

ALLOYSTAR TECHNOLOGY



Oil and Gas Industry



Electric Power Industry



Mining Industry



Building Material
Industry



Steel and Metallurgical
Industry

ONE-STOP WEAR-RESISTANT PROFESSIONAL SOLUTION



OUR PLANT

At **ALLOYSTAR**, we are committed to providing comprehensive, one-stop wear-resistant solutions tailored to your specific needs. By gaining a deep understanding of your requirements, we deliver end-to-end services, including customized solution development, premium product supply, and reliable after-sales support.

Through continuous monitoring of customer feedback and operational performance, we consistently refine our products to ensure:

- Enhanced equipment protection
- Extended service life
- Reduced downtime and maintenance costs

Our expertise and dedication to excellence have made us a trusted partner for clients across various industries. We look forward to helping you achieve greater efficiency and reliability in your operations.

OUR PLANT



OUR PLANT

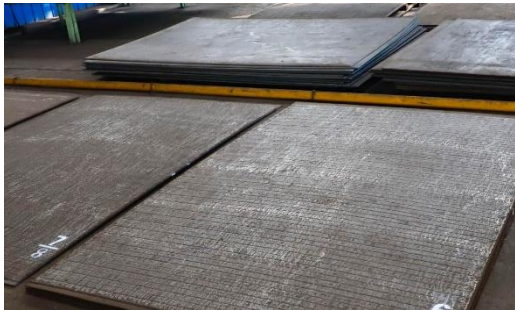


OUR MAIN PRODUCTS

- Wear-Resistant Plate
- Smooth Wear-Resistant Plate
- Wear-Resistant Pipe
- Customized Wear Parts
- Ceramic Wear Liners (including ceramic-lined pipes and elbows)
- Bimetallic Liners (White Iron Liners, Chocolate Liners, Loaf Liners, Chute Liners)
- Metal Matrix Components with Ceramic Particles (liners, blow bars, hammers)
- PTAW (Plasma Transferred Arc Welding)
- Tire Tables and Rollers
- Flux-Cored Wire

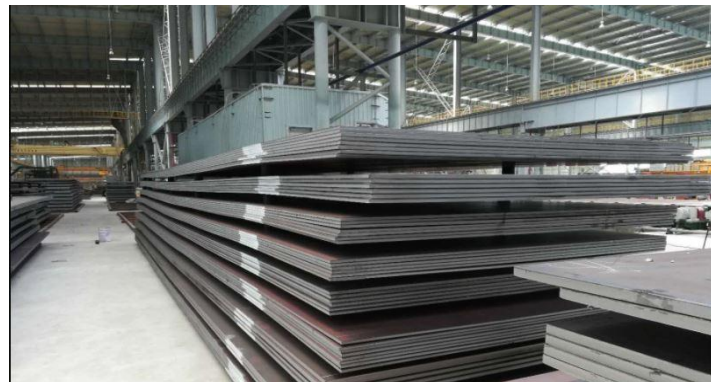
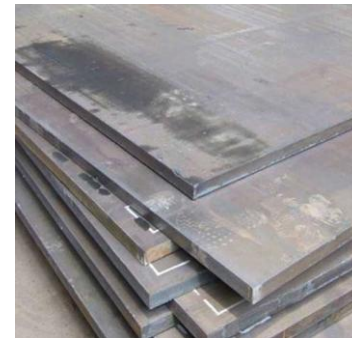
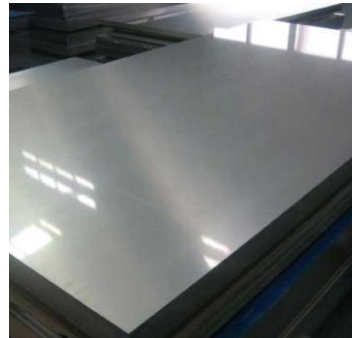
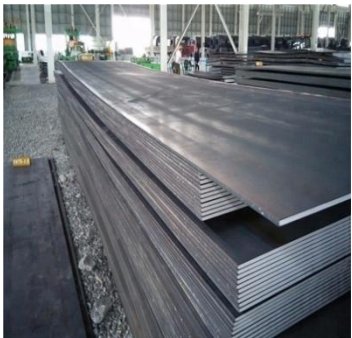
Hardfacing Products- Wear-Resistant Plate (CCO)

- **Bimetallic Wear-Resistant Plate** is produced by depositing chromium-rich, abrasion-resistant materials onto a mild steel base plate using the **arc welding process**. The plate is available in thicknesses ranging from **3mm on 3mm to 50mm on 12mm**.
- The **hardfacing overlay plate** is specifically designed for applications involving **severe abrasive wear** and **moderate to low impact**, providing exceptional durability and extended service life.



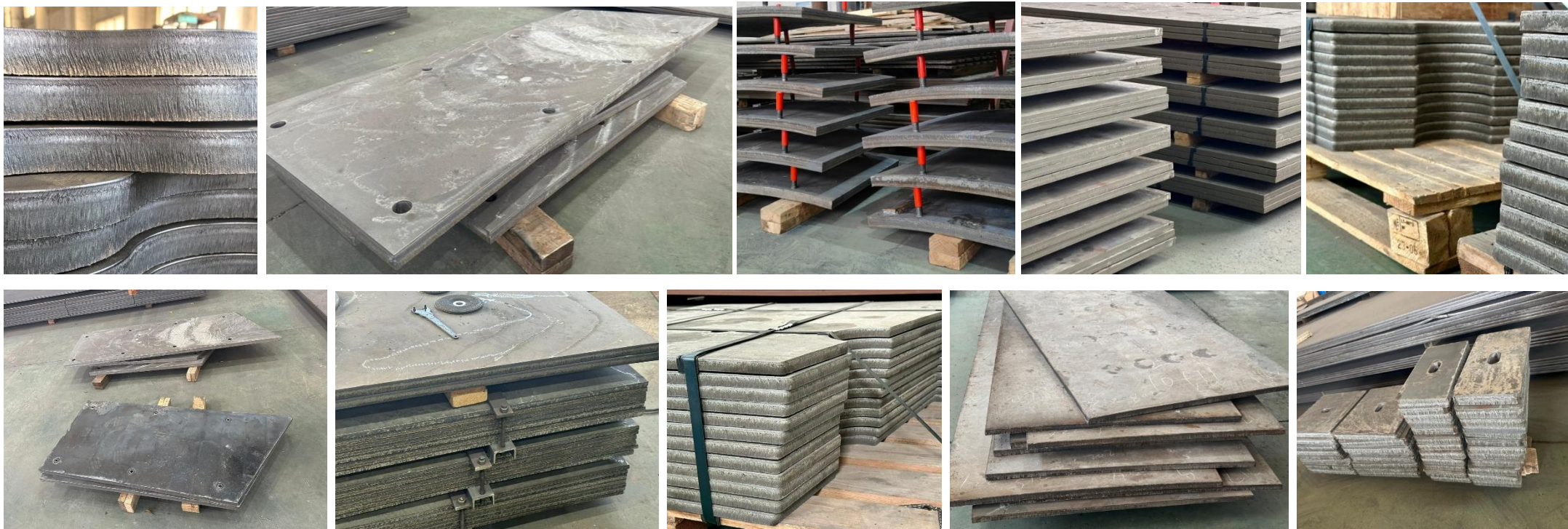
Products- Wear-Resistant Plate

- **AS Plate** refers to a **wear-resistant steel plate** designed to withstand **abrasion and impact**. It is made from a special **high-carbon alloy steel** with added alloying elements that significantly increase its **hardness and toughness** compared to ordinary steel, while still maintaining good formability.
- Common grades include **AS400**, **AS450**, and **AS500**—with the number indicating the plate's hardness level. The higher the grade, the greater the hardness and wear resistance.
- **Applications and Specifications:**
- AS plates are widely used in industries where components are exposed to heavy wear, such as dump truck beds, excavator buckets, mining chutes, and construction machinery parts. They are available in thicknesses ranging from **3mm to 200mm**, widths between **1500mm and 2200mm**, and lengths from **3000mm to 15000mm**, making them suitable for a wide variety of industrial needs.



Hardfacing Products- Smooth Wear-Resistant Plate

- We manufacture our products using **advanced fusion bond welding technology**, applying a highly **abrasion-resistant chromium carbide** layer onto a steel substrate. This process produces a **consistent chemistry and microstructure** with a **smooth overlay deposit**, free from surface weld beads and with a **low friction coefficient**.
- Thanks to the **precipitation of various carbides**, the material offers **exceptional wear resistance, high hardness, and excellent impact resistance**. Plate thicknesses are available from **5mm on 5mm up to 25mm on 15mm**, making it suitable for a wide range of heavy-duty applications.



Hardfacing Products- Wear-Resistant Pipe

Bimetallic Wear-Resistant Pipe offers **excellent wear resistance**, as well as **high temperature and impact resistance**, making it ideal for demanding industrial applications.



Hardfacing Products- Customized Wear Parts



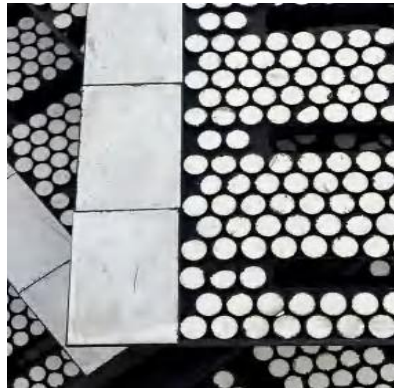
Other Wear-Resistant Products- Ceramic Wear Liners

Ceramic Wear Liners

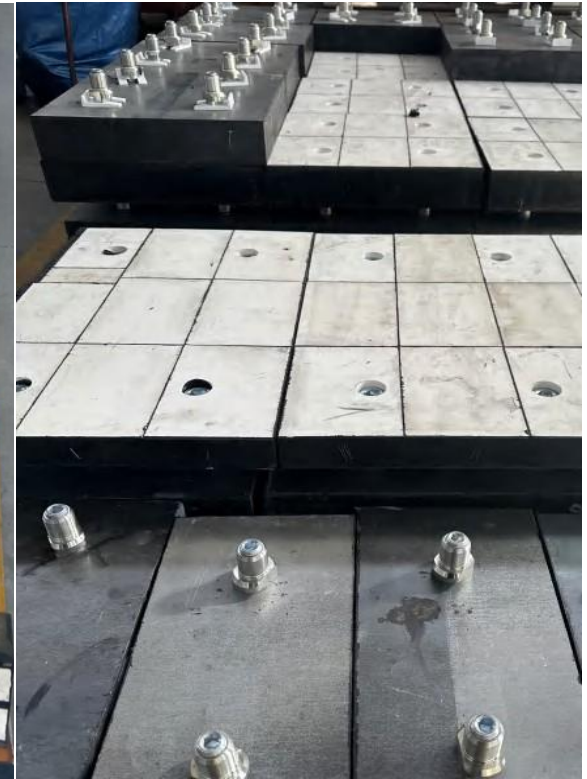
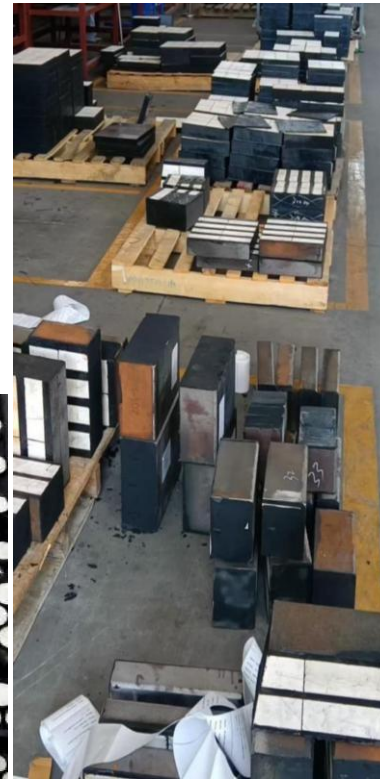
Ceramic Rubber Composite Lining is manufactured using an **advanced thermal vulcanization process** that bonds toughened wear-resistant ceramics with durable rubber. This innovative combination leverages the **high hardness and superior wear resistance of ceramics** along with the **excellent buffering and fatigue resistance of rubber**. Additionally, it helps **suppress dust and reduce noise**, making it ideal for heavy-duty and high-impact industrial applications.



▪ Ceramic



▪ Ceramic+rubber



▪ Ceramic+rubber+steel

Other Wear-Resistant Products- Ceramic Liner Pipes/Elbow

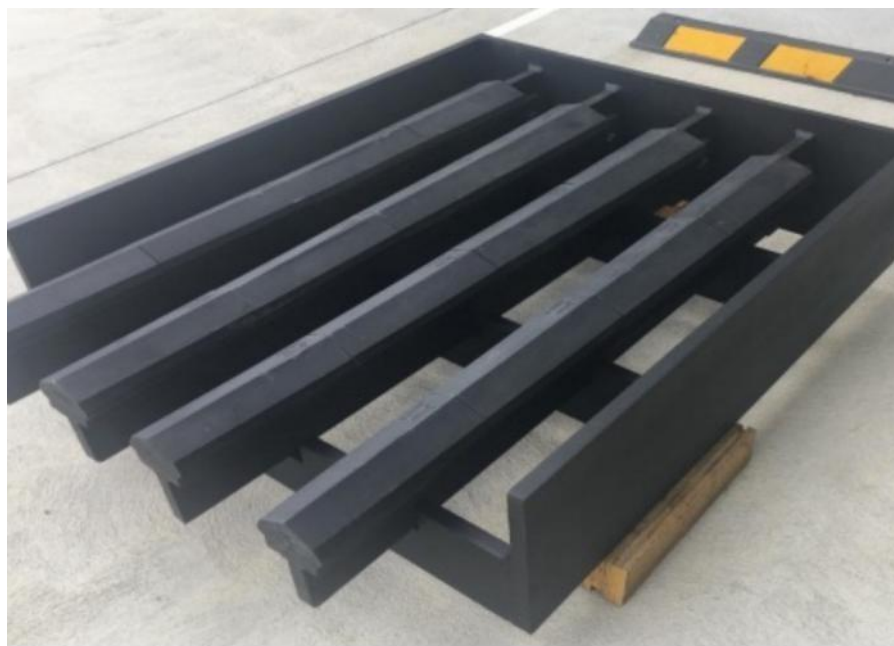
Ceramic-Lined Pipes are engineered for **extreme wear and corrosion resistance**. They feature a **high-alumina ceramic layer** bonded to the inner surface of the pipe, providing exceptional durability and reliability in harsh environments such as **mining, power generation, and cement production**.

Key Benefits:

- Superior Wear Resistance:** Ideal for transporting highly abrasive materials such as coal, ore, and ash.
- Excellent Corrosion Resistance:** Withstands both acidic and alkaline conditions.
- Extended Service Life:** Minimizes maintenance needs and reduces replacement costs.
- Smooth Internal Surface:** Enhances flow efficiency and lowers energy consumption.



Other Wear-Resistant Products- Bimetal Liners



Bimetal Grizzly Bar

Bimetal Grizzly Bar



Customized grizzly bar
180mm - 120mm



Customized grizzly bar
110mm - 70mm

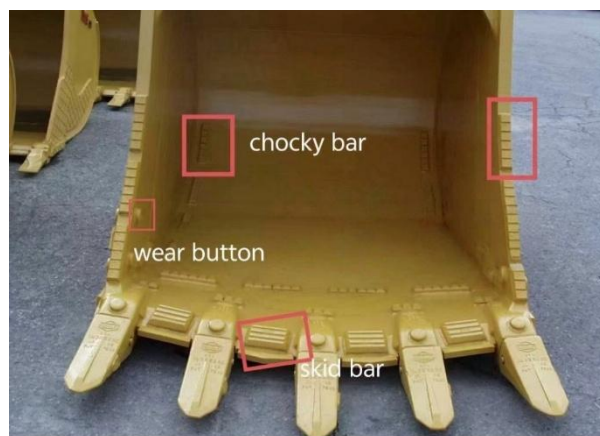


Customized grizzly bar
105mm - 59mm



Customized grizzly bar
140mm - 65mm

Other Wear-Resistant Products- White Iron Casting Liners



White Iron Casting Liners are **wear-resistant components** designed to protect industrial equipment from severe abrasion. Made from **high-carbon white iron**, these liners feature a **hard carbide structure**, delivering **exceptional wear resistance** with hardness levels often exceeding **HRC 60**.

Applications:

White iron liners are widely used in **grinding mills** in the **mining and cement industries** to protect mill shells from wear caused by grinding media and abrasive materials. They are also utilized in **material handling equipment** to safeguard surfaces against abrasion.

Advantages:

- Long service life in highly abrasive environments due to superior wear resistance.
- Can be **cast into various shapes and sizes** to fit different equipment designs.

Limitations:

- Dimensions are typically limited to **600mm or smaller**.
- A **custom mold** is required for casting.
- Minimum thickness is generally **30mm** or more.

- **Choky Bars:** Designed for high-impact and abrasive environments, often used in chutes, hoppers, and conveyor systems.
- **Wear Buttons:** Ideal for localized wear protection in mining and construction equipment.



Hardfacing and Casting Products- Liners (Main Crusher Machine)



White Iron Liners are **highly wear-resistant components** made from **high-chromium white iron**, renowned for their **exceptional hardness and durability**. They are widely used in industries such as **mining, cement, and construction** to protect equipment from abrasion, reduce wear, and **extend service life**.

Key Benefits:

- **Superior Wear Resistance:** Perfect for handling highly abrasive materials such as ore, gravel, and slag.
- **High Hardness:** Offers outstanding protection against impact and erosion.
- **Cost-Effective:** Minimizes downtime and maintenance costs by significantly extending equipment lifespan.
- **Versatile Applications:** Ideal for use in chutes, hoppers, crushers, and other heavy-duty equipment.

With their unmatched durability and reliability, **white iron liners** are the **perfect solution for industries requiring long-lasting wear protection** in the most demanding environments.



Other Wear-Resistant Products- Metal Matrix with Ceramic Particles

The main materials used in our casting wear-resistant products

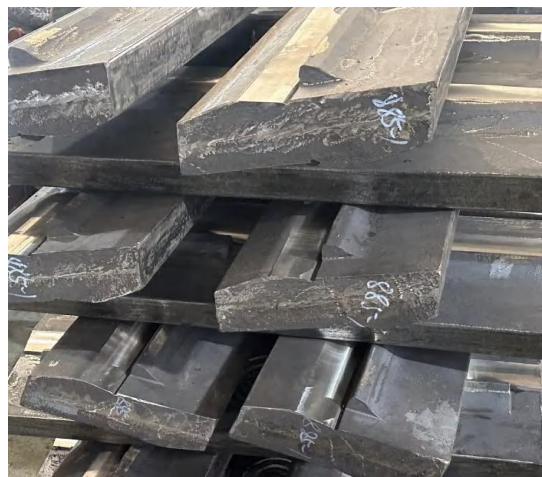
To **enhance the wear life** of our wear-resistant products, we use a **metal matrix composite material** that integrates **ceramic particles** into the surface of the alloy. This process creates a strong **ceramic-metal composition**, significantly boosting performance. The resulting material offers **2–3 times the wear resistance** of conventional materials and can be manufactured to match the **original wear curve** of the component.

Even if cracks occur in some ceramic particles, they **do not propagate into the base material**, ensuring excellent durability. This unique structure provides **high abrasion resistance** combined with **outstanding impact resistance**, making it ideal for demanding industrial applications.

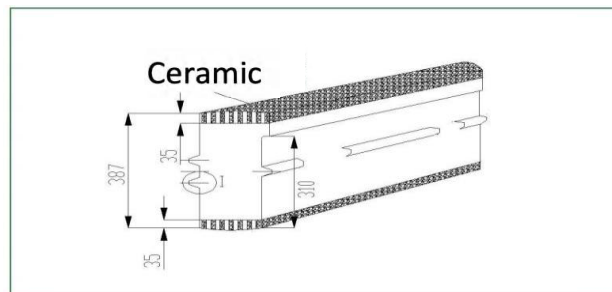


- **Manganese**
- **High Chrome**
- **High Chrome with Ceramic Particles**

Hardfacing and Casting Products- Blow bar and Hammer



MMC Blow Bar



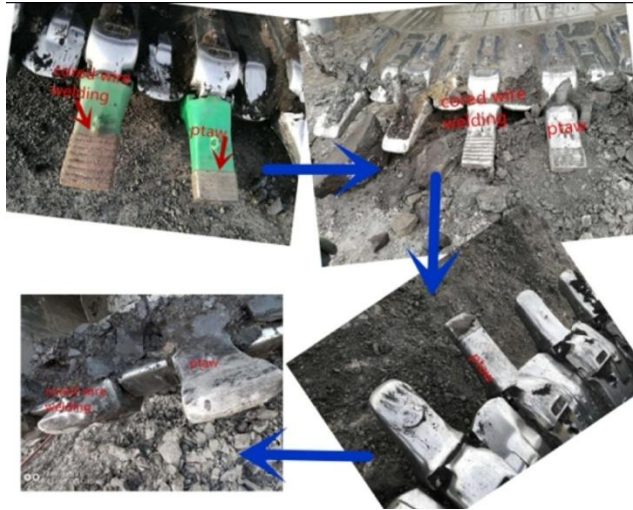
**Metal Ceramic Composite
Crusher Blow Bar
Material: Metal Ceramic
Composite**



Loaf Liner

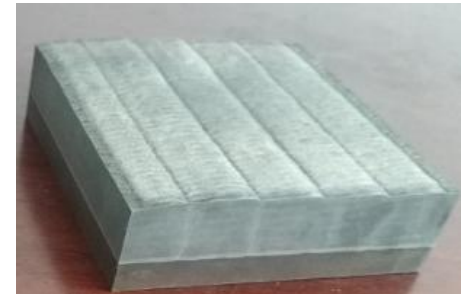
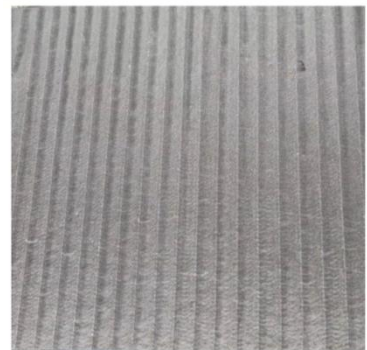
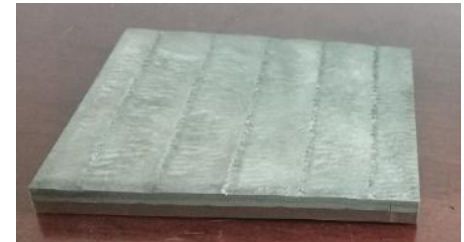


Hardfacing Products- PTAW (Plasma Transferred Arc Welding)



PTAW (Plasma Transferred Arc Welding) Wear-Resistant Products are high-performance materials used in **mining, metallurgy, power generation, and cement industries**. Produced through plasma transferred arc welding, this process creates a **dense, durable coating** by melting wear-resistant materials into a high-temperature molten pool. The resulting coating offers **excellent wear, corrosion, and impact resistance**, helping to **extend equipment service life and reduce maintenance costs**.

Hardfacing Products- PTAW (Plasma Transferred Arc Welding)



Hardfacing Products- Tire Table and Roller



Used after 3 years in power plant



Used after 3 years in power plant



Hardfacing Products- Flux Cored Wire

- **Uniform wire diameter** for consistent and smooth wire feeding.
- **Stable arc** with minimal spatter and smoke, eliminating broken arc issues during welding.
- **Hardfacing efficiency** of over **90%** for superior performance.





ALLOYSTAR Wear-Resistant Plate

CCO Wear Resistance Plate				Smooth Wear Plate
Specifications				Specifications
Model	AlloyStar® 107AS	AlloyStar® 307AS	AlloyStar® 607AS	AlloyStar® 688AS
Base Material	All weld able steels, mostly structural steels	All weld able steels, mostly structural steels	All weld able steels, mostly structural steels	All weld able steels, mostly structural steels
Application	High Abrasion & Moderate Impact	Tough Abrasion & High Impact	Tough Abrasion & Moderate Impact & Working Temperature up to 850°C	Tough Abrasion & High Impact
Hardness	58 – 62 HRC	58 – 64 HRC	58 – 65 HRC	58 – 64 HRC
Hard Phase Alloy	C 3.5-5.5% Cr 21-35%	C 3.5-5.5% Cr 21-35% Nb 2-7% Mo 1.5-7.0%	C 3.5-5.5% Cr 15-25% Mn 1-3% Nb+Mo+V+W+Ti 2.5-14%	C 2~4%; Cr 22~35%
Dimensions				Dimensions
Thickness (mm) [Base + Overlay]	3+3, 5+3, 4+4, 5+5, 6+4, 6+6, 8+4, 8+5, 8+8, 10+8, 10+10, 12+4, 12+6, 12+8, 12+12, 12+17, 12+20, 12+32, 13+8, 14+6, 14+8, 20+20, 20+32, 12+50 and customized			5+5, 6+6, 8+8, 10+10, 12+12, 13+20, 15+25
Width*Length (mm)	1480*3050, 2200*3000 and customized			1000*3000 and customized

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