COMPANY PROFILE

Jiangsu DLX Technology Co., Ltd. was founded in 2002 and is located in the beautiful ancient city of Changzhou. It is adjacent to Shanghai to the east and Nanjing to the west, with convenient transportation. The company currently has more than 150 employees and covers an area of 20000 square meters. Its products are sold both domestically and internationally.

The factory mainly produces tungsten wire and molybdenum wire, which are used for lighting bulb products, textile weaving, anti cutting glove products, electronic and electrical products, medical equipment products, automotive glass heating and defogging, etc. The factory has passed ISO9001 system certification and has its own research and development patents; The production process includes melting, electroslag, drawing, rolling, heat treatment, precision machining, and testing.

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CHANGZHOU DLX ALLOY CO.,LTD.

江苏戴之信科技有限公司

CHANGZHOU DLX ALLOY CO., LTD.

GLOBAL LEADER IN ALLOY INDUSTRY

CUSTOMER FIRST TEAM COLLABORATION

NITINOL

Nickel-titanium belongs to a unique category of shape memory alloys.

Its exceptional properties arise from thermo-elastic martensitic phase transformations within the material. Nitinol alloys are typically composed of 55%–56% nickel and 44%–45% titanium. Minor variations in composition can significantly affect the material’ s character-istics.

There are two main categories of nitinol.

The first is known as “SuperElastic”, char-acterized by extraordinary recoverable strain and kink resistance.

The second category consists of “shape memory” alloys, valued for Nitinol’ s ability to recover a pre-set shape when heated above its transformation temperature.

The first category is commonly used in ortho-dontics (braces, archwires, etc.) and eyeglass frames. SZNK manufactures shape memory alloys mainly for actuators, applied in a wide range of mechanical equipment.

Straightened Superelastic State

Maximum force (N)	Tensile strength (MPa)	Elongation (%)	Upper platform stress (MPa)	Residual stress (WT%)	Actual operating temperature (af)
Depending on the diameter	≥1000 (1350)	≥10 (15)	≥400 (460)	<0.5 55.96	(10±10)
Depending on the diameter	≥1000 (1350)	≥10 (15)	≥400 (460)	<0.5 56.1	(-30±10)
Depending on the diameter	≥1000 (1350)	≥10 (15)	≥400 (460)	<0.5 50.0	(60±10)

Chemical Composition Table

Element	Ni	C	Co	Cu	Cr
Mass %	54.5-57.0	≤0.040	≤0.050	≤0.010	≤0.010

Element	H	Fe	Nb	N	O	Ti[A]
Mass%	≤0.005	≤0.050	≤0.025	≤0.005	≤0.040	Balance

Product Type	Grade	Fully Annealinbg Af	Type	Standard
Shape Memory Alloy	NiTi-01	20°C~40°C	Wire Bar Plate	In accordance with customer requirements or industry standards ASTMF2063 Q/XB1516.1 Q/XB1516.2
	NiTi-02	45°C~90°C		
Super-elastic Alloy	Ni-Ti-SS	-5°C~5°C		
Low-temperature Super-elastic Alloy	TN3	-20°C~-30°C		
	TNC			
Medical Nitinol Alloy	NiTi-SS	Actual Transition Temperature 33°C±3°C		
Dimensions	Wire: 0.05-6.0mm Bar: 3.0mm-20mm Plate: Thickness 0.3-10.0mm, Width ≤400mm, Length ≤2500mm			

PLATINUM-IRIDIUM TUBE

Medical-grade platinum-iridium (Pt-Ir) tube is a precision seamless tubing with platinum (Pt) as the matrix and iridium (Ir) as the alloying element. The typical formulation is Pt90Ir10 (90% platinum + 10% iridium), with Pt80Ir20 as an alternative for specific applications, combining bio-inertness and mechanical reinforcement.

Product Introduction

Materials that encounter human tissue both temporarily and permanently must meet the highest standards. Precious metals possess many favorable properties, including biocompatibility, resistance to corrosion, and electrical conductivity. Diagnostic equipment, surgical instruments, catheters, pacemakers, and oral surgery applications are typical applications for brazed precious metal components.

Product	min.outer-∅	max.outer-∅	min.wall thickness
Platinum	0,228mm	6,35mm	0,003
Pt90Ir10	0,228mm	6,35mm	0,003
Gold	0,228mm	6,35mm	0,003

Platinum and gold are radiopaque materials that cause them to show up in an x-ray fluoroscopy image.
This makes it easy to locate the materials within the image. Catheter systems use rings or tips made from either Gold or Platinum to create a clear visualization of the medical device in the human body. Stents are made of fine wire and are used in vascular surgery and other endovascular procedures.

Product Advantages

Bio-inertness: No tissue rejection, allergy or inflammation, with long-term implantation safety meeting clinical standards.
Superior Corrosion Resistance: Resists corrosion from bodily fluids and disinfectants (e.g., hydrogen peroxide, glutaraldehyde), with a corrosion rate only 1/60 of that of medical 316L stainless steel.
Mechanical Reinforcement: Iridium significantly enhances hardness and fatigue resistance, capable of withstanding cyclic stress of ~40 million heartbeats per year, with fracture strength over 35% higher than pure platinum.
Stable Conductivity: Excellent temperature stability; resistance change rate at 25–42°C is only 60% of pure platinum, ensuring precision of electrophysiological signal transmission.
Precision Adaptability: Seamless structure without welding defects, and micron-level dimensional accuracy meets the small-space requirements of minimally invasive interventional devices.

With comprehensive features of "bio-inertness + strong corrosion resistance + high precision + stable conductivity", medical-grade Pt-Ir tubes have become core materials in high-end medical fields such as cardiac intervention, neural stimulation, and precise drug delivery, serving as the key foundation for ensuring the safety and efficacy of implantable devices.