

BAOJI XINNUO NEW METAL MATERIALS CO.,LTD (XINNUO)



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1.1 Brief Introduction



Founded: 2004

Employees: 200

Construction area: 25,000 square meters.

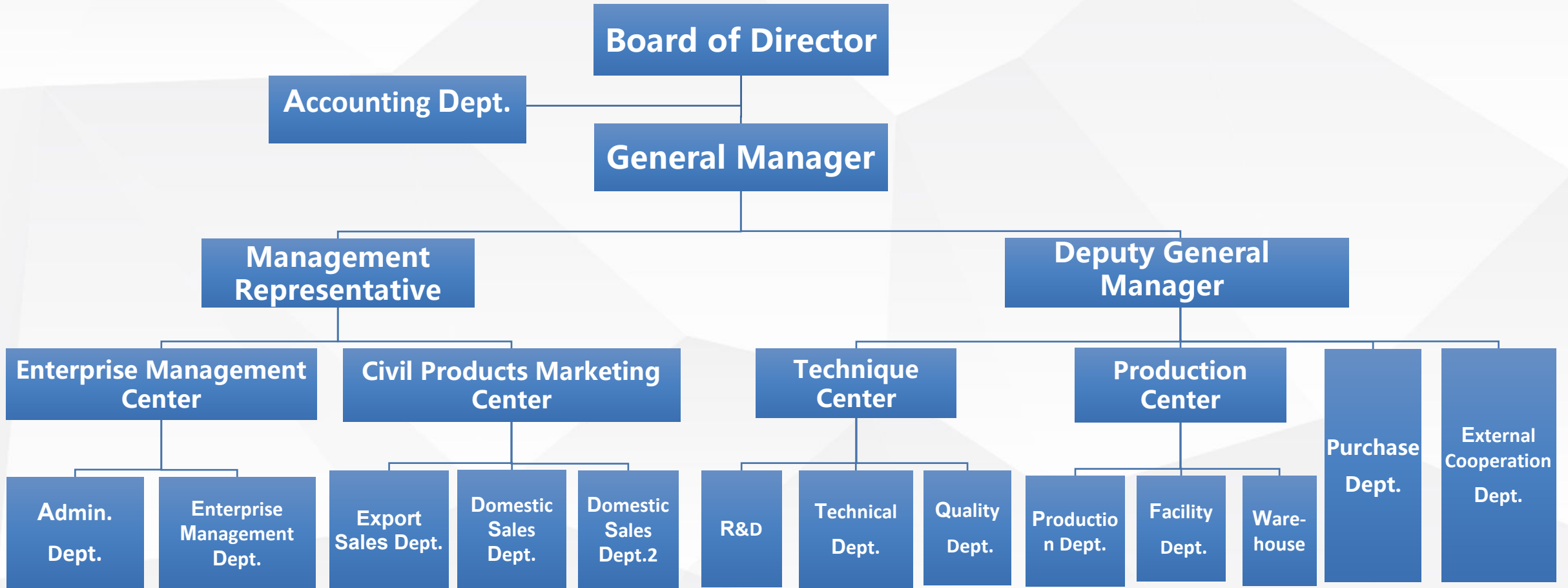
Products: Titanium Bar, Wire and Plate.

Industries served: Orthopedic implant, Aerospace and Additive manufacturing.

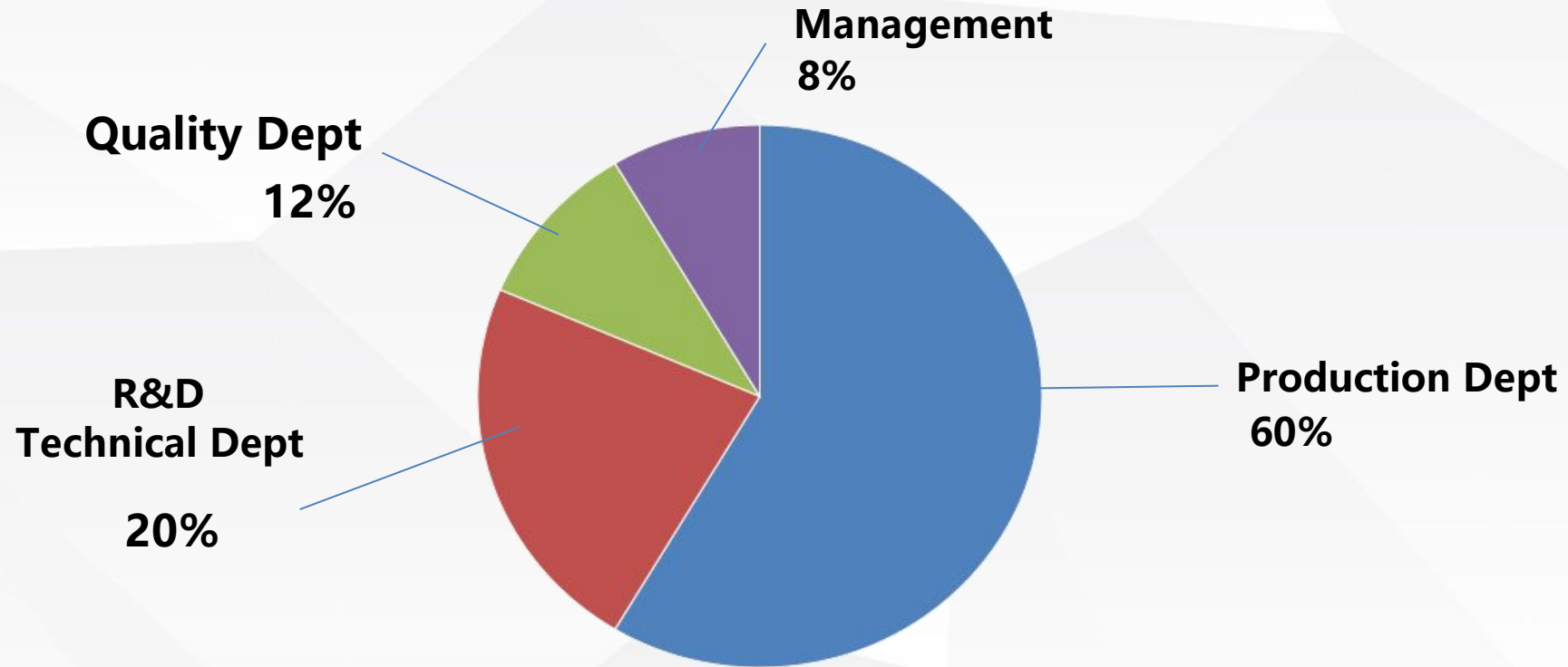
*****25% market share of Titanium for orthopedic implant device manufacturing in China.**

*****2024 new production line with more than 30,000 square meters will be in operation**

1.2 Organisation Chart



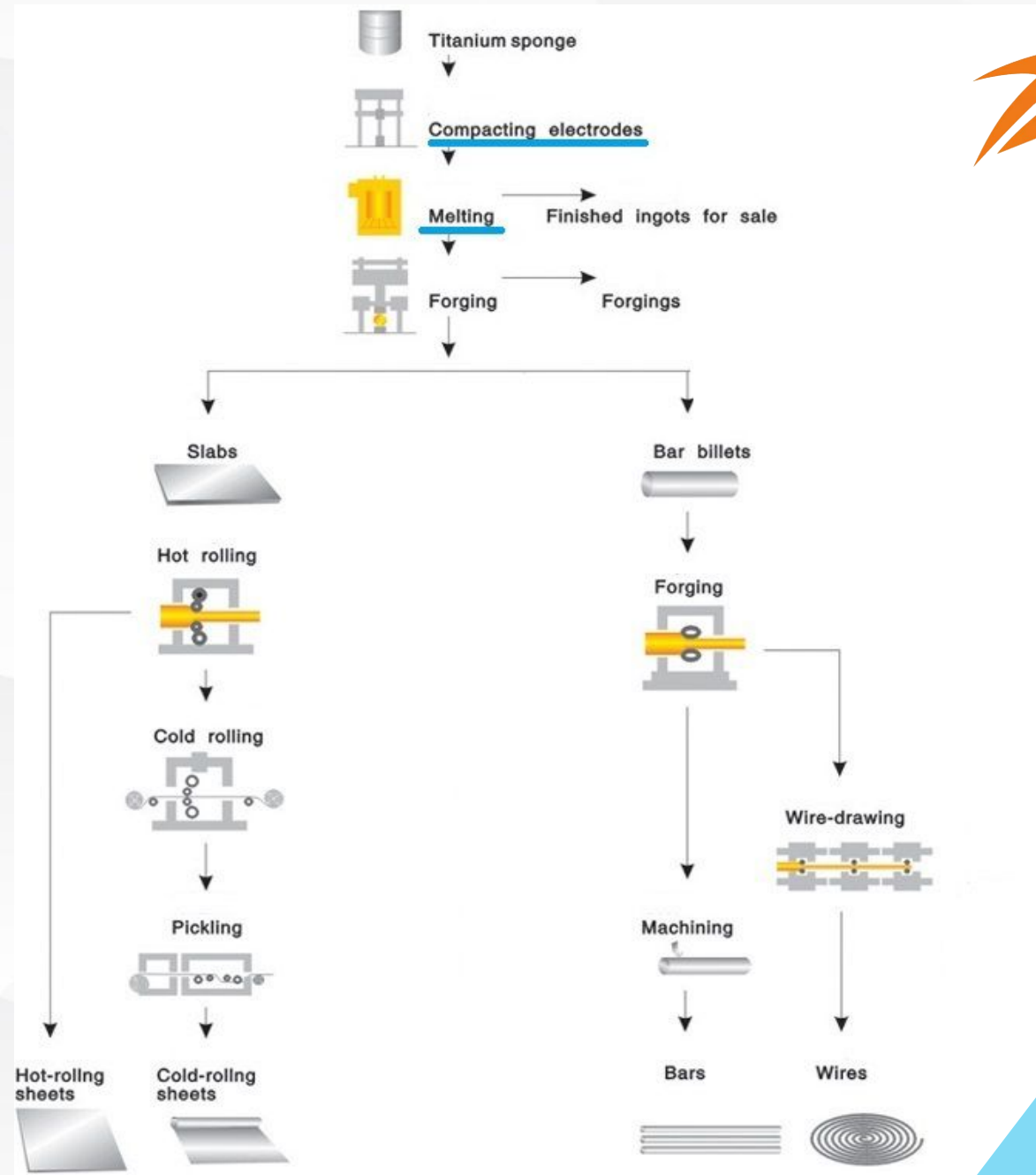
1.3 Manpower Breakdown



1. 50% of the employees with college degree or above.
2. 42 employees have professional and qualified certificates.
3. 5 employees are experts with professor title.

1.4 Production process

XINNUO company has the complete production processes to ensure the stability and controllability of product's quality.



2.1 Main Product



Titanium bar for Spine screws & Intramedullary nail

Grade: Gr5, Ti-6Al-4V, Gr23, Ti-6Al-4V ELI

Standard: ASTM F136, ISO 5832-3

Regular sizes: $\Phi 10$, $\Phi 13$, $\Phi 14$, $\Phi 14.2$, $\Phi 14.5$ mm

Characteristic: Shrinkage ≤ 0.03 mm, and the metallography can be controlled

2.2 Main Product



Titanium bar for Hip & Knee Joint

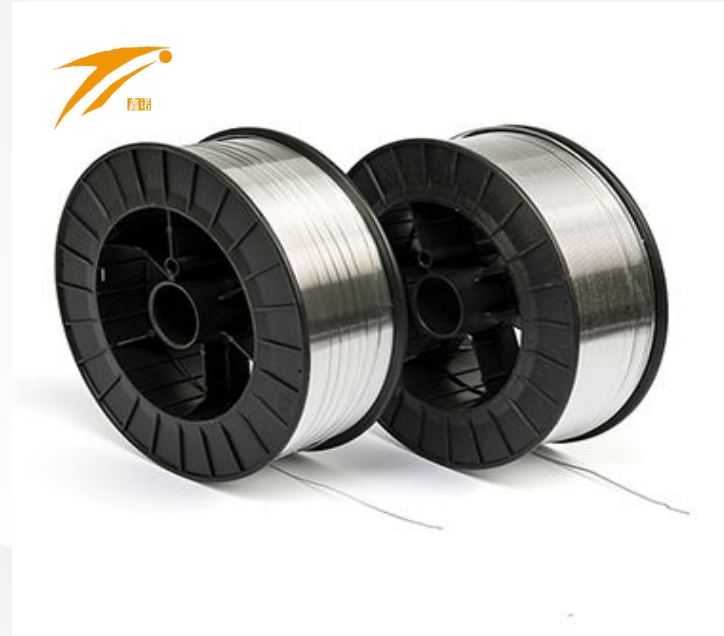
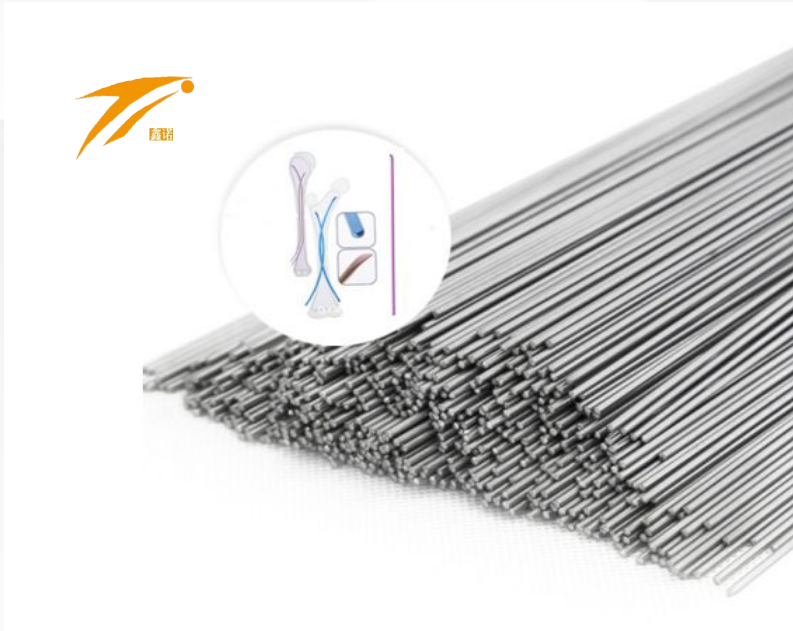
Standard: ASTM F136, ISO5832-3.

Grade: Gr5, Gr5 ELI, Ti6Al4V, Ti6Al4V ELI

Regular Size: $\Phi 16$, $\Phi 17.2$, $\Phi 18$, $\Phi 20$, $\Phi 24$, $\Phi 30$, $\Phi 40$, $\Phi 45$, $\Phi 50$, $\Phi 55$, $\Phi 65$ mm

Characteristic: Good elasticity, high strength, good metallographic structure, good abrasion resistance.

2.3 Main Product



Titanium wire for High Elasticity Kirschner Wire and 3D Printing

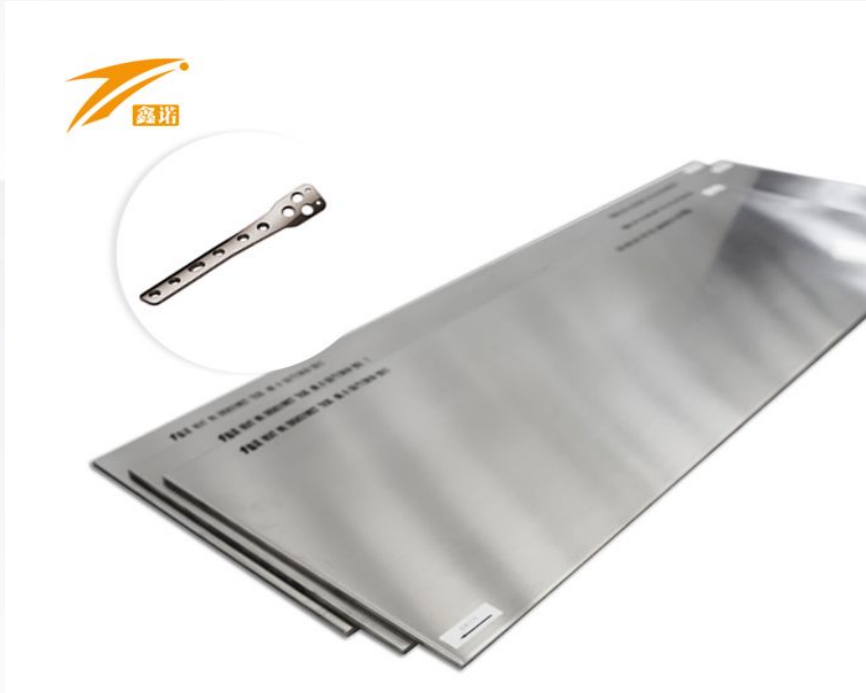
Grade: Gr5, Ti-6Al-4V, Gr23, Ti-6Al-4V ELI

Standard: ASTM F136, ISO 5832-3, AMS 4954

Regular Sizes: Φ 1.0, Φ 1.2, Φ 1.6, Φ 2.0, Φ 2.5, Φ 3.0, Φ 3.2, Φ 3.5, Φ 4.0mm etc.

Characteristic: Stable physical properties, Straight or Coil shape or in Spool.

2.4 Main Product



Titanium Plate for Internal Bone Fixation & Medical Equipment

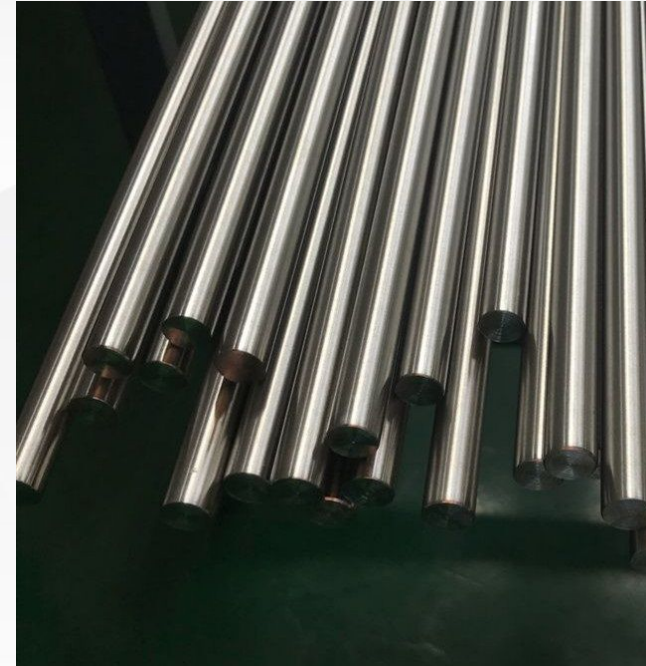
Grade: Gr5, Ti-6Al-4V, Gr23, Ti-6Al-4V ELI, Gr1-Gr4

Standard: ASTM F136, ISO 5832-3, ASTM F67, ISO 5832-2

Regular Sizes: (1.5~120) T * 300 W * (1000~1200) L mm

Characteristic: Roughness: $Ra \leq 3.2 \mu m$ (polished), Stable physical properties.

2.5 Main Product



Titanium bar & plate for Aviation fasteners, structural parts, engines and aircraft

Grade: Gr5, Ti-6Al-4V, Gr7, Gr12, Ti 6246, Ti 6242, Ti 811 etc.

Standard: AMS 4928, AMS 4911, AMS 6931, AMS-T-9046, AMS-T-9047 etc.

Regular Sizes: Bar Φ 1-300mm, Plate Thk 1.5-120mm, Customized products

3.1 Main Production Equipments



German ALD Vacuum Self-consumption Electric Arc Furnace

1. FAC full-automatic control
2. MCD Multicontact conductive design
3. DDS Dual motor drive system
4. SCR Semiconductor control rectifier
5. CSS Constant melting speed control system
6. DAS powerful data acquisition system
7. SCS Smelting pressure control system
8. AEP Automatic emergency protection program

3.2 Main Production Equipments



4500T Hydraulic Machine for Electrode Preparation

Titanium sponge and intermediate alloy go through the Automatic mixer press into the dense electrode block with density more than $3.6\text{g}/\text{cm}^3$.

3.3 Main Production Equipments



German Bohler MW120×100-4 precision wire rod rolling mill



四机架纵列式连轧
先进的钛合金丝材轧制解决方案

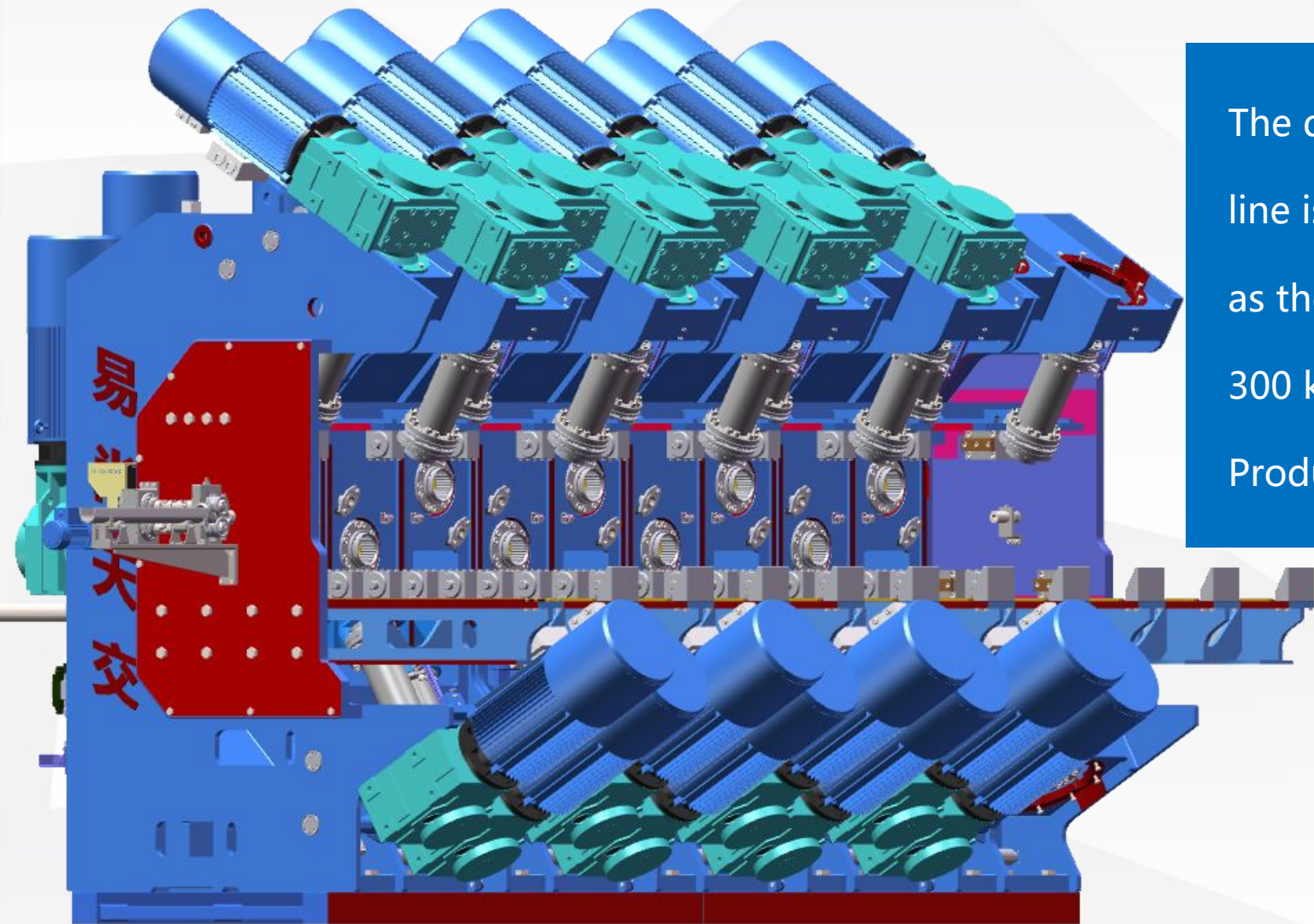
Imported German MW120×100-4 precision wire rod mill, accuracy deviation $\pm 50\mu\text{m}$, the highest rolling speed can reach 120m/min. can realize large single weight wire fully automatic continuous cold rolling, automatic continuous warm rolling of high precision, high performance bar and wire rod rolling, the product has high precision size control, good performance consistency, can effectively reduce multiple hot drawing of the material hydrogen content and microstructure The product has high dimensional control accuracy and good property consistency, which can effectively reduce the adverse effects of multiple passes of hot drawing on the hydrogen content and microstructure of material.

3.4 Main Production Equipments



Y Mould Tandem Mill

The designed production capacity of this rolling line is 4000 tons, with titanium alloy rod and wire as the main product. The billet weight is about 300 kg. The finished coil single weight is 150 kg. Production is scheduled in October 2024.



3.5 Main Production Equipments



650 Plate Rolling Mill

Four-roller reversible rolling machine

Small size ensures the flatness and precision thickness tolerance of titanium sheets and better microstructure.

3.6 Main Inspection Equipments



ODE-C20A40 Optical Surface Automatic Detector

Smallest detection specification is $\Phi 4.0\text{mm}$ bar, all kinds of defects on the surface (cracks, pits, etc.) have very high recognition accuracy.

Smallest identified defects area is 0.01mm^2 , and the highest detection speed is $30\text{m}/\text{min}$, in the field of surface inspection of titanium wires and bars to reach the international advanced level.



3.7 Main Inspection Equipments



SUT-DK-TB Automatic Rotary Head Ultrasonic Flaw Detection Machine



Detection range is diameter $\Phi 6.0$ - $\Phi 40$ mm pipe and bar, can achieve the inspected material four-channel longitudinal and transverse wave inspection. The equipment can detect a minimum of 0.3mm flat bottom hole equivalent size defects, much higher than the existing domestic medical bar standard 1.2mm defect detection equivalent, while the tube, bar, wire 0.8 * 0.8 * 3mm surface detection accuracy.

3.8 Main Inspection Equipments



Electronic Universal Material Testing Machine



Metallographic Inlay Machine

3.9 Main Inspection Equipments



5kg VAR Melting furnace for testing

For R&D department to test new titanium material and grades, and improve our products' quality as per customers and market need.

4.1 System & standard



Certificate of Registration

nqa.

This is to certify that the Quality Management System of
Baoji Xinnuo New Metal Materials Co., Ltd.
 Unified Social Credit Code: 916103027527243556
 Operation Address: No.6, South Section of Fenghuang 6th Road, High-tech Development Zone, Baoji City, Shaanxi Province, China
 Registered Address: No.6, South Section of Fenghuang 6th Road, High-tech Development Zone, Baoji City, Shaanxi Province, China

applicable to

Processing and sales of titanium and titanium alloy materials for basic surgical instruments, orthopedic surgical instruments, implant materials and artificial bone joints, ultrasonic physiotherapy equipment accessories and dental materials products(excluding products required for qualification licensing)

has been assessed and registered by NQA against the provisions of

ISO 13485:2016

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA.
 Certified Clients shall accept regular surveillance assessments, the validity of certificates shall be maintained for the positive result of audit.
 The information of this certificate can be checked on CNCA's website (www.cnca.gov.cn)
 SNQA's website: www.snqa.com.cn

Managing Director: [Signature]
 Certificate Number: **39925**
 Issue Date: 20 May 2014
 Reissue Date: 17 June 2024
 Valid Until: 19 June 2027

UKAS MANAGEMENT SYSTEMS 0015 **IAF**

The use of the UKAS Accreditation Mark indicates accreditation in respect of those activities covered by the accreditation certificate number 015 held by NQA. NQA is a trading name of NQA Certification Limited, Registration No 09261758. Registered Office: Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZJ, UK. This certificate is the property of NQA and must be returned on request. Shanghai NQA Certification Co., Ltd. Address: Room 2201, 968 Lujiazui Ring Road, China (Shanghai) Pilot Free Trade Zone.

ISO 13485:2016 certificate of quality system

Certificate of Registration

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 Unified Social Credit Code: 916103027527243556
 Operation Address: No.6, South Section, Fenghuang 6# Road, Hi-Tech Development Zone, Baoji City, Shaanxi Province, China
 Registered Address: No.6, South Section, Fenghuang 6# Road, Hi-Tech Development Zone, Baoji City, Shaanxi Province, China

applicable to

Processing and sales of titanium and titanium alloy products

has been assessed and registered by NQA against the provisions of

ISO 9001:2015

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA.
 Certified Clients shall accept regular surveillance assessments, the validity of certificates shall be maintained for the positive result of audit.
 The information of this certificate can be checked on CNCA's website (www.cnca.gov.cn)
 SNQA's website: www.snqa.com.cn

Managing Director: [Signature]
 Certificate Number: **129899**
 Issue Date: 16 June 2021
 Reissue Date: 11 June 2024
 Valid Until: 11 June 2027
 EAC Code: 17

UKAS MANAGEMENT SYSTEMS 0015 **IAF**

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ISO9001:2015 certificate of quality system

Bureau Veritas Certification

Certificate of Approval
 This is to certify that the Quality Management System of:
BAOJI XINNUO NEW METAL MATERIALS CO., LTD.
 NO.6, SOUTH OF FENGHUANG 6TH ROAD, HIGH-TECH DEVELOPMENT ZONE, BAOJI CITY, SHAANXI PROVINCE, CHINA
 has been audited in accordance with the requirements of EN 9104-001:2013 by Bureau Veritas Certification and conforms to the following Quality Management Systems Standards detailed below

Standards
 BS EN ISO 9001:2015
 EN 9100 : 2018
 (Technically equivalent to AS9100D)
Scope of certification
 MANUFACTURE OF TITANIUM & TITANIUM ALLOY INGOT, BAR, WIRE, SHEET FOR AVIATION INDUSTRY.

Certification Structure: Single Site

This certificate forms part of the approval identified by certificate number: CN039718

Original ASCS Approval: 17-02-2022
 Certificate Issue Date: 17-02-2022
 Certificate Expiry Date: 16-02-2025

Trevor William Douce
 Authorised Signatory

ADS aerospace sector certification scheme **UKAS MANAGEMENT SYSTEMS**

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
 Certification Body: Bureau Veritas Certification Holding SAS-UK Branch 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

AS9100D certificate of quality system

4.2 System & Standard



ASTM F67 / ASTM F136 / ASTM F1295

ISO 5832-2 / ISO 5832-3 / ISO5832-11

AMS 4928 / AMS 4911 / AMS 4954

GB/T 13810 / GB 23102

5.1 Technology improvement & innovation

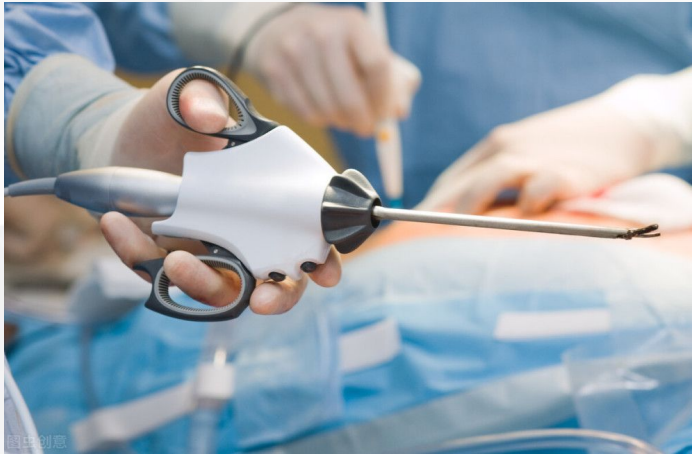


- XINNUO make 5 percent annual sales as investments in R&D, innovation and management improvements every year.
- 4 patents of invention and 6 patents of design
- New materials application for dental and ultronic dissector etc.
- Materials used for aerospace industry
- Localized materials to be substituted for imports and provide users with value-added services
- Close collaboration with universities and research instituts for new materials development



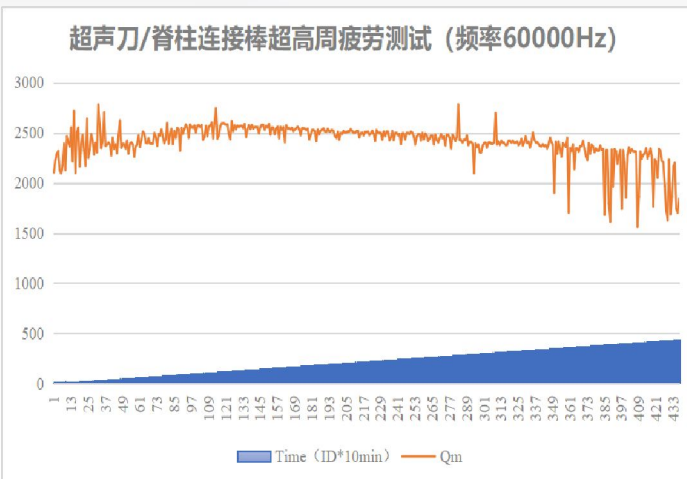
10 patents for
Invention & Design

5.2 Technology improvement & innovation



Titanium rod for Ultrasonic dissector

Material: ASTM F136, Ti6Al4V ELI
Titanium rod: Dia5mm, 6mm, 8mm, 13.5mm



Ultrasonic dissector connecting rod ultra-high cycle fatigue test (frequency 60000Hz)



Titanium rod for dental implants

Standard: GB/T13810-2017、ASTMF67、ASTMF136、ISO5832-2、ISO5832-3
Grade: Gr4, Gr4B, Gr5
Size: Dia3.0mm, 3.5mm, 4.0mm, 6.0mm, 8.0mm, 10mm, 12mm, 14mm.

6. Mission and Vision



XINNUO Mission:

To be top one Titanium brand to serve industries of medical and aerospace in China.

Dedication to community and country through hard work.

XINNUO Vision:

To benchmark world first class Titanium enterprise.

To serve the industries of medical and aerospace to make value for customers.

XINNUO is employees spiritual home and platform for career development.



THANKS

www.xinnuoti.com