Requiremrnt	Ti	AL	V	Fe	C	N	O	H	Residual element	
									Each	Total
	Remainder	5.50~6.50	3.50~4.50	≤0.25	≤0.08	≤0.05	≤0.13	≤0.012	≤0.1	≤0.40
Result	Remainder	6.05	4.13	0.18	0.011	0.005	0.115	0.0006	Good	Good

Requiremrnt	Tensile Strength R _m (Mpa)	Yield Strength R _{p0.2%} (Mpa)	Elongation (%)	Reduct. Of area (%)
	860MIN.	795MIN.	10MIN.	25MIN.
Result	1147	865	18.5	46.0

Visual Inspection	Dimensional Inspection
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ACCEPTABLE	ACCEPTABLE
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Macro/Microstructure	Ultrasonic Inspection(AMS2631B Class A)	Surface Contamination Test
ACCEPTABLE	ACCEPTABLE	ACCEPTABLE

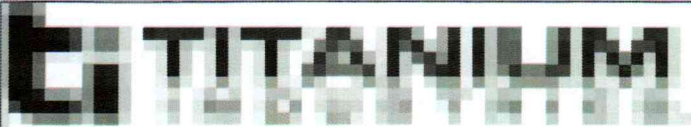
I hereby certify this product conforms to ALL specifically listed technical requirements, and other requirements for these specifications. Furthermore, I certify the above stated quantitative results were derived from testing and analysis, and are in accordance with the referenced specification(s) requirements. No mercury contamination and radio-activity.

Note:

Test Method(s): ASTM E539-19;ASTM E2371-21; ASTM E1941-10: ASTM E1409-08:
ASTM E1447-09;ASTM E8/E8M-16



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Certificate of Conformance

Cert Number 24829-7 3/25/2025

Sold To: [Redacted]
Ship To: [Redacted]

Customer		Your Order		Reference		Product Information			
Our Order		Packing List							
525/0				RM202401006 (1/12/2024)					
16583-1-1				24829-1 (3/25/2025)					
TITANIUM 6AL4V ELI ROUND BAR PER ASTM F136-13				Heat		Tag		Pcs	
2.5MM DIA X 3000MM L				1069232312(2.5)		19314		1184	
h9 TOLERANCE, BRIGHT SURFACE								KGS	
Conform To		ASTM F136						77.56	

Certificate of Conformance

1. All items furnished are in full compliance with purchase order and specification requirements listed, as documented on supplied Mill, Ingot or Lab Report.

2. The material supplied did not come in contact with Mercury or Mercury bearing instruments which are not shielded with a double barrier during processing at Titanium Industries.

3. No weld repair has been performed on this material during processing at Titanium Industries.

4. The Material supplied meets the visual and dimensional requirements of the Purchase Order

5. Raw Material / Product Certification with traceability to manufacturer(s) consisting of inspection test results as required, are included in this certification package.

6. Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punished by law.

TI
QA
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QUALITY CERTIFICATE OF TITANIUM PRODUCT

NO: WRTY20240304D1

合同号 Contract No	牌 号 Designation No	批 号 Heat No		状 态 Condition		规 格 Size		净 重 Net Weight				技 术 标 准 Specification		
10733TL	Ti6Al4V ELI	1069232312		M		Φ2.5mm x 3000mm		104.3kg/1610pcs				ASTM F136-2013		
力学性能 Tensile Test	试样状态 Sample Condition	Rm Tensile Strength [MPa]		Rp0.2 Yield Strength 0.2% [MPa]		A(4D) Elongation [%]		Z Reduction Area[%]		B _k [J/cm ²]	HV [10/15]		弯曲实验 Bend Test	杯突值 IE Impact Strength [mm]
	M	1037		862		16.5		48		/	/		/	/
		/		/		/		/		/	/		/	/
		/		/		/		/		/	/		/	/
其它 Others	外形尺寸 Dimensional Inspection	表面质量 Visual Inspection	探伤检验 Ultrasonic Inspection	低倍组织 Macrostructure	高倍组织 Microstructure		水（汽）压实验 Hydraulic		压扁实验 Flattening		扩展实验 Flaring		展平实验 Fairing	
	Pass	Pass	Pass	Pass	A1		/		/		/		/	
	化学成分 Chemical Composition[%]													
Ti		Al	V	Fe	C	O	N	H	/	/	/	/	/	其它元素（Other）
Balance		6.32	4.22	0.179	0.01	0.109	0.005	0.005	/	/	/	/	/	单个（Each）<0.10
		/	/	/	/	/	/	/	/	/	/	/	/	总和（Total）< 0.40
		/	/	/	/	/	/	/	/	/	/	/	/	/
备注 Note	Tolerance h9: +0/-0.025mm Origin:China													

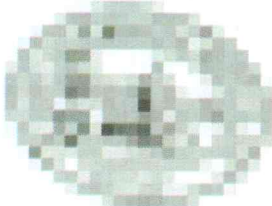
CERTIFICATE OF COMPLIANCE

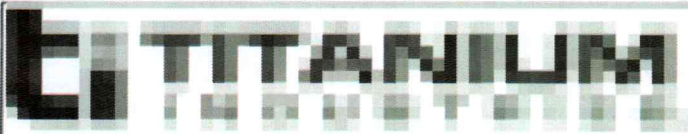
CUSTOMER P.O#		DATE SHIPPED
TAI-10733-TL		2024/3/10
GRADE/ALLOY :	TEMPER/COND.:	
6AL4V ELI	Annealed	
HEAT NO.:	SPECIFICATION:	
1069232312	ASTM F136-2013	

ITEM DESCRIPTION:
Titanium round bar 6AL4V Eli per ASTM F136 with h9 tolerance, bright surface.
Dia. 2.5mm x 3000mm (tolerance h9: +0/-0.025mm) N.W.: 104.3kgs
Dia. 4.0mm x 3000mm (tolerance h9: +0/-0.030mm) N.W.: 125kgs

SEE ATTACHED EN10204 3.1 CERTIFICATE

WE HEAREBY CERTIFY THAT ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONSAND INDICATED HEREIN.PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.





Certificate of Conformance

Cert Number 24950-7

4/14/2025

Sold To:

Ship To:

Customer		Your Order		Reference			
Our Order		Packing List		RM202407012 (7/24/2024)			
525/0				24950-1 (4/14/2025)			
17145-1-1				Product Information			
TITANIUM 6AL4V ELI ROUND BAR PER ASTM F136-13				Heat	Tag	Pcs	KGS
3MM DIA X 3000MM R/L				B23436(1368-1)	20204	788	73.48
h9 TOLERANCE, BRIGHT SURFACE							
Conform To		ASTM F136					

Certificate of Conformance

1. All items furnished are in full compliance with purchase order and specification requirements listed, as documented on supplied Mill, Ingot or Lab Report.
2. The material supplied did not come in contact with Mercury or Mercury bearing instruments which are not shielded with a double barrier during processing at Titanium Industries.
3. No weld repair has been performed on this material during processing at Titanium Industries.
4. The Material supplied meets the visual and dimensional requirements of the Purchase Order
5. Raw Material / Product Certification with traceability to manufacturer(s) consisting of inspection test results as required, are included in this certification package.
6. Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punished by law.

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QUALITY CERTIFICATE OF TITANIUM PRODUCT

NO: WRTY20240823D1

合同号 Contract No	牌 号 Designation No	批 号 Heat No			状 态 Condition		规 格 Size			净 重 Net Weight			技 术 标 准 Specification		
11368TL	Ti6Al4V ELI	B23436			M		Φ3.0mm x 3000mm			128.9kg/1379pcs			ASTM F136-2013		
室温力学性能 Tensile Test	试样状态 Sample Condition	Rm Tensile Strength [MPa]		Rp0.2 Yield Strength 0.2% [MPa]		A(4D) Elongation [%]		Z Reduction Area[%]		a _k [J/cm ²]		HV [10/15]		弯曲实验 Bend Test	杯突值 IE Impact Strength [mm]
	M	1049		889		18		47		/		/		/	/
		/		/		/		/		/		/		/	/
其它 Others	外行尺寸 Dimensional Inspection	表面质量 Visual Inspection	探伤检验 Ultrasonic Inspection	低倍组织 Macrostruc ture	高倍组织 Microstructure			水（汽）压实验 Hydraulic		压扁实验 Flattening		扩展实验 Flaring		展平实验 Fairing	
	Pass	Pass	Pass	Pass	A1			/		/		/		/	
化学成分 Chemical Composition(%)															
Ti		Al	V	Fe	C	O	N	H	/	/	/	/	/	/	其它元素 (Other)
Balance	T	6.36	4.23	0.175	0.0093	0.096	0.0048	<0.001	/	/	/	/	/	/	单个 (Each) <0.10
	M	6.34	4.21	0.175	0.0085	0.113	0.0047	<0.001	/	/	/	/	/	/	总和 (Total) < 0.40
	B	6.33	4.22	0.180	0.0078	0.107	0.0049	<0.001	/	/	/	/	/	/	/
备注 Note	Tolerance h9: +0/-0.025mm														
	Origin:China														

产品质量证书

JH/JL0520-1

CERTIFICATE OF PRODUCT QUALITY

客户名称 CUSTOMER		宝鸡威尔钛业有限公司		合同号 CONTRACT NO.		TI20231115-QL1						
产品名称 PRODUCT		牌号 BRAND	锭号 HEAT NO.	规格/mm DIMENSION		状态 CONDITION		数量 QUANTITY	重量/kg WEIGHT			
钛合金锭		TC4	B23436	Φ700*L		Z		1根	3740			
技术条件 SPECIFICATION		GB/T 3620.1-2007										
化学成分/CHEMICAL ANALYSIS(≤%)												
元素 ELEMENT		Ti	Al	V	Fe	O	N	C	H	单一 /SINGLE	总和 /TOTAL	
标准值 STANDARD VALUE		余量 REMAINDER	6.00- 6.45	4.00- 4.45	0.14- 0.18	0.09- 0.12	0.015	0.02	0.003	0.10	0.30	
测试值 TEST VALUE	上	余量 REMAINDER	6.36	4.23	0.175	0.096	0.0048	0.0093	<0.0010	<0.10	<0.30	
	中		6.34	4.21	0.175	0.113	0.0047	0.0085	<0.0010			
	下		6.33	4.22	0.180	0.107	0.0049	0.0078	<0.0010			
其他/OTHER												
尺寸检验 DIMENSION INSPECTION			外观检验 VISUAL INSPECTION		倒角半径 CHAMFER RADIUS		切斜尺寸 CUTTING ANGLE SIZE		表面粗糙度(μm) SURFACE ROUGHNESS		无损检验 NONDESTRUCTIVE TEST	
实测外径: Φ695mm-Φ700mm			符合要求		30mm		2mm		<6.3			
备注 NOTES		三次熔炼, 冒口: 75mm, 已锯切。										

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检验专用章

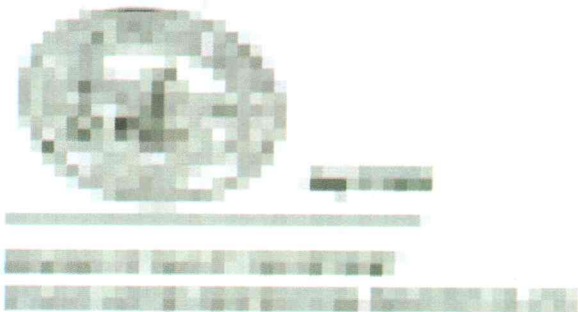
CERTIFICATE OF COMPLIANCE

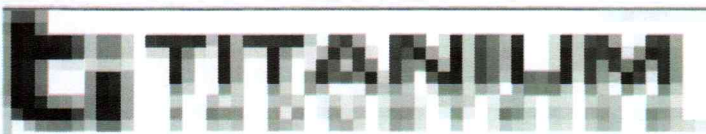
CUSTOMER P.O#		DATE SHIPPED
TAI-11368-TL		2024/9/2
GRADE/ALLOY :	TEMPER/COND.:	
6AL4V ELI	Annealed	
HEAT NO.:	SPECIFICATION:	
B23436	ASTM F136-2013	

ITEM DESCRIPTION:
Titanium round bar 6AL4V Eli per ASTM F136 with h9 tolerance, bright surface.
Dia. 3.0mm x 3000mm (tolerance h9: +0/-0.025mm) N.W.: 128.9kgs
Dia. 4.0mm x 3000mm (tolerance h9: +0/-0.030mm) N.W.: 110kgs

SEE ATTACHED EN10204 3.1 CERTIFICATE

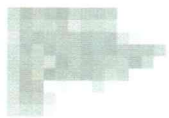
WE HEAREBY CERTIFY THAT ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONSAND INDICATED HEREIN.PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.





Certificate of Conformance

Cert Number 24949-7 4/14/2025



Sold To: [Redacted]
Ship To: [Redacted]

		Reference					
Customer Our Order	525/0	Your Order Packing List	RM202501009 (2/3/2025)				
	17670-1-1		24949-1 (4/14/2025)				
Product Information							
TITANIUM 6AL4V ELI ROUND BAR PER ASTM F136-13			Heat	Tag	Pcs	KGS	
1.6MM DIA X 2000MM L			Ti6Al 4V D23439	21390	3050	53.52	
H9 TOLERANCE, BRIGHT SURFACE							
MILL: WIRETECH							
Conform To			ASTM F136				

Certificate of Conformance

1. All items furnished are in full compliance with purchase order and specification requirements listed, as documented on supplied Mill, Ingot or Lab Report.
2. The material supplied did not come in contact with Mercury or Mercury bearing instruments which are not shielded with a double barrier during processing at Titanium Industries.
3. No weld repair has been performed on this material during processing at Titanium Industries.
4. The Material supplied meets the visual and dimensional requirements of the Purchase Order
5. Raw Material / Product Certification with traceability to manufacturer(s) consisting of inspection test results as required, are included in this certification package.
6. Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punished by law.



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03/18/2025

NO: WRTY20250313D1

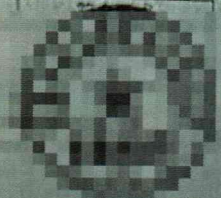
合同号 Contract No	牌号 Designation No	热号 Heat No		状态 Condition	规格 Size	净重 Net Weight			技术标准 Specification				
11927JT	Ti6Al4V ELI	Ti6AL4VD23439		M	Φ1.6mm x 2000mm	53.7kg/3050pcs			ASTM F136-2013				
宣通力学性能 Tensile Test	试样状态 Sample Condition	Rm Tensile Strength [MPa]		Rp0.2 Yield Strength 0.2% [MPa]		A(40) Elongation [%]		Z Reduction Area[%]		ak [J/cm²]	HV [10/15]	弯曲实验 Bend Test	杯突值 IE Impact Strength [mm]
	M	1000		827		20		/		/	/	/	/
		/		/		/		/		/	/	/	/
其它 Others	外行尺寸 Dimensional Inspection	表面质量 Visual Inspection	探伤检验 Ultrasonic Inspection	低倍组织 Macrostruc ture	高倍组织 Microstructure		水（汽）压实验 Hydraulic		压扁实验 Flattening		扩展实验 Flaring	展平实验 Fairing	
	Pass	Pass	Pass	Pass	A1		/		/		/	/	
	化学成分 Chemical Composition(%)												
Ti		Al	V	Fe	C	O	N	H	/	/	/	/	/
Balance		6.31	4.20	0.148	0.013	0.113	0.0047	<0.001	/	/	/	/	其它元素（Other）
		6.31	4.19	0.148	0.020	0.109	0.0056	<0.001	/	/	/	/	单个（Each）<0.10
		6.33	4.20	0.149	0.013	0.117	0.0045	<0.001	/	/	/	/	总和（Total）< 0.40
备注 Note	Tolerance h9: +0/-0.025mm Origin:China												
	Lot No:102023405												

产品质量证书

CERTIFICATE OF PRODUCT QUALITY

JH/JL0520-1

客户名称 CUSTOMER	宝鸡威尔钛业有限公司			合同号 CONTRACT NO.	Ti20231115-QL1					
产品名称 PRODUCT	牌号 BRAND	批号 HEAT NO.		规格/mm DIMENSION	状态 CONDITION	数量 QUANTITY	重量/kg WEIGHT			
钛合金锭	Ti6Al4V	Ti6Al4VD23439		Φ700*L	Z	1PC	3765			
技术条件 SPECIFICATION	化学成分执行销售订单特殊要求									
化学成分/CHEMICAL ANALYSIS(%)										
元素 ELEMENT	Ti	Al	V	Fe	O	N	C	H	单 /SINGLE	总和 TOTAL
标准值 STANDARD VALUE	含量 CONTENT	6.00-6.45	4.00-4.45	0.14-0.18	0.09-0.12	0.015	0.02	0.003	0.10	0.30
测试值 TEST VALUE	上 UPPER	6.31	4.20	0.148	0.113	0.0047	0.013	<0.0010	<0.10	<0.30
	中 MIDDLE	6.31	4.19	0.148	0.109	0.0056	0.020	<0.0010		
	下 LOWER	6.33	4.20	0.149	0.117	0.0045	0.013	<0.0010		
其他/OTHER										
尺寸检验 DIMENSION INSPECTION		外观检验 VISUAL INSPECTION		倒角半径 CHAMFER RADIUS	切斜尺寸 CUTTING ANGLE SIZE	表面粗糙度(μm) SURFACE ROUGHNESS		无损检验 NONDESTRUCTIVE TEST		
实测外径: Φ695mm-Φ703mm		符合要求		20mm	1mm	<6.3				
备注 NOTES	三次熔炼, 切圆口。									



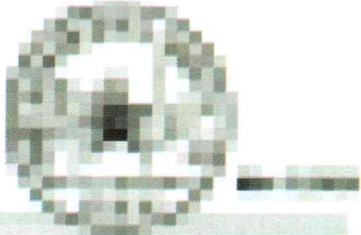
CERTIFICATE OF COMPLIANCE

CUSTOMER P.O#		DATE SHIPPED
TAI-11927-JT		/
GRADE/ALLOY : 6AL4V ELI	TEMPER/COND.: Annealed	
HEAT NO.: TI6AL4VD23439	LOT NO. 102023405	SPECIFICATION: ASTM F136-2013

ITEM DESCRIPTION:
Titanium round bar 6AL4V Eli per ASTM F136 with h9 tolerance, bright surface.
Dia. 1.6mm x 2000mm (tolerence h9: +0/-0.025mm) N.W.: 53.7kgs

SEE ATTACHED EN10204 3.1 CERTIFICATE

WE HEAREBY CERTIFY THAT ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONSAND INDICATED HEREIN.PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.





Certificate of Conformance

Cert Number 25206-7

6/13/2025

Sold To:

Ship To:

		Reference				
Customer	525/0	Your Order	RM202504004 (4/14/2025)			
Our Order	17880-2-1	Packing List	25206-1 (6/13/2025)			
Product Information				Tag	Pcs	KGS
TITANIUM 6AL4V ELI ROUND BAR TO ASTM F136-13				21660A	588	54.88
3MM DIA X 3000MM L						
h9 TOLERANCE, BRIGHT SURFACE						
Conform To ASTM F136						

Certificate of Conformance

1. All items furnished are in full compliance with purchase order and specification requirements listed, as documented on supplied Mill, Ingot or Lab Report.
2. The material supplied did not come in contact with Mercury or Mercury bearing instruments which are not shielded with a double barrier during processing at Titanium Industries.
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6. Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punished by law.

6/13/2025

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钛材质量证明书



Acc to EN10204.3.1

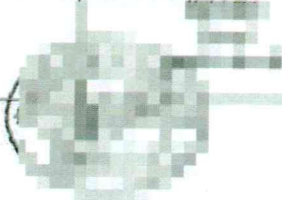
QUALITY CERTIFICATE OF TITANIUM PRODUCT

05/27/2025

NO: WRTY20250523D2

合同号 Contract No	牌号 Designation No	炉号 Heat No		状态 Condition		规格 Size		净重 Net Weight				技术标准 Specification			
12120JT	Ti6Al4V ELI	Ti6AL4VD23439		M		Φ3.0mm x 3000mm		112.2kg/1200pcs				ASTM F136-2013			
力学性能 Tensile Test	试样状态 Sample Condition	Rm Tensile Strength [MPa]		Rp0.2 Yield Strength 0.2% [MPa]		A(4D) Elongation [%]		Z Reduction Area[%]		a _k [J/cm ²]		HV [10/15]		弯曲实验 Bend Test	杯突值 IE Impact Strength [mm]
	M	1158		989		19.5		56		/		/		/	/
		/		/		/		/		/		/		/	/
其它 Others	外行尺寸 Dimensional Inspection	表面质量 Visual Inspection	探伤检验 Eddy Current Inspection	低倍组织 Macrostruc ture	高倍组织 Microstructure		水(汽)压实验 Hydraulic		压扁实验 Flattening		扩展实验 Flaring		展平实验 Fairing		
	Pass	Pass	Pass	Pass	A1		/		/		/		/		
		化学成分 Chemical Composition(%)													
Ti		Al	V	Fe	C	O	N	H	/	/	/	/	/	其它元素 (Other)	
Balance		6.31	4.20	0.148	0.013	0.113	0.0047	<0.001	/	/	/	/	/	单个 (Each) <0.10	
		6.31	4.19	0.148	0.020	0.109	0.0056	<0.001	/	/	/	/	/	总和 (Total) < 0.40	
		6.33	4.20	0.149	0.013	0.117	0.0045	<0.001	/	/	/	/	/	/	
备注 Note	Tolerance h9: +0/-0.025mm Origin:China Final product analysis-H:0.003														

批准(Approved by):



产品质量证书

JH/JL0520-1

CERTIFICATE OF PRODUCT QUALITY

客户名称 CUSTOMER	宝鸡威尔钛业有限公司			合同号 CONTRACT NO.	T20231115-QL1					
产品名称 PRODUCT	牌号 BRAND	批号 HEAT NO.	规格/mm DIMENSION	状态 CONDITION	数量 QUANTITY	重量/kg WEIGHT				
钛合金锭	Ti6Al4V	Ti6Al4V D23439	Φ700*L	Z	IPC	3763				
技术条件 SPECIFICATION	化学成分执行销售订单特殊要求									
化学成分/CHEMICAL ANALYSIS(≤%)										
元素 ELEMENT	Ti	Al	V	Fe	O	N	C	H	单一 /SINGLE	总和 /TOTAL
标准值 STANDARD VALUE	含量 REMAINDER	6.00-6.45	4.00-4.45	0.14-0.18	0.09-0.12	0.015	0.02	0.003	0.10	0.30
测试值 TEST VALUE	上 UP	6.31	4.20	0.148	0.113	0.0047	0.013	<0.0010	<0.10	<0.30
	中 MID	6.31	4.19	0.148	0.109	0.0056	0.020	<0.0010		
	下 DOWN	6.33	4.20	0.149	0.117	0.0045	0.013	<0.0010		
其他/OTHER										
尺寸检验 DIMENSION INSPECTION		外观检验 VISUAL INSPECTION		倒角半径 CHAMFER RADIUS	切斜尺寸 CUTTING ANGLE SIZE	表面粗糙度(μm) SURFACE ROUGHNESS		无损检验 NONDESTRUCTIVE TEST		
实测外径: Φ695mm-Φ703mm		符合要求		20mm	1mm	<6.3				
备注 NOTES	三次熔炼, 切冒口。									

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检验专用章/STAMP

日期

Date

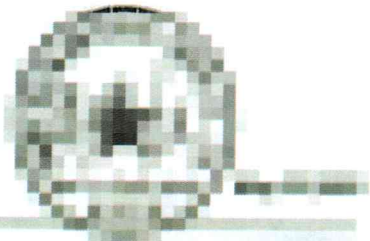
CERTIFICATE OF COMPLIANCE

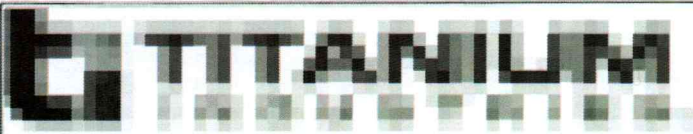
CUSTOMER P.O#		DATE SHIPPED
TAI-12120-JT		/
GRADE/ALLOY : 6AL4V ELI	TEMPER/COND.: Annealed	
HEAT NO.: Ti6AL4VD23439 Ti6Al4VELID23437	SPECIFICATION: ASTM F136-2013	

ITEM DESCRIPTION:		
Titanium round bar 6AL4V Eli per ASTM F136 with h9 tolerance, bright surface.		
Dia. 2.5mm x 3000mm	(tolerance h9: +0/-0.025mm)	N.W.: 114.5kgs (HEAT NO: Ti6AL4VD23439)
Dia. 3.0mm x 3000mm	(tolerance h9: +0/-0.025mm)	N.W.: 112.2kgs (HEAT NO: Ti6AL4VD23439)
Dia. 4.0mm x 3000mm	(tolerance h9: +0/-0.030mm)	N.W.: 117kgs (HEAT NO: Ti6Al4VELID23437)

SEE ATTACHED EN10204 3.1 CERTIFICATE

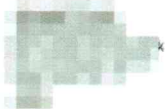
WE HEAREBY CERTIFY THAT ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONSAND INDICATED HEREIN.PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.





Certificate of Conformance

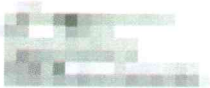
Cert Number 25206-11 6/13/2025



Sold To: [Redacted]
Ship To: [Redacted]

		Reference				
Customer	525/0	Your Order	RM202504004 (4/14/2025)			
Our Order	17880-3-1	Packing List	25206-1 (6/13/2025)			
Product Information						
TITANIUM 6AL4V ELI ROUND BAR TO ASTM F136-13			Heat	Tag	Pcs	KGS
4MM DIA X 3000MM L			D23437(4.0)	21661A	328	54.88
h9 TOLERANCE, BRIGHT SURFACE						
Conform To	ASTM F136					

- Certificate of Conformance
1. All items furnished are in full compliance with purchase order and specification requirements listed, as documented on supplied Mill, Ingot or Lab Report.
 2. The material supplied did not come in contact with Mercury or Mercury bearing instruments which are not shielded with a double barrier during processing at Titanium Industries.
 3. No weld repair has been performed on this material during processing at Titanium Industries.
 4. The Material supplied meets the visual and dimensional requirements of the Purchase Order
 5. Raw Material / Product Certification with traceability to manufacturer(s) consisting of inspection test results as required, are included in this certification package.
 6. Note: The recording of false, fictitious or fraudulent statements or entries on this document may be punished by law.



钛材质量证明书



05/27/2025

Acc to EN10204.3.1 QUALITY CERTIFICATE OF TITANIUM PRODUCT NO: WRTY20250523D3

合同号 Contract No	牌 号 Designation No	热 号 Heat No		状 态 Condition		规 格 Size		净 重 Net Weight			技 术 标 准 Specification			
12120JT	Ti6Al4V ELI	Ti6Al4VELID23437		M		Φ4.0mm x 3000mm		117kg/700pcs			ASTM F136-2013			
室温力学性能 Tensile Test	试样状态 Sample Condition	Rm Tensile Strength [MPa]		Rp0.2 Yield Strength 0.2% [MPa]		A(4D) Elongation [%]		Z Reduction Area[%]		a _k [J/cm ²]	HV [10/15]		弯曲实验 Bend Test	杯突值 IE Impact Strength [mm]
	M	972		809		14.5		52		/	/		/	/
		/		/		/		/		/	/		/	/
其它 Others	外形尺寸 Dimensional Inspection	表面质量 Visual Inspection	探伤检验 Eddy Current Inspection	低倍组织 Macrostructure	高倍组织 Microstructure		水（汽）压实验 Hydraulic		压扁实验 Flattening		扩展实验 Flaring		展平实验 Fairing	
	Pass	Pass	Pass	Pass	A1		/		/		/		/	
	化学成分 Chemical Composition(%)													
Ti		Al	V	Fe	C	O	N	H	/	/	/	/	/	其它元素（Other）
Balance		6.32	4.22	0.16	0.0087	0.105	0.0042	<0.001	/	/	/	/	/	单个（Each）<0.10
		6.34	4.24	0.16	0.0092	0.111	0.0047	<0.001	/	/	/	/	/	总和（Total）< 0.40
		6.34	4.22	0.16	0.0099	0.109	0.0045	<0.001	/	/	/	/	/	/
备注 Note	Tolerance h9: +0/-0.030mm Origin:China													
	Final product analysis-H:0.003													

批准(Ac)

CERTIFICATE OF PRODUCT QUALITY

客户名称 CUSTOMER	宝鸡威尔钛业有限公司			合同号 CONTRACT NO.	T20231115-QL1					
产品名称 PRODUCT	牌号 BRAND	批号 BATCH NO.	规格/mm DIMENSION	状态 CONDITION	数量 QUANTITY	重量/kg WEIGHT				
钛合金锭	Ti6Al4V	Ti6Al4VELID23437	Φ700*L	Z	IPC	3765				
技术条件 SPECIFICATION	化学成分执行销售订单特殊要求, 其他执行 GB/T 3620.1-2016									
化学成分/CHEMICAL ANALYSIS(%)										
元素 ELEMENT	Ti	Al	V	Fe	O	N	C	H	单一 /SINGLE	总和 /TOTAL
标准值 STANDARD VALUE	余量 REMAINDER	6.00-6.45	4.00-4.45	0.14-0.18	0.09-0.12	0.015	0.02	0.003	0.10	0.30
测试值 TEST VALUE	上	6.32	4.22	0.16	0.105	0.0042	0.0087	<0.0010	<0.10	<0.30
	中	6.34	4.24	0.16	0.111	0.0047	0.0092	<0.0010		
	下	6.34	4.22	0.16	0.109	0.0045	0.0099	<0.0010		
其他/OTHER										
尺寸检验 DIMENSION INSPECTION	外观检验 VISUAL INSPECTION	倒角半径 CHAMFER RADIUS	切斜尺寸 CUTTING ANGLE SIZE	表面粗糙度(μm) SURFACE ROUGHNESS	无损检验					
实测外径: Φ695mm-Φ603mm	符合要求	20mm	1mm	<6.3						
备注 NOTES										

审核
Auditor

检验专用章/STAMP

日期:
Date

CERTIFICATE OF COMPLIANCE

CUSTOMER P.O#		DATE SHIPPED
TAI-12120-JT		/
GRADE/ALLOY :	TEMPER/COND.:	
6AL4V ELI	Annealed	
HEAT NO.:	SPECIFICATION:	
Ti6AL4VD23439 Ti6Al4VELID23437	ASTM F136-2013	

ITEM DESCRIPTION:	
Titanium round bar 6AL4V Eli per ASTM F136 with h9 tolerance, bright surface.	
Dia. 2.5mm x 3000mm (tolerance h9: +0/-0.025mm)	N.W.: 114.5kgs (HEAT NO: Ti6AL4VD23439)
Dia. 3.0mm x 3000mm (tolerance h9: +0/-0.025mm)	N.W.: 112.2kgs (HEAT NO: Ti6AL4VD23439)
Dia. 4.0mm x 3000mm (tolerance h9: +0/-0.030mm)	N.W.: 117kgs (HEAT NO: Ti6Al4VELID23437)

SEE ATTACHED EN10204 3.1 CERTIFICATE

WE HEAREBY CERTIFY THAT ITEM(S) SHIPPED ON THIS ORDER HAVE BEEN INSPECTED AND TESTED AND FOUND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONSAND INDICATED HEREIN.PRODUCT CONFORMS TO THE REQUIREMENTS OF THE PURCHASE ORDER.

