



TIANJIN WODON NEW MATERIAL TECHNOLOGY CO.,LTD

Professional manufacturer of
wear resistant material

WODON PHILOSOPHY

We concentrate , we lead.

WODON VISION

Creating value for customers , reducing abrasion cost in the industry.

WODON GOAL

Being benchmark in wear resistant material industry worldwide in future.

WODON RESPONSIBILITY

Utilizing resources efficiently Protecting the ecological environment.

Company Profile

Tianjin Wodon new material technology Co., Ltd, established in 2014, is a high-tech enterprise focusing on R&D and production of wear resistant materials. Up to now four branches are established located in Tianjin, Hunan, Hebei and Jiangsu. The main products are: weld overlay wear plates, hardfacing wires for wear plate welding, coal grinding roller hardfacing wire, cement vertical mill hardfacing wire, press roller hardfacing wire, continuous casting roller welding wire, and various kinds wear parts etc. The company's products are widely used in steel, cement, mining, coal power, metallurgical machinery, engineering machinery, loading machinery, port transportation and other industries.

With a number of independent intellectual property rights and invention patents, the company has a strong R&D and debugging team to provide customers with one-stop services. With the aim of pursuing quality and customer satisfaction, Wodon takes the lead in passing the ISO9001 quality management system certification. Since its establishment, the company has become a leader in the industry with its spirit of continuous innovation, high-quality products, perfect after-sales service and good reputation. The products are exported to more than 50 countries and regions in the world, and are widely trusted and supported by users around the world.

Wodon will continue to uphold the business philosophy of "responsibility, professionalism, openness and sharing", pursue the enterprise spirit of quality first and excellence, and provide you with the best products and the most comprehensive services.



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**Manufacturing
Bases**

150km²

Area

500+

Employees

Company History

Wodon's products and services have been well accepted by customers since its establishment. In order to better serve customers, meet market demand, and increase production capacity, the company has successfully established Tianjin Factory, Hunan Factory, Hebei Factory, and Jiangsu Factory, and entered the international market with all its strength in 2014, enjoying a high reputation in the industry for many years. The company will continue to solve wear problems for customers with leading technology, excellent quality, efficient team and comprehensive services.



Company Honor

Quality is the cornerstone, innovation is the soul. Tianjin Wodon has been committed to the research and development and production of wear resistant materials for nearly 20 years, and constantly innovates on the basis of quality assurance!

Since its establishment, the company has won more than 60 invention patents and utility model patents, and has taken the lead in passing a number of international authoritative certifications. It has been awarded "Tianjin Specialized and Special New SME " and the title of "High-tech Enterprise". Creating value for customers, reducing abrasion cost in the industry is the unchanging original intention of every Wodon staff!



Production Capacity

Tianjin Wodon currently has 101 overlay wear plate welding tables (205 torches), 6 flux cored welding wire production lines, multiple CNC underwater plasma cutting equipment, multi-functional plate rolling machine, offline welding roller repair equipment, automatic stud welding equipment, automatic wear pipe hardfacing equipment and other processing equipment,It has strong production and processing capabilities and a wide range of products, which can fully meet the needs of customers.



Flux cored welding wire workshop



Overlay wear plate workshop



CNC underwater plasma cutting equipment



Wear plate welding tables



Multi functional bending machine



Intelligent wear resistant surfacing pipe machine



Annual output of overlay wear plates
260,000 square meters

Annual output of welding wire
16,000 tons

Annual output of wear parts
12,000 tons

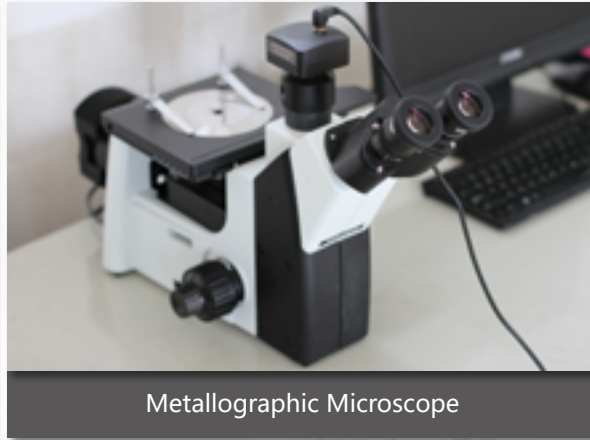
Research Ability

Tianjin Wodon has a group of innovative R & D engineers and keep improving technical personnel, so that the product quality has been continuously improved. Since its establishment, the company has maintained long-term cooperation with Beijing University of Technology, Iron and Steel Research Institute, Beijing Electric Power Equipment Research Institute and other research institutes.

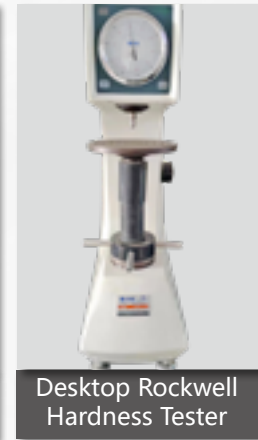
The company strictly implements the ISO9001 quality management system certification. From raw material incoming inspection, product realization process, process inspection, final inspection, product protection, warehousing product management to after-sales service, there are strict rules and regulations management system and procedures. Wodon has made clear every quality management work regulations and requirements.



Vickers Hardness Tester



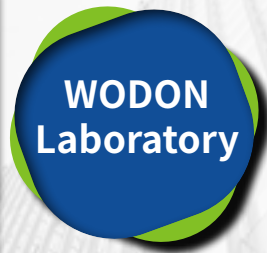
Metallographic Microscope



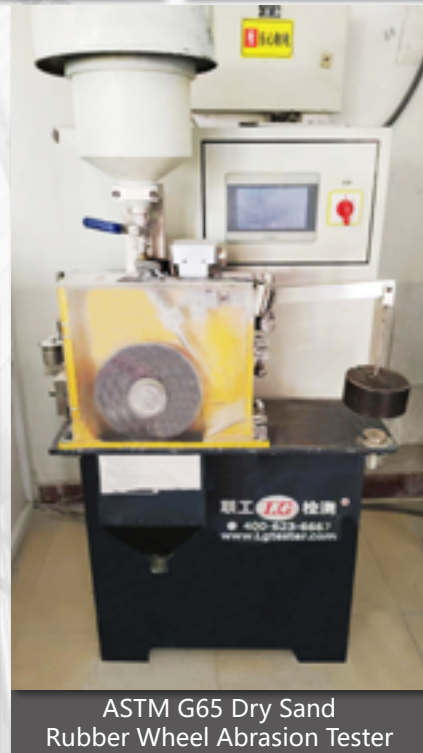
Desktop Rockwell Hardness Tester



Portable olympus Spectrometer



German Spectro Spark Direct Reader



ASTM G65 Dry Sand Rubber Wheel Abrasion Tester

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Wear Plate



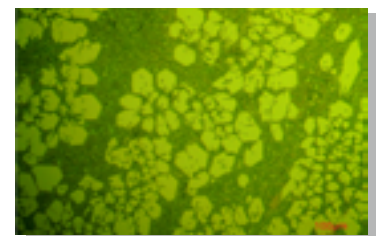
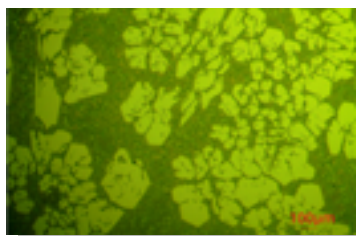
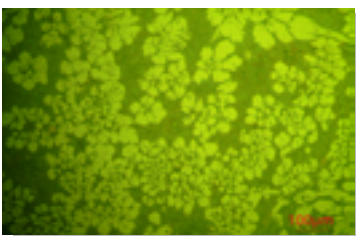
Characteristics of Wodon wear plates

Outstanding advantages

- ▶ **Cr content:** 27% ~ 45%
- ▶ **Hardness:** 58 ~ 65 HRC
- ▶ **Carbides Volume fraction:** 40% ~ 50%
- ▶ **Abrasion resistance:** 15 times of low carbon steel and 5 ~ 8 times of heat-treated steel
- ▶ **Flatness:** Uniform flatness, $\pm 3\text{mm/m}$
- ▶ **Thickness:** Uniform thickness

Chromium carbide microstructure:

As can be seen from the photos below, the volume fraction of Cr₇C₃ carbide in the metallographic structure of Wodon wear plate is about 50%.



Specification

Base plate thickness: 3-100mm

Thickness of weld overlay: 3-50mm

Wear plate size: 1400*3400mm 1400*3000mm 1500*3000mm

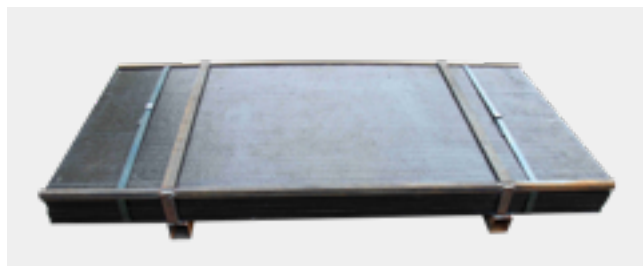
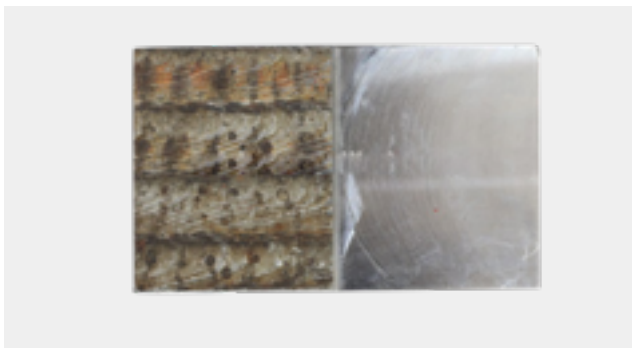
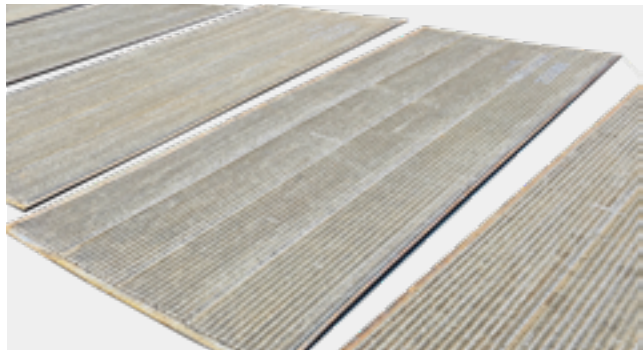
1400*3500mm 2000*3000mm 2100*3500mm

Other special customized sizes

Classification

Product	Type	Character
WD-1000/1100	General wear resistant composite steel plate	Suitable for general wear, medium and low impact resistance, hardness HRC: 58~65
WD-1200/1500	High chromium wear resistant composite steel plate	With Cr content up to 40%, used for severe wear, can withstand medium and low impac
WD-1600	Impact and wear resistant composite steel plate	Independently developed, can withstand high impact and wear resistance
WD-G900	High-temperature wear resistant composite steel plate	Maximum temperature can withstand 900 °C
WD-NC100	Wear resistant composite crack-free steel plate	hardness HRC: 50~55, mainly used for sliding block and sliding plate in rolling mill
WD-D3000	Customized according to requirements, special elements can be added for special wear resistant fields	

Product display



Wear Plate

Wear parts introduction

Processing technique

Cutting hole



Bolt embedded welding in the back



Bending



Assembly welding



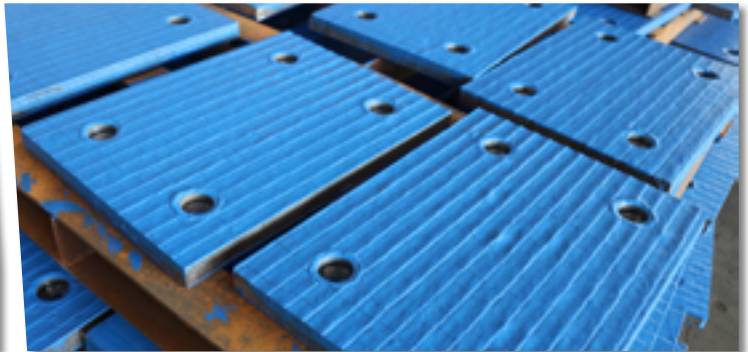
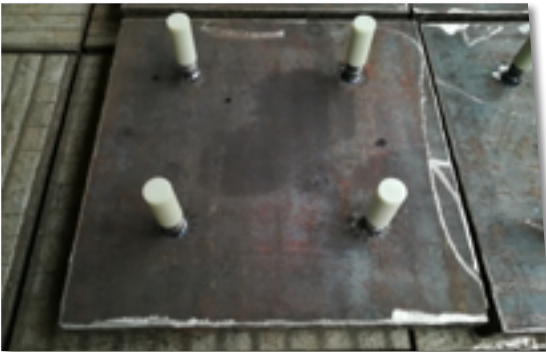
Wear elbow, Wear pipe, Square to round transition



Applications

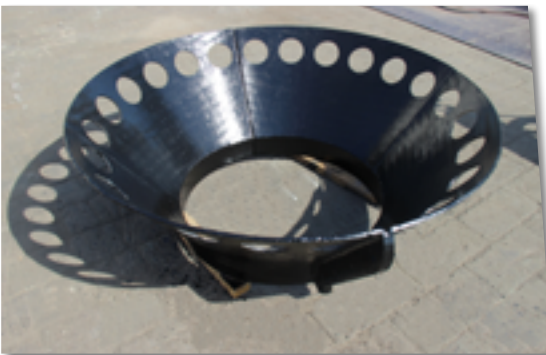
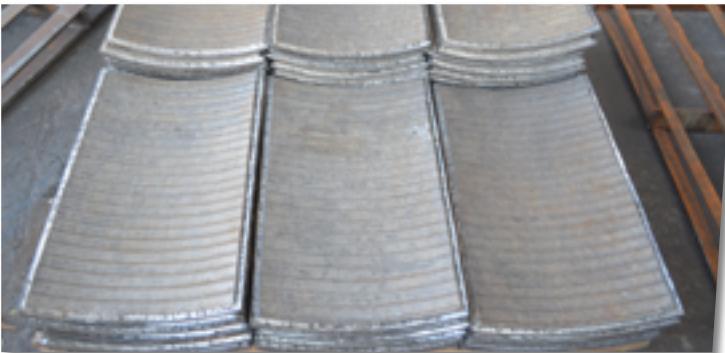
Flat liner

Used for various wear resistant liners



Curve plate

Used for various curve wear resistant parts



Wear Plate

Applications

Wear pipe

Round pipes, square pipes and elbows, etc.



Engineering, Earthmoving

Bucket, grab, shovel and other applications.



Applications

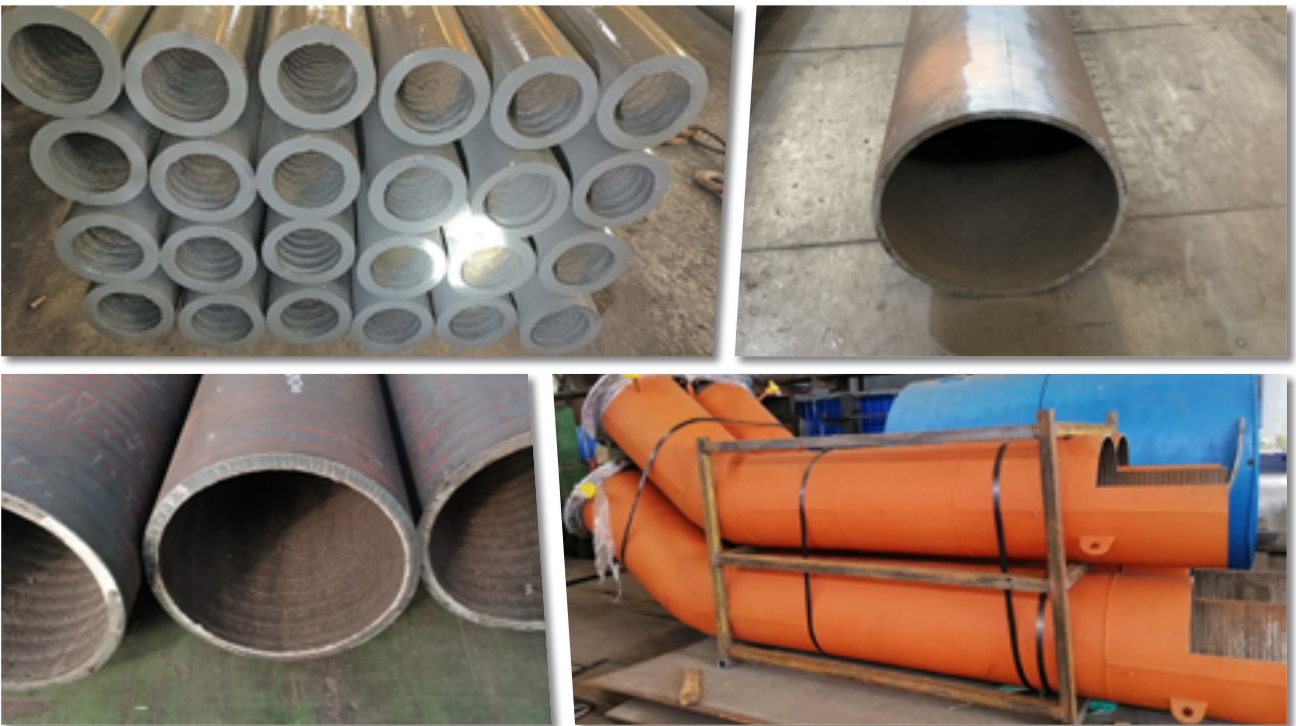
Bulk material handling

All kinds of chutes applications.



Wear pipe hardfacing

Various material handling applications.

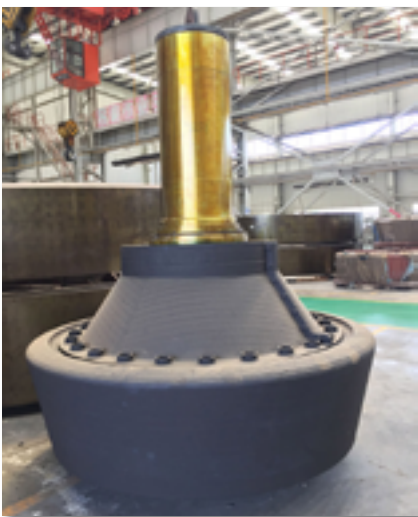
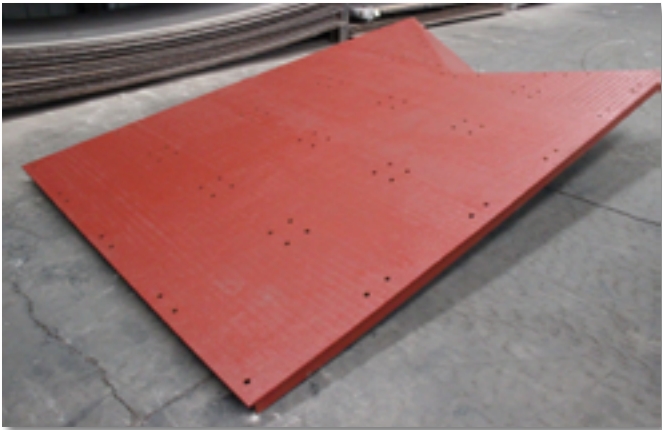


Wear Plate

Display of other applications



Display of other applications



Welding Wire



Advantage of welding wire

- ▶ **Quality control:** The welding wire without any joint, smooth wire feeding, no break arc, stable arc, uniform diameter.
- ▶ **Combination of metallurgy:** Combination of metallurgy, no falling off after welding, uniform stress release after surfacing.
- ▶ **Deposition efficiency:** Less spatter, small smoke, deposition efficiency > 90%.
- ▶ **Full range of categories:** Independent research and development, many varieties, can meet all kinds of wear requirements.

Classification of welding wire

Product	Description
Wear plate welding wire	Suitable for single, double and multi layers wear plate welding.
Various repair welding wires	Coal grinding roller hardfacing welding wire, Cement mill hardfacing welding wire , Squeeze roller hardfacing welding wire, Coal mine middle trough repairing welding wire , Roller hardfacing welding wire , steel slag grinding, star wheel repairing welding wire , other repairing welding wires.
Gas shielding welding wire	Various gas shielding repairing welding wires (repair all kinds of wear parts) . Heat resistant welding wire, grate bar and single tooth roller repairing welding wire, gas shielding welding wire, impact resistant welding wire and various welding wires containing special elements (customized as required)

Welding Wire

Classification of welding wire

Wear plate welding wire

Model	Hardness (HRC)	Main Ingredients	Application
HD161	58~65	C、Cr、Mn、Si	For hardfacing single layer wear plate
HD161+	58~65	C、Cr、Mn、Si	For hardfacing single layer wear plate
HD181	58~65	C、Cr、Mn、Si	For hardfacing ultrathin wear plate
HD30	55~63	C、Cr、Mn、Si	For hardfacing multiple layers wear plate

Steel mill roller welding wire

Model	Hardness (HRC)	Main Ingredients	Application
D430	35~45	C、Cr	For hardfacing common corrosive component
320H	~	C、Cr	For hardfacing continuous casting roller
224	45~55	C、Cr、Mo、W	For hardfacing hot rolled billet roller
224B	50~60	C、Cr、Mo、W	For hardfacing hot rolled billet roller
414N	40~50	C、Cr、Mo	For hardfacing continuous casting roller
414-O	40~50	C、Cr、Mo	For hardfacing continuous casting roller

Vertical cement mill welding wire

Model	Hardness (HRC)	Main Ingredients	Application
HB100	58~63	C、Cr、Mo	For repairing Coal grinding mill, Grinding disc, Cement vertical mill
HB100L+	58~63	C、Cr、Mo	
HB100+	58~63	C、Cr、Mo	
HB350	58~63	C、Cr、Mo、Nb	
HB650	58~63	C、Cr、Mo、Nb	



Classification of welding wire

Cement squeeze roller welding wire

Model	Hardness (HRC)	Main Ingredients	Application
HB-JYG1#	~	C、Cr、Mo	For base layer
HB-JYG2#	55~63	C、Cr、Mo	For buffer layer
HB-JYG3#	55~63	C、Cr、Mo	For pattern layer

Gas shielding welding wire

Model	Hardness(HRC)	Main Ingredients	Application
D114	50~55	C、Cr、Mn	For hardfacing hammer head, hammer plate and other high impact parts
D172	≥ 40	C、Cr、Mo	For hardfacing bucket gear, mining machinery and others
D212	≥ 45	C、Cr、Mo	For hardfacing the surface of wear parts, such as gear, digger, mining machinery etc
D256	HB ≥ 170	C、Mn	For hardfacing high manganese rail, bulldozer and other wear parts under impact
D313	45~50	C、Cr	For hardfacing continuous casting roller
D322	55~63	C、W、Mo	For repairing die and toughening tool and mechanical parts with high wear performance
D405	53~60	C、Cr、Mo、W、V	For hardfacing hot rolling roll
D430	35~40	C、Cr	For hardfacing general corrosion resistant parts
D502Mo	35~45	C、Cr、Mo	For hardfacing valve
D518	40~50	C、Cr、Mo、Ni	For hardfacing continuous casting roller
D688	50~58	C、Cr	For hardfacing heavy wear parts
D788	50~60	C、Cr	For hardfacing heavy wear parts
D788A	50~60	C、Cr	For hardfacing heavy wear part, single layer welding only
D888	58~65	C、Cr	For hardfacing heavy wear parts
D995	58~65	C、Cr、Nb、W、V	For hardfacing heat resistant wear parts
D688 Welding rod	50~62	C、Cr	For welding by severe abrasive wear parts

Wodon develops a variety of flux cored welding wires according to customers' needs, which can meet the wear requirements of various working conditions.

Welding Wire

■ Packaging pictures



■ Hardfacing and repairing



Service

Wodon implements the requirements of ISO9001 strictly to ensure the quality and timely delivery. Fully implement the "customer-centric" service concept. After-sales service can meet the needs of customers to the maximum extent, improve the service life of products, extend the service cycle and save costs. Since the establishment of the company, we are always committed to creating the maximum value for customers with the best service.



Provide **12 hours** presenting quotation



Providing scheme within **24 hours**



Arriving at the site within **48 hours** (limited to Chinese Mainland)



7 (days) * 24 (hours) telephone communication

WODON



Professional manufacturer of wear resistant material



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