



**METAL
TECHNOLOGY**

BOSSIN METAL TECHNOLOGY

XI'AN BOSSIN METAL TECHNOLOGY CO.,LTD.



Brief Introduction

XI'AN BOSSIN METAL TECHNOLOGY CO., LTD. is national high-tech enterprise specializing in the research, development, manufacturing for titanium, titanium alloy and Nitinol materials. The main products include titanium bars, titanium plates, titanium wires, titanium forgings titanium special-shaped parts and Nitinol, widely used in the fields of medical, aerospace, petrochemical industry, marine engineering and 3D printing

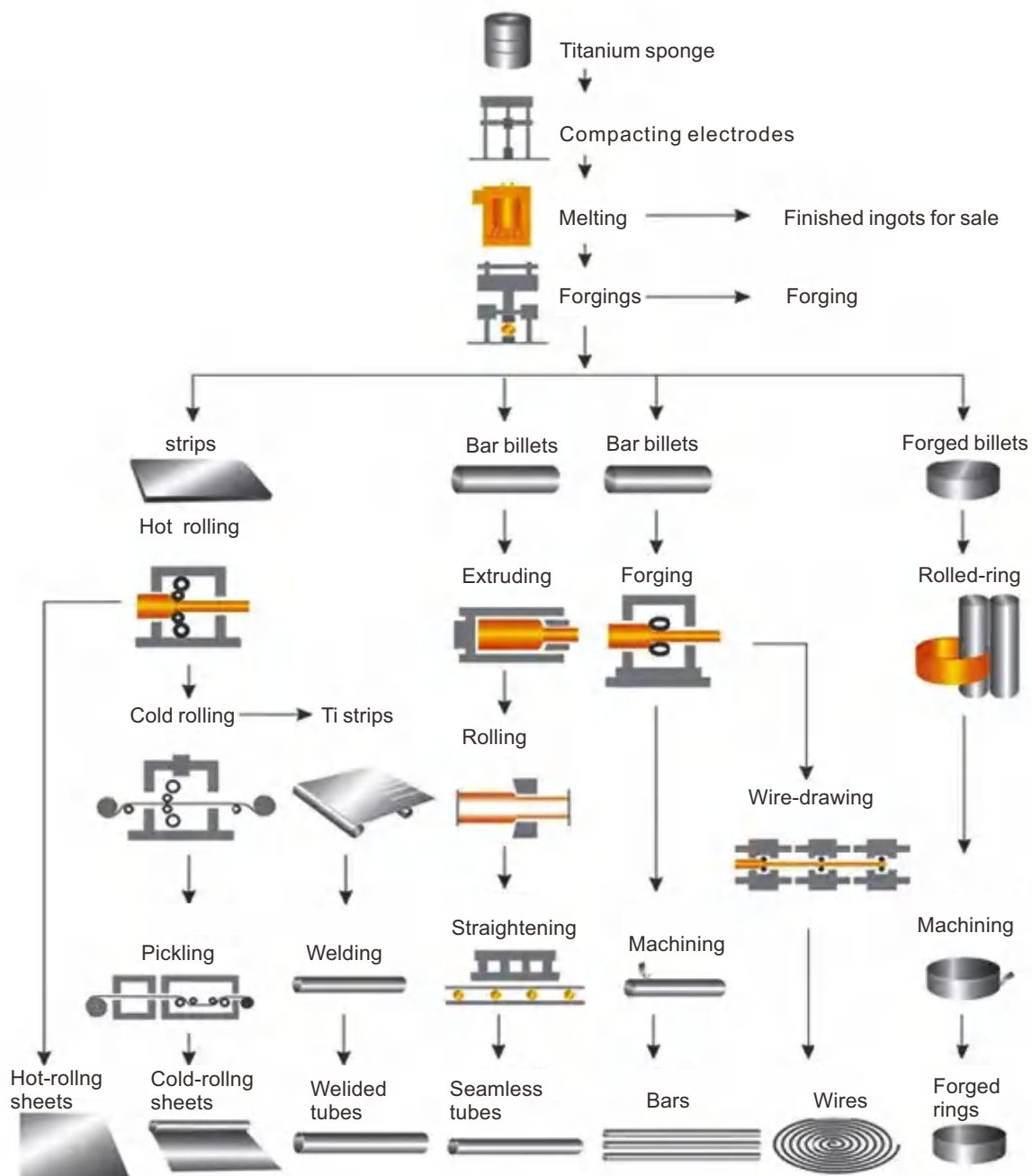
We are located in Baoji High-tech Zone, known as "China's Titanium Valley", covering an area of 38,000 square meters and a plant area of 30, 000 square meters, Have built a complete manufacturing system and testing equipment, The annual production capacity of 5000 tons. Equipped with advanced equipment, such as 4T dual-room vacuum self-consuming melting furnace, 2500T electrode hydraulic press, 25mn fast forging unit, Continuous rolling and finishing production line for titanium bars, center-less lathe, machining center other processing equipment. And implement various international technical standards such as AMS, ASTM, ASME, ISO, MIL, DIN, JIS and so on.

We are ISO13485/ISO9001: 2015/ EN9100: 2018/ certified, The 80% products have been exported to international markets, established an outstanding international reputation in titanium processing. Our products testing is carried out by ISO 17025 approved labs and Mill Test Certs are provided with every order. First -class quality and credibility are the basis of our survival, and customers 'satisfaction is our eternal pursuit.

We are dedicating to create international advanced manufacturing base and technological innovation platform for titanium and titanium alloy and providing its best quality products and services for all customers. We warmly welcome friends from all over the world to visit, negotiate and cooperate.

PROCESS FLOW

Strictly control the process in accordance with the execution standards to ensure the unique traceability of the product .
Full-process monitoring of every production step,
Maintain a zero-defect reputation in the titanium processing industry.



MELTING WORKSHOP



**ANNUAL PRODUCTION CAPACITY
OF 3000 TONS**

We have two sets of the world advanced vacuum consumable arc melting furnace(VAR) and vacuum plasma welding and other important equipment, to ensure that we have a strong titanium and titanium alloy melting capacity, providing a solid foundation for the subsequent development of the enterprise.

FORGING WORKSHOP



The factory is equipped with 25MN fast forging unit, which can complete all the processes of free forging. With mature forging process, forged materials superior quality and high precision, significantly reducing machining requirements while enhancing production efficiency, thereby providing robust support for downstream manufacturing processes.

Rolling Equipment



Titanium Bar&Wire Precision Rolling Mill
and Combined Drawing Equipment



Improved material strength and uniformity, with a more refined metallurgical structure, achieving Grade A1--A3 standards.

Enhanced surface finish and dimensional accuracy of the products

Titanium Bars/Rods



Medical applications

Product	Specification (mm)	Grade	Standard
Titanium Bars for Bone Screws	Φ3.5; Φ4.0; Φ4.5; Φ5.0; Φ5.5; Φ6.0; Φ8.0; Φ10.0	GR1 GR2 GR3 GR4 6AL4V Eli GR23	ASTM F136 ISO5832-3 ASTM F67 ISO5832-2
Titanium Bars for Spine	Φ13.5; Φ14.0; Φ14.2; Φ15.0; Φ16.0; Φ17.0		
Titanium Bars for Bone Joint	Φ30.0; Φ35.0; Φ40.0; Φ50.0; Φ55.0; Φ60.0; Φ65.0		
Titanium Bars for Dental Implants	Φ3.0-20.0mm		
Dental Titanium Disc	Φ98*10-25mm 220*150*10-25mm		

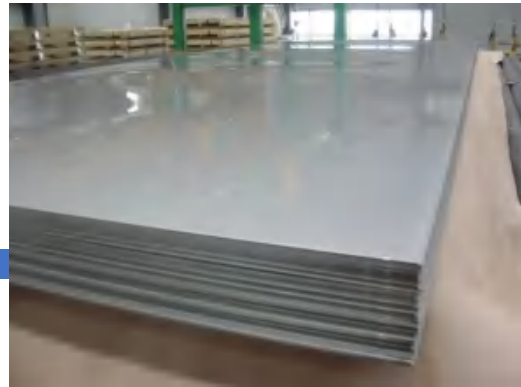
Aerospace applications

Product	Specification (mm)	Grade	Standard
Titanium Bars	Φ3.0—100mm	GR1 GR2 GR3 GR4 GR5 GR7 GR9 GR12	AMS 4928, AMS 4930
Titanium Forgings and Rings	OD 200-1300, According to requirements.	TA9 TA10 TA15 TB3 TC6 TC11 TC18 Ti6246 Ti6242	AMS 6931,AMS 4965 AMS 4931,MIL-T-9047

Other industrial applications

Product	Specification (mm)	Grade	Standard
Titanium Bars	Φ3.0—100mm	GR1 GR2 GR3 GR4 GR5 GR7 GR9 GR12	ASTM B348
Titanium Flat bar, Square bar, Hexagon bar	6.35 x 6.35mm, 6.35 x 12.70mm, 6.35 x 25.40mm, 8.0 x 8.0mm, 9.50 x 9.50mm, 15.87 x 15.87mm, 25.40 x 25.40mm, According to requirements		

Titanium Sheets/Plates



Medical applications

Product	Specification (mm)	Grade	Standard
Titanium Plate	(0.5~4.0)×(30~1000)×≤2000 (4.0~50.0)×(50~1000)×≤2000	GR1 GR2 GR3 GR4 6AL4V Eli GR23	ASTM F136 ISO5832-3
Titanium Profile plate	1.5×10, 3.2×10.2 4.0×13.5, 5.0×17 According to drawings		ASTM F67 ISO5832-2

Aerospace and other industrial applications

Product	Specification (mm)	Grade	Standard
Titanium Plate	(0.5~4.0)×(300~2000)×≤6000 (4.0~120.0)×(500~2000)×≤10000	GR1 GR2 GR3 GR4 GR5 GR7 GR9 GR12 TA9 TA10 TA15 TB3 TC6 TC11 TC18	ASTM B265 AMS 4911

Titanium Wire



Medical applications

Product	Specification (mm)	Grade	Standard
Titanium Wire	Φ0.05mm - 6.0mm	GR1 GR2 GR3 GR4	ASTM F136 ISO5832-3
Titanium Cable/Rope (Braided)	OD1.6---6.0mm 1×3Strands,7×7Strands According to drawings	6AL4V Eli GR23	ASTM F67 ISO5832-2

Other industrial applications

Product	Specification (mm)	Grade	Standard
Titanium Wire	Φ0.05mm - 6.0mm	GR1 GR2 GR3 GR4 GR5 GR7 GR9 GR12 ERTI-1, ERTI-2, ERTI-3, ERTI-4, ERTI-5, ERTI-7, ERTI -9 , ERTI -12, ERTI -23	ASTM B863 AWS A5.16 AMS4951 AMS4954 AMS4956

Titanium Tubes/Pipes



Capillary Tube

Specification (mm)	Grade	Standard
OD 2.0—20mm	Gr1 GR2 6AL4V Eli GR23	ASTM F136 ISO5832-3 ASTM F67 ISO5832-2

Titanium Coil/Strip, Foil



Product	Specification (mm) (Thickness*Width)	Grade	Standard
Titanium Coil	0.4-0.8x100-2500	Gr1, GR2, GR3, GR4, GR5, GR5 Eli, GR7, GR9, GR12, GR23	ASTM B265 AMS 4911 ASTM F136 ASTM F67
Titanium Foil	0.005-0.4x30-1250		

Nitinol Wire

Nitinol wire Guide Wire



Nitinol Binary wire

Nitinol Binary wire comply with ASTM F2063 standards for medical guidewire applications.

Nitinol Ternary wire

Compared to Nitinol Binary wire, Nitinol Ternary wire has higher upper platform stress, is an ideal material for high hardness guide wire, also has high torque force

Surface: Black Oxide, Polished bright

Composition	Transformation Temperature AF	plateau stress	Feature
Nitinol Binary wire	$\leq -15^{\circ}\text{C}$	$\geq 550\text{ MPa}$	Guide wire materials, ASTM F2063
Nitinol Ternary wire	$\leq -25^{\circ}\text{C}$	$\geq 650\text{ MPa}$	High stiffness, good torque

Nitinol wire Orthodontic Archwire



Dental Orthodontic Wires ASTM F2063 (Orthodontic Raw Materials For Further Processing)

Name	NiTi, CuNiTi, TMA
Type	Nitinol round wire, Nitinol square wire, Nitinol rectangle wire
Size	0.010", 0.012", 0.014", 0.016", 0.018", 0.020" 0.016"× 0.016", 0.017"× 0.017", 0.020"× 0.020" 0.014"× 0.022", 0.016"× 0.022", 0.017"× 0.022", 0.018"× 0.022" 0.014"× 0.025", 0.016"× 0.025", 0.017"× 0.025", 0.018"× 0.025",
Delivery Condition	Super elastic Cold working, subsequent heat treatment is required Thermal-Activated
Surface Condition	Black Oxide Light Oxide(golden to brown) Polished bright Pickling Surface

Nitinol Bar/Rods

Size	Diameter ≥4.0mm
Category	Super-elastic/Shape memory alloy
AF temperature	-20°C~100°C
Standard	ASTM F2063-2018
Technology	Hot Rolled
Application	medical treatment can be used for the heart stent; the industry can be widely used in the bridge construction and other industries.

Nitinol Cable/Rope(Braided)



Size: OD1.6-10mm
1×3Strands, 7×7Strands
According to drawings

Nitinol Strip



Size: Thickness:0.05mm—2.0mm
Application: For the manufacturing Orthodontic
Bracket parts ASTM F2063

Nitinol Plate/Sheet

Size	Thickness $\geq 0.05\text{mm}$
Category	Super-elastic/Shape memory alloy; Cold-rolled surface/Pickling/Polished
AF temperature	$-20^{\circ}\text{C} \sim 100^{\circ}\text{C}$
Standard	ASTM F2063-2018
Condition	Annealing/Cold-rolled

Nitinol Tube

Size: OD 0.18-16.0 mm,

Wall thickness: 0.025-3.0 mm

Surface finish: $R_a \leq 0.1\mu\text{m}$



OD range(mm)	OD tolerance(mm)	ID tolerance(mm)	WT range(mm)	WT tolerance(mm)
$0.18 \leq \text{OD} \leq 0.5$	± 0.002	± 0.005	$0.025 \leq \text{WT} \leq 0.12$	± 0.003
$0.5 < \text{OD} \leq 1.0$	± 0.005	± 0.008	$0.025 \leq \text{WT} \leq 0.30$	± 0.005
$1.0 < \text{OD} \leq 3.0$	± 0.010	± 0.010	$0.025 \leq \text{WT} \leq 0.40$	± 0.008
$3.0 < \text{OD} \leq 6.0$	± 0.010	± 0.015	$0.05 \leq \text{WT} \leq 1.50$	± 0.008
$6.0 < \text{OD} \leq 9.0$	± 0.015	± 0.020	$0.07 \leq \text{WT} \leq 2.00$	± 0.008
$9.0 < \text{OD} \leq 12.0$	± 0.020	± 0.020	$0.10 \leq \text{WT} \leq 2.00$	± 0.010
$12.0 < \text{OD} \leq 16.0$	± 0.020	± 0.030	$0.10 \leq \text{WT} \leq 3.00$	± 0.010

Titanium Precision Forging



Semi-finished Hip Stem



Semi-finished Hip Stem



Semi-finished Hip Stem



Semi-finished Hip Stem

Nitinol Components

取石篮芯
Stone Extractor Core



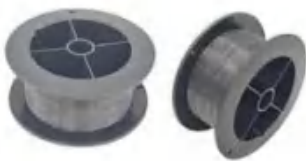
组织取出器部件
Specimen Retrieval System Core



肺结节定位爪子
Lung Nodules Locate The Paws



镍钛导丝芯
Guide wire



肺结节定位弹簧
Lung Nodule Positioning Spring



牙弓丝
Arch wire



Nitinol Spring



Nitinol Bracelet

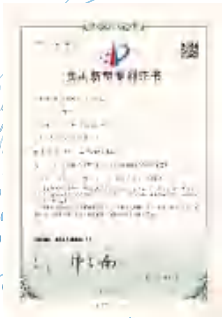
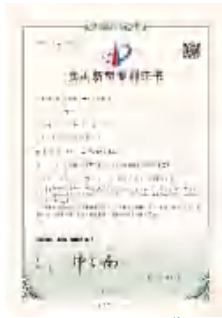
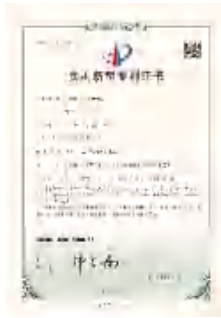
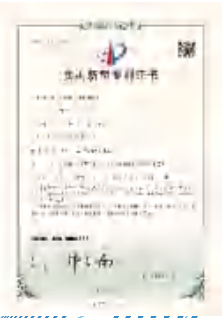
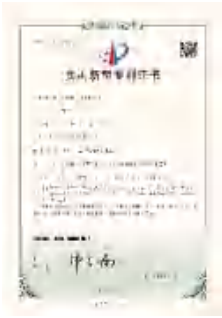


Nitinol Actuation Wire



Headphone Wire

CERTIFICATE OF QUALIFICATION



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