

 QISHUAI

 Gold Supplier



SHANDONG QISHUAI WEAR RESISTANT EQUIPMENT CO.,LTD

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Shandong Qishuai Wear Resistant Equipment Co.,Ltd

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COMPANY PROFILE

Company profile

Shandong Qishuai wear resistant equipment Co., Ltd is specialized in High-performance alloy spraying-welding wear-resistant processing, microcrystalline Zirconia-Corundum wear-resisting lining board and high performance alloy casting of high-tech professional production enterprises. After years of development, the company has gathered considerable technical strength and experience in product development, manufacturing and installation area.

Quality is our culture

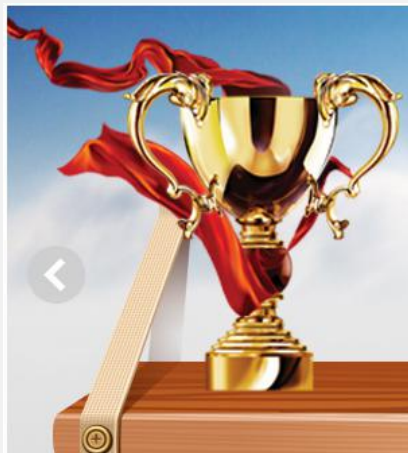
Professional production team

24 hours after sales services

Wear resistant expert



certificate



QISHUAI TEAM WORK

- professional production team
- professional sales team
- professional Technical engineers
- After-sales services



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PRODUCTS

- High alumina ceramic tiles
- isostatic pressing alumina ceramic pipe
- Rubber ceramic composite lining plate
- Alumina ceramic rubber composite pulley lagging
- Wear resistant chromium carbide plate
- Wear resistant chromium tube



The Features of Ceramic tile:

1.High hardness

Its Rockwell hardness HRA80-90, hardness second only to diamond, and the wear-resistant is far more than wear-resistant steel and stainless steel.

2.Excellent wear resistance

Equivalent to 266 times than the manganese steel and 171.5 times of the high chromium cast iron. In the same conditions,it can extend the service life at least above ten times.

3.Light weight

The weight is only half of steels, so can greatly reduce the equipment load.

4.Corrosion resistance

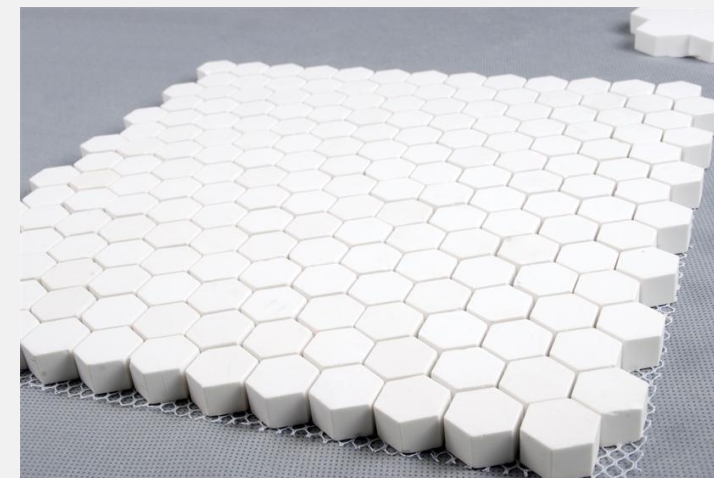
High-aluminum ceramic inorganic oxides have very stable molecular structure and electrochemical corrosion, so they can resist the erosion of organic solvents such as acids, bases and salts.

5.Stability of heat temperature

Working temperature of high alumina ceramics can be as high as 1600°C.

6.Smooth surface

High alumina ceramics have the properties of smooth and adhesion, the roughness is only 1/6 that of steel pipes thus less flow Resistance.



The most popular size as below,also customized any sizes.

- 100*100*20mm(4" *4" *3/4") 150*100*25mm(6" *4" *1")
- 150*100*13mm(6" *4" *1/2") 150*50*25mm(6" *2" *1")
- 150*100*15mm(6" *4" *5/8") 100*75*25mm(4" *3" *1")

The detailed parameters of ceramic brick:

Performance index	92series	95series	Performance index	92series	95series
Content	≥92	≥95	Moh's Hardness	9	9
Bulk Density	3.63g/m³	3.68g/m³	Rate of Water Absorption (%)	≤0.01	≤0.01
Bending strength (Mpa)	255	275	Rochwell Hardness(HRA)	≥85	≥85
Compressive Strength(Mp)	≥2000	≥2250	Fracture Toughness (M pa)	3.65	3.75
Thermal expansion coefficient(6.5-7.5)	7.2×10-6m/×m.k	7.5×10-6m/×m.k	Dielectric Strength	10×10-6	10×10-6
Thermal Conductivity	20W/m.k	20W/m.k	Temperature	1600	1600



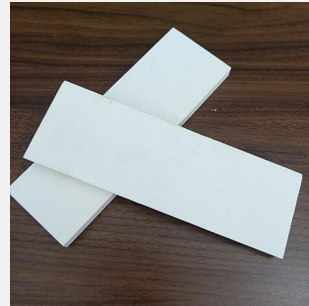
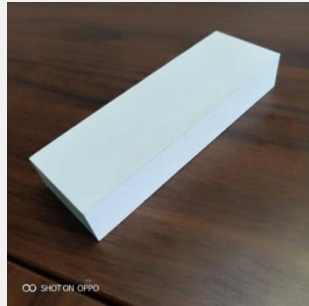


Plate liner



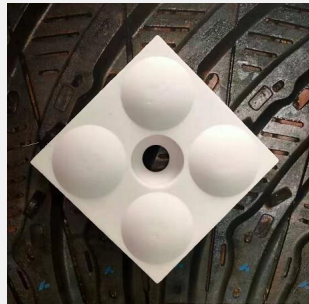
Pipelng liner



Mosaic



Cylindrical mosaic



Welding liner



Irregular liner

isostatic pressing alumina ceramic pipe



Product Description

92% & 95% alumina ceramic tube is mainly used in wear resistance fields. Usually alumina ceramic tube will be installed with steel tube, and we could supply the finished products as custom drawing.

Product Advantages

1. Molding: Isostatic pressing
2. Wear-Resistance: Approx 10 times stronger than common pipes under same conditions
3. Corrosion resistance: Strong acid or alkali resistant
4. Scouring abrasion resistance: Can bear scouring abrasion by large grain material without damage
5. Good fluidity : Smooth surface ensure the free flow of material without blocking
6. Low maintenance cost: Super wear-resistance reduce the maintenanc frequency and also the maintenance cost.



Rubber ceramic composite lining plate



Mineral Processing equipment operates in some of the harshest and remote locations. It is crucial to the Mineral Processing industries that this equipment continues to operate efficiently and its lifecycle is maximised to minimise down time. By appropriately protecting equipment from the extreme wear caused by the high speed and flow rates of ore when processed as a slurry ensures better equipment longevity. Slurry is highly abrasive and can not only cause wear damage to wet processing equipment but also with the inclusion of chemicals and heat, there is constant risk of corrosion and dangerous leakage.

Composite Ceramic Wear Liners can be supplied as standard pads, or cut panels to meet customer drawings and specifications, or can be custom engineered to ensure maximum suitability for your specific application.

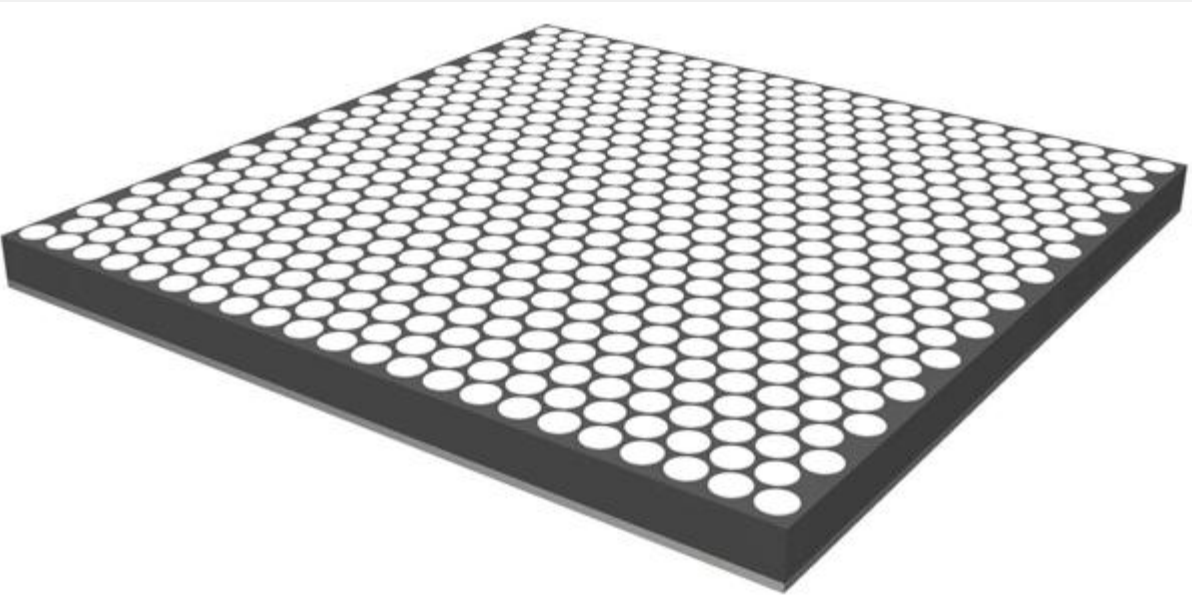
Ceramic Wear Panels can also be supplied with steel backing for mechanical fastening onto equipment for quicker and easier replacement.

Qishuai Composite Ceramic Wear Liners last longer, requiring less change-outs, reducing downtime and increasing the productivity of your equipment.





Rubber ceramic composite lining plate



The rubber composite ceramic liner plate have two forms of rubber+ceramic and metal+rubber+ceramic. It is a special ceramic pieces, embedded by vulcanization in the special rubber, composition a square wear-resistant rubber liner, and then by welding or paste fixed to the inner shell of the equipment on the steel plate, to form a strong and buffer anti-wear layer.

- normal size:
- 500*500*30 300*400*32
 - 500*500*40 188*300*30
 - 300*300*25 316*476*60

Ceramic material data:

Ceramic content	Bulk density	Moh's hardness	Rate of water absorption(%)	Bending strength(M pa)	Fracture toughness(M pa)	Rockwell hardness(HRA)
92% and 95%	3.63g/m ³ (92%al2o3)	9	≤0.01	255(92%al2o3)	3.65(92%al2o3)	≥85
	3.68g/m ³ (95%2o3)			275(95%al2o3)	3.75(95%al2o3)	

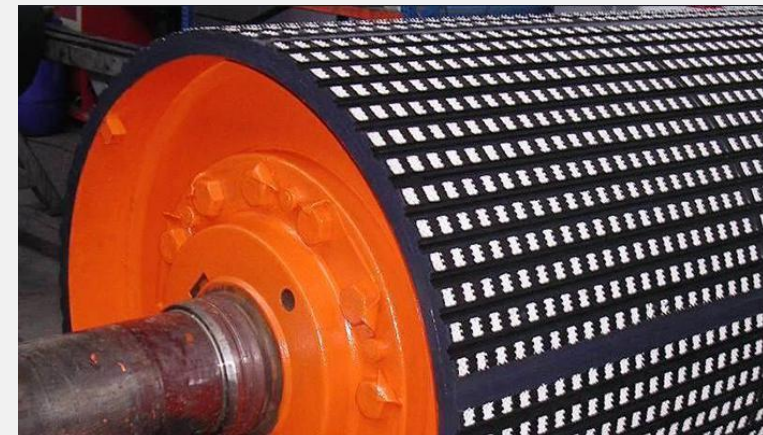
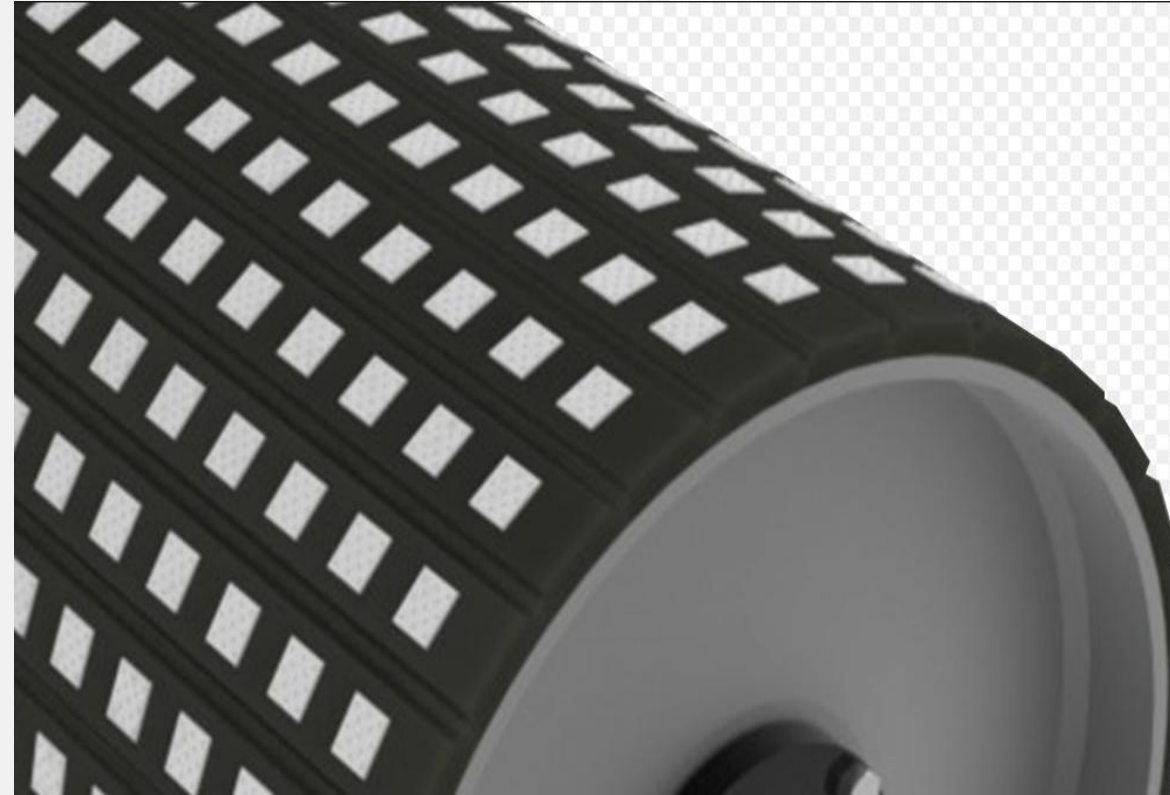
Rubber material data:

Tensile strength	Rubber elongation	shore hardness	break permanent deformation	rubber proportion	Main composition
16MPa	450-500%	60±5	30%	1.2	Natural rubber
Peer strength between rubber and ceramic/steel and ceramic				6MPa	
Bonding strength between rubber and ceramic				4MPa	

Note: the rubber species is natural rubber or customized according to your requirements.

Alumina ceramic rubber composite pulley lagging

Vulcanize the wear-resistant ceramics with dimple on the surface onto the special rubber according to some curtain layout by an advanced hot vulcanization process to get a special wear-resistant composite material, which is then instead of the traditional rubber pasted onto the surface of the pulley to form the ceramic pulley lagging, which means low maintenance and less downtime.



Alumina ceramic rubber composite pulley lagging



Standard Size of ceramic pulley lagging

Size	Length (mm)	Width(mm)	Ceramic thickness (mm)	Rubber thickness (mm)
800×500×16mm	800	500	8	8
800×500×17mm	800	500	8	9
800x500×18mm	800	500	10	8
800×500×19mm	800	500	10	9
800x500×20mm	800	500	12	8
800x500×21mm	800	500	12	9

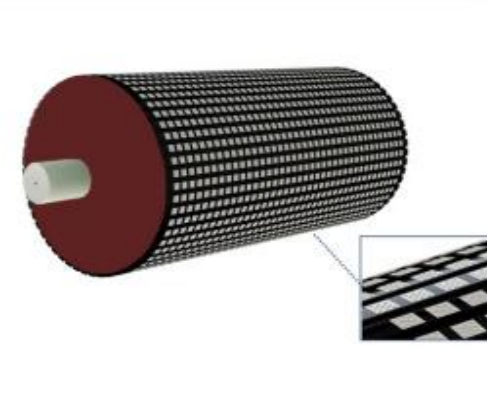
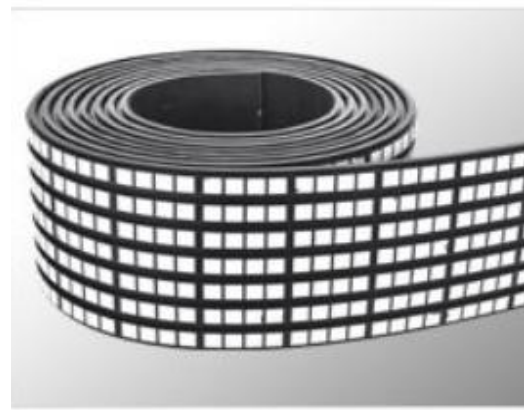
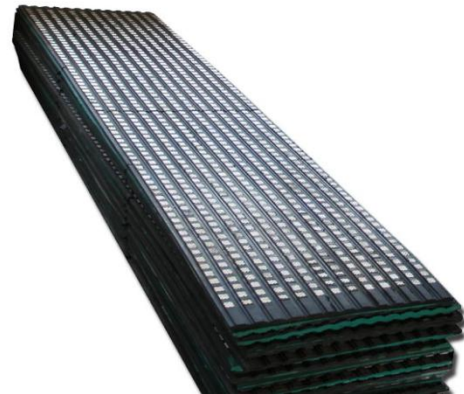
Technical details of the rubber and alumina ceramic

Main Technical Parameter of Wear Resistant Ceramic

Item	Index
Alumina Content	≥92%
Bulk Density	≥3.63g/cm ³
Rockwell Hardness (HRA)	≥90
Compressive Strength	≥850MPa
KIC Fracture Toughness	≥4.8MPa.M1/2
Bending Strength	≥290MPa
Thermal Conductivity	20W/m.k
Coefficient of Thermal Expansion	7.2×10-6m/×m.k

Main Technical Parameter of Rubber

Item	Index
Tensile Strength	≥27MPa
Break Extension	≥300%
Shore Hardness	60-70
Break Permanent Deformation	≤24%
Rubber and Ceramic Adhesion	≥3.0MPa
Temperature	≤100-300℃
Rubber Aging Life	≥8 year

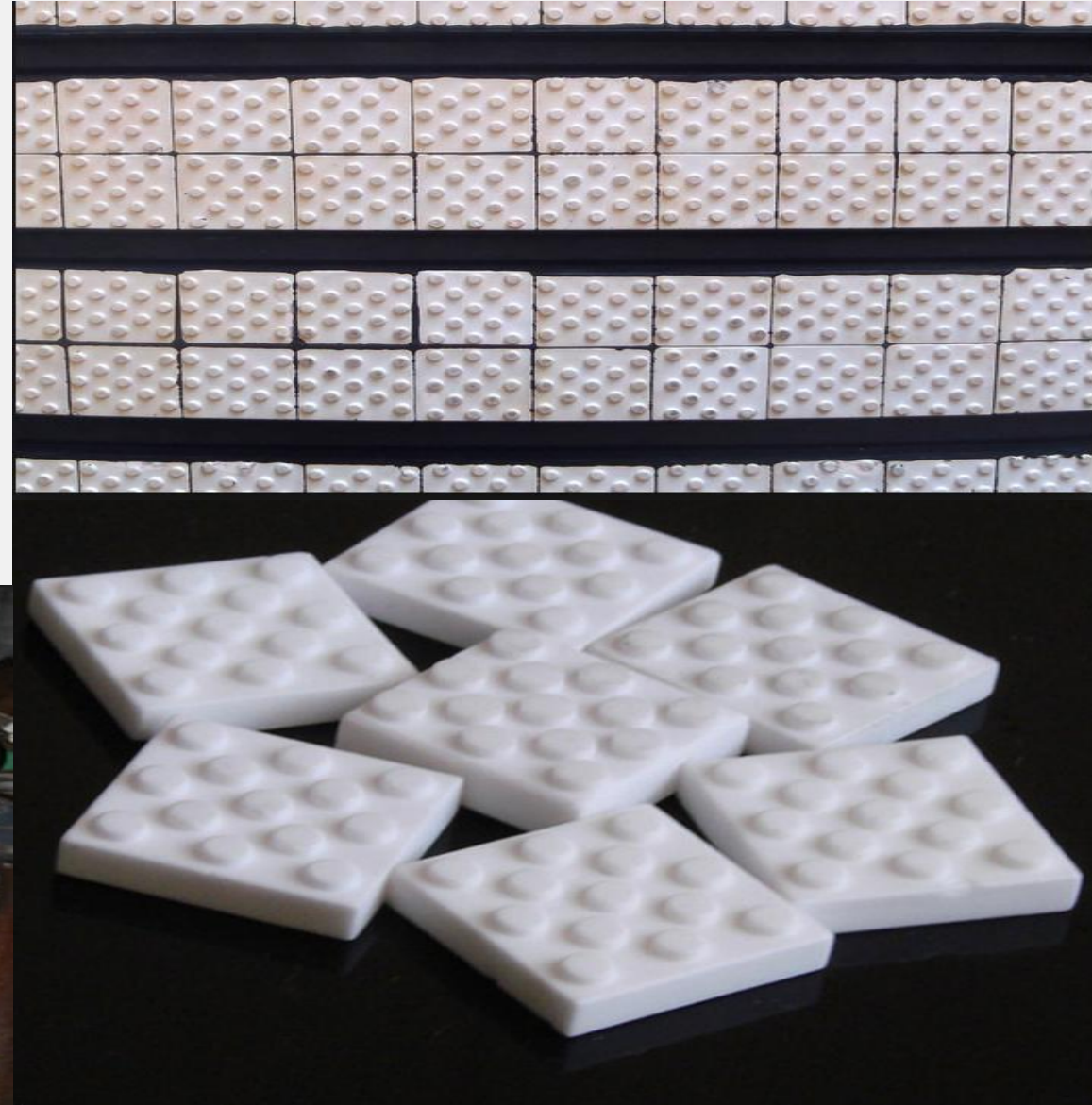
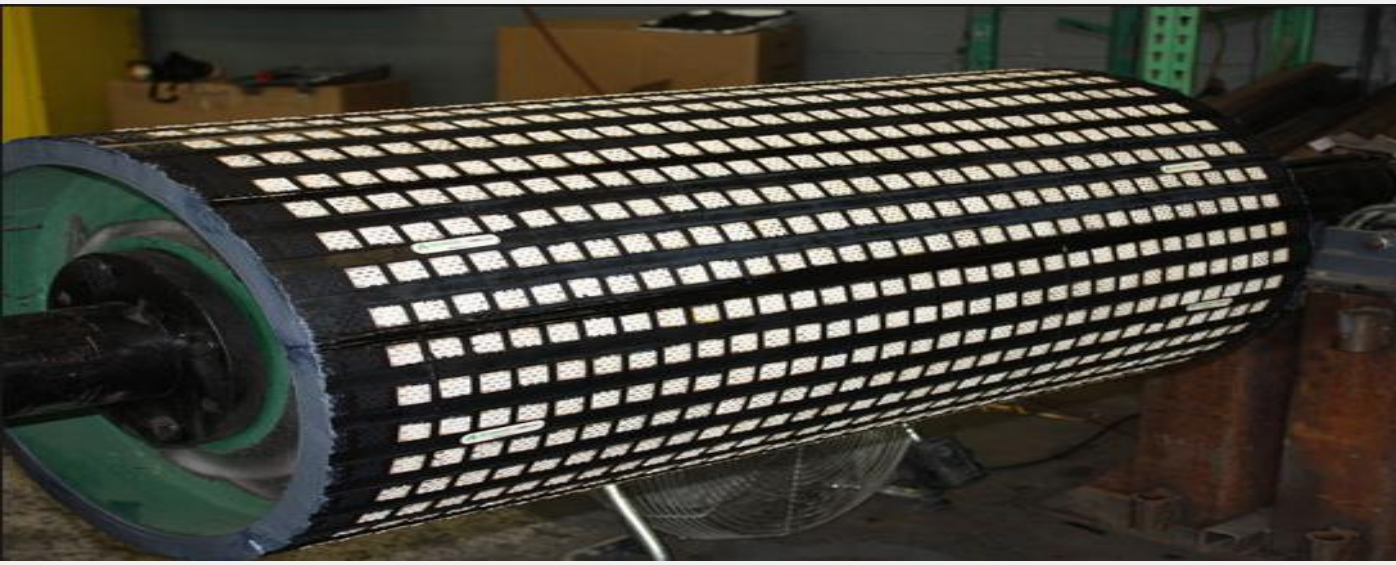


Alumina ceramic rubber composite pulley lagging

The features of the alumina ceramic rubber composite pulley lagging

Features of non-stick rubber sheet:

- 1.Synthetic rubber
- 2.Electrostatic prevention
- 3.Flame resistant
- 4.Exceptionally high abrasion resistance and modulus
- 5.Exceptional grip
- 6.Exceptional wear resistance
- 7.Will not prematurely harden
- 8.Bonding layer
- 9.Press cured using high temperature and pressure





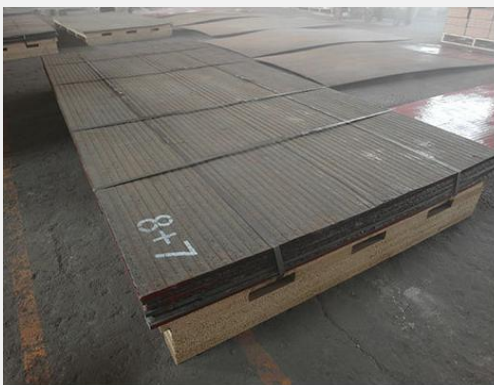
Complex-Carbide Overlay Plate

The bimetallic (meaning two types of metals) product starts with standard steel base plate that is then fused or overlaid with chromium carbide. chromium carbide metallurgically bonds to the steel's surface to form a protective and durable surface that will not separate from the base metal. Chromium carbide overlay steel plate is extremely hard, resistant to both wear and impact, and withstands high temperatures.

WEAR PLATE AFTER HARDFACING:

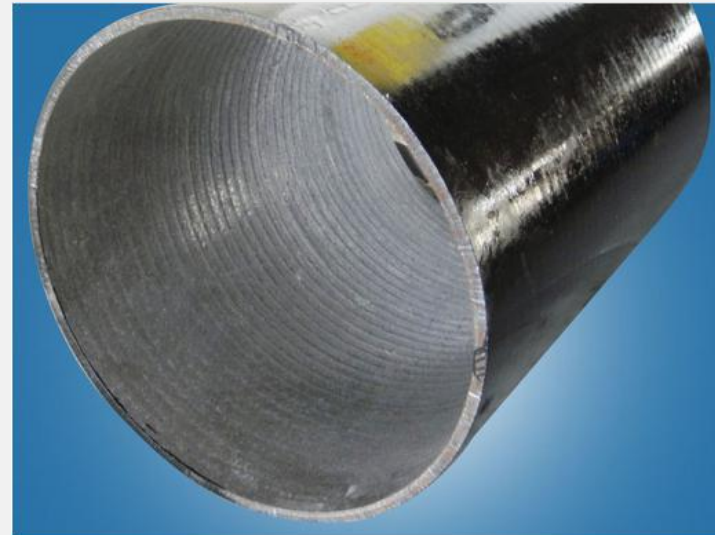
- 1- Thickness tolerances : -0/+1 mm
- 2- Physical properties : resistant to abrasion and erosion till 800° C.
- 3- Flatness tolerances : max. 3 mm/1000 mm.
- 4- Dimensions of the standard plates : customized
- 5- Application: high hardness and abrasion

Wear resistant chromium carbide plate



Product Name	China made high chrome carbide overlay Wear liner plate
Material	High chromium carbide overlay plate
Thickness	3+3,6+4,8+6,10+10,12+12,etc Or as your requirement.
Hardness	50-65 HRC
Surface Treatment	Hardfacing , clading ,coated.
Technique	Hardfacing Advanced submerged arc welding / open arc welding technology
Chemical Composition	C : 4.0-5.0% Cr : 24-45% Mn : 1.0-5%
Base Plate	Q235 / Q345
Plate Size	Length: 3000mm Width: 600-1500mm Size van be customized
Feature	High wear resistance 12-20 times higher than common plate 5-10 times than low alloy steel plate 2-3 times than high chromium cast iron plate
Delivery time	7 days for sample 25 days for production
Packaging details	Steel frame or as required package
Application	Mining,Steel,Cement,Power,Port,etc.

Wear resistant chromium tube



Wear Resistant Alloy Tube

Chromium Carbide Overlay (CCO) Steel Pipe is chromium carbide overlay on the inside diameter of the standard wall pipe.

Wear resistant chrome pipe is composed of the wear base material and the wear layer, the wear layer is generally accounts for 1/3 or 2/3 of total thickness; The wear layer and the base material is combined through metallurgy, so that the wear layer can't fall off, and can bear stronger impact.



Wear Resistant Alloy Tube

The features of chrome carbide overlay steel pipe:

- 1-preferable wearlessness
- 2-superior heat resistant performance
- 3-Excellent machining performance
- 4-Superior cost performance effect

Chemical composition:

Cr	C	Si	Mn	others	Hardness
24-30%	4%-5%	0.5%-1.5%	0.5%-2.5%	Less than 2%	58-62HRC

Hardfacing layer information:

Hardness	HARDNESS TOLERANCES	Thickness tolerances	Weld pool	Welding direction
58-62HRC	-0/+1,5 HRC	-0/+1 mm	2mm	Lengthways of the plate

Wear resistant chromium tube



The advantage of CCO pipe:

- 1-In the inner or external wall of general steel pipe, with wear resistant pipe welding machine directly clad wear resistant layer of high carbon high chromium. Compared with manual welding, automatic welding will not have wear resisting layer off phenomenon, improve the service life of wear resistant pipe.
- 2-Can be cut, formed and welded
- 3-Cost effective
- 4-Increased wear life of piping systems
- 5-Minimise downtime
- 6-Reduce maintenance and operational costs
- 7-Weld overlay can be applied to two sides for added strength and durability
- 8-increase production

OUR CUSTOMERS



PRODUCTS APPLICATION



Iron and Steel Smelting Industry



Thermal Power Industry



Coal Mining Industry



Machinery Manufacturing Industry



Water Pump Industry



Petrochemical Industry



WORMLY WELCOME TO VISIT US!

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