



TEL : 400-7300345

Headquarter Address / No. 068 Jinsha West Road, Jinzhou New District, Changsha, China
Changsha Management Headquarter / 29/F, Industrial Bank Building, No. 567, Furong Zhong Road Section 3, Yuhua District, Changsha, China

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「Create a better world with zero carbon」

01

OVERVIEW

- ◎ Group Profile
- ◎ Milestones
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「创造美好零碳世界」

Huamin Holdings
Create a better world with zero carbon

Hunan Huamin Holdings Co., Ltd. (stock code: SZ300345) was established in 1995 and listed on the GEM of Shenzhen Stock Exchange in 2012.

Sticking to the concept of sustainable development featuring green and low carbon, we focus on the R&D and production of PV new energy, wear-resistant castings and metal surface modification technology (PIP technology). Under the background of China's "carbon peaking and carbon neutrality" strategic goals, we have made a strategic layout for high-efficiency N-type monocrystalline silicon wafers and silicon wafers exclusive for HJT cells. Therefore, we are building a PV new energy industry chain centered on silicon wafers, cell modules and smart power stations. We have now successively invested in the projects of "high-efficiency N-type monocrystalline silicon ingot and wafer" and "special monocrystalline silicon wafer for silicon heterojunction solar cells" in Dali, Yunnan Province and Xuancheng, Anhui Province, forming a new development pattern of "one body with and two focuses" with PV new energy and new wear-resistant materials as the core.

We have always maintained a strong momentum in innovation to lead the development of the industry as a pioneer. We aim to become a world-class new energy company with advanced technologies and products and fuel a zero-carbon future.

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DEVELOPMENT MILESTONES

1995

The Company was founded

2012

The Company was listed on the Shenzhen Stock Exchange

2015

The comprehensive and efficient ball mill energy saving technology was included in the Catalogue of National Key Energy Conservation and Low-Carbon Technologies for Promotion

Hunan Hongyu Intelligent Manufacturing Co., Ltd. was established

2016

The world's first production line using programmable ion permeation (PIP) technology was completed and put into operation

2017

Sichuan Hongyu New Materials Technology Co., Ltd. was established

The project "programmable ion permeation (PIP) and its

2020

The Company was renamed Hunan Huamin

2022

The Company acquired Hongxin New Energy Technology (Yunnan) Co., Ltd. as part of its strategic expansion into the PV new energy sector

The Company completed the private placement

2023

The Hongxin New Energy PV Project commenced operations following the ignition ceremony. Honghui New Energy was established to develop the project of monocrystalline silicon wafers for silicon heterojunction solar cells

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Core intellectual property

Several technologies have received global recognition and been leading in their respective fields.

28 years

Experience in low-carbon development

Development in two major industries

PV new energy + new wear-resistant materials

Driver of a zero-carbon future

Huamin Holdings consistently demonstrates remarkable innovation strength.

We follow in the footsteps of the sun.

Contribute to a zero-carbon future with advanced technologies and products.

An aerial photograph showing a dark asphalt road that curves through a dense, green forest. To the left of the road is a large, calm body of water, likely a lake, which reflects the sky and the surrounding trees. The road has white lane markings and a few cars are visible driving along it. The overall scene is serene and natural.

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Huamin Holdings has consistently pursued a strategic alignment with the national objectives of achieving the carbon peak by 2030 and carbon-neutrality by 2060.

We remain committed to our initial aspiration of promoting energy conservation and environmental protection, and diligently fulfill our mission of contributing to national development through industry advancement.

We persistently pursue excellence, innovation, and opportunities for mutual success.

We collaborate with all partners to shape a better future together.

Mission

Create a better world with zero carbon

Vision

Strive to be a world-class new energy company

Core values

Responsibility, innovation, excellence, and mutual benefit

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02

LANDSCAPE

Huamin Holdings

PV new energy

Hongxin New Energy Technology (Yunnan) Co., Ltd.

Honghui New Energy (Anhui) Co., Ltd.

New wear-resistant materials

Ningxiang Business Center

Sichuan Hongyu New Materials Technology Co., Ltd.

Hunan Hongyu Intelligent Manufacturing Co., Ltd.



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PV new energy

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Pursuit of a green world motivates our vision of a better future

Focusing on PV new energy, Huamin Holdings is dedicated to continuous innovation and advancement.

The strategic allocation of production capacity for the manufacturing of TOPCon solar cells and HJT large ultra-thin monocrystalline silicon wafers,

the partnership with the leading enterprises in the heterojunction PV industry,

the professional R&D teams for such core procedures as washing, crystal pulling, and slicing,

the continuous improvement in product quality,

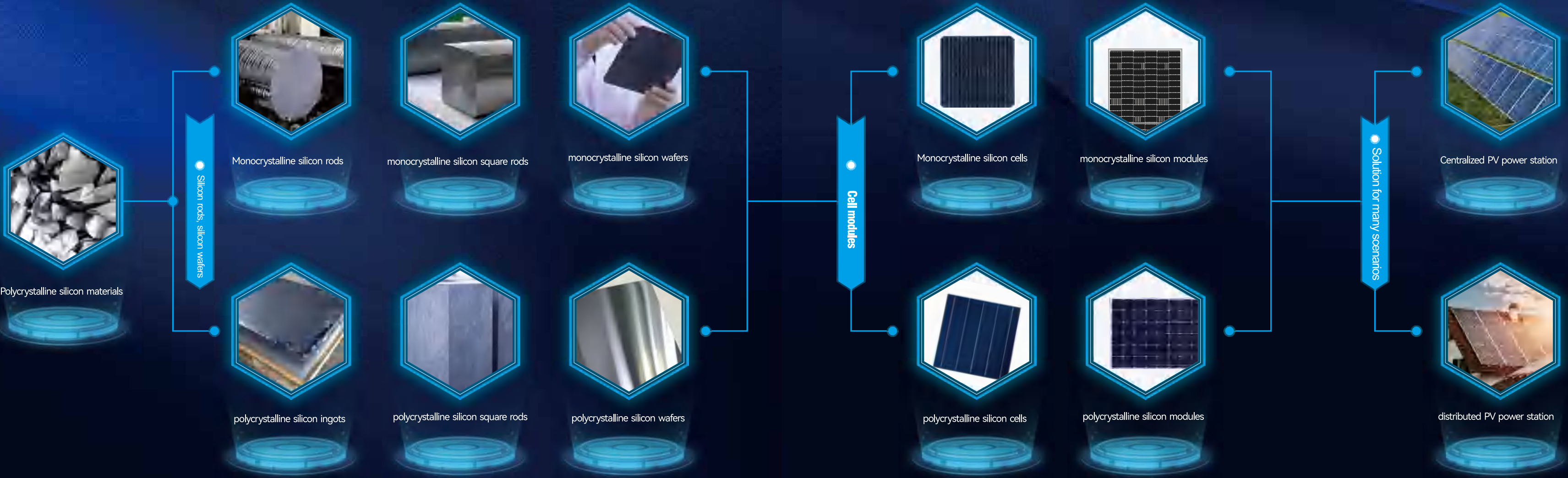
the establishment of three major production bases, the Changsha Operation Center, and the Suzhou Business Center,

all demonstrate Huamin Holdings' resolute commitment to ride on the tide of global energy development

and its unwavering confidence in collaborative efforts to shape a zero-carbon future.

In-depth coverage of the industrial chain

Huamin Holdings is dedicated to delivering reliable and professional PV solutions encompassing all scenarios.



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Changsha, Hunan Province

Huamin Holdings Headquarters
Hongxin New Energy Changsha Operation Center



Dali, Yunnan Province

Hongxin New Energy's production base for the
"high-efficiency N-type monocrystalline silicon rod and silicon wafer project"



Xuancheng, Anhui Province

Production base for monocrystalline silicon wafers for silicon heterojunction solar cell



Suzhou, Jiangsu Province

Hongxin New Energy Business Center



Dongying, Shandong Province

Hongxin Dahai's production base for silicon materials

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Honsun Solar

Founded in January 2022, Honsun Solar Technology (Yunnan) Co., Ltd. is a subsidiary of Huamin Holdings (SZ300345) and stands as a profoundly innovative enterprise in the field of solar technology. Pursuing the mission of "Advancing Solar Energy and Safeguarding Our Green Homeland", Honsun Solar will build a PV industry chain centered on high-efficiency N-type monocrystalline silicon wafers, modules, and power stations, and strive to be a premier supplier of intelligent PV energy solutions on a global scale. The company has a PV production base in Yunnan Province, a silicon material production base in Shandong Province, and a business center in Suzhou City, and has also developed enduring strategic alliances with numerous industry-leading enterprises.

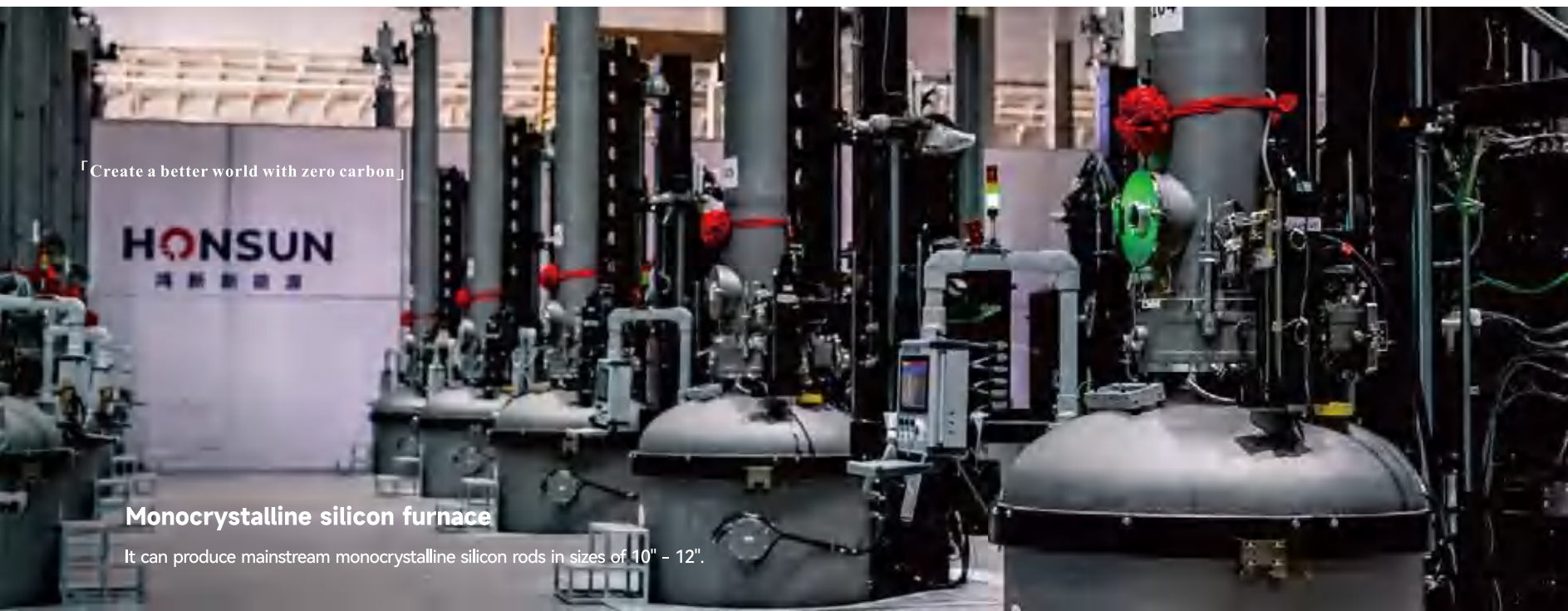
Adhering to the principle of maintaining harmony with nature, Hongxin New Energy continuously promotes technological innovation and product innovation, contributing to creating a better world with zero carbon.

Stability

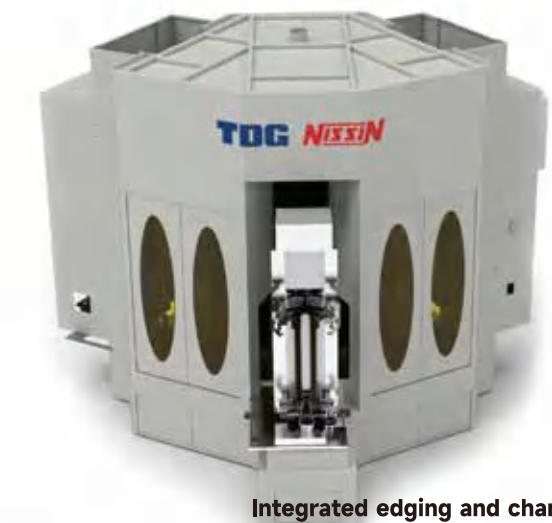
Efficiency

Excellence





Monocrystalline silicon furnace
It can produce mainstream monocrystalline silicon rods in sizes of 10" - 12".



Integrated edging and chamfering machine
Dual-position, vertical machining
It can process rods with a maximum length of 950 mm.



Multi-blade cutting machine
9 blades with circular diamond wire
It is capable of processing silicon rods with a maximum length of 6,500 mm.



High speed silicon wafer sorter
Capacity \geq 14,000/hour



Diamond wire squaring machine
It can process single rods with a maximum length of 950 mm.
Its surface machining precision is \leq 0.25mm



Diamond wire slicer
It can cut monocrystalline silicon square rods with dimensions of up to 230*230*900mm.

Advanced equipment



High automation
state-of-the-art 1600-type monocrystalline silicon furnace features centralized control and a vision system for precise monitoring. After program upgrading, it can realize crystal pulling with one key.



High efficiency and high precision
The multi-blade cutting machine, the diamond wire squaring machine, and the integrated edging and chamfering machine adopt advanced equipment in China.



Great stability
The diamond wire slicer is equipped with the Siemens system, known for its stability in the 3-axis mode and higher yield.



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large, thin, efficient, customizable

N-type silicon rods, silicon wafers



Established process
N-type high-efficiency technology



Advanced equipment
boosting cost reduction and
efficiency improvement



6S lean management
ensuring excellent quality



Large size, low silicon consumption,
high efficiency, and available for customiza

P-type silicon rods,silicon wafers



Automated production line
customized products



Intelligent management
high reliability

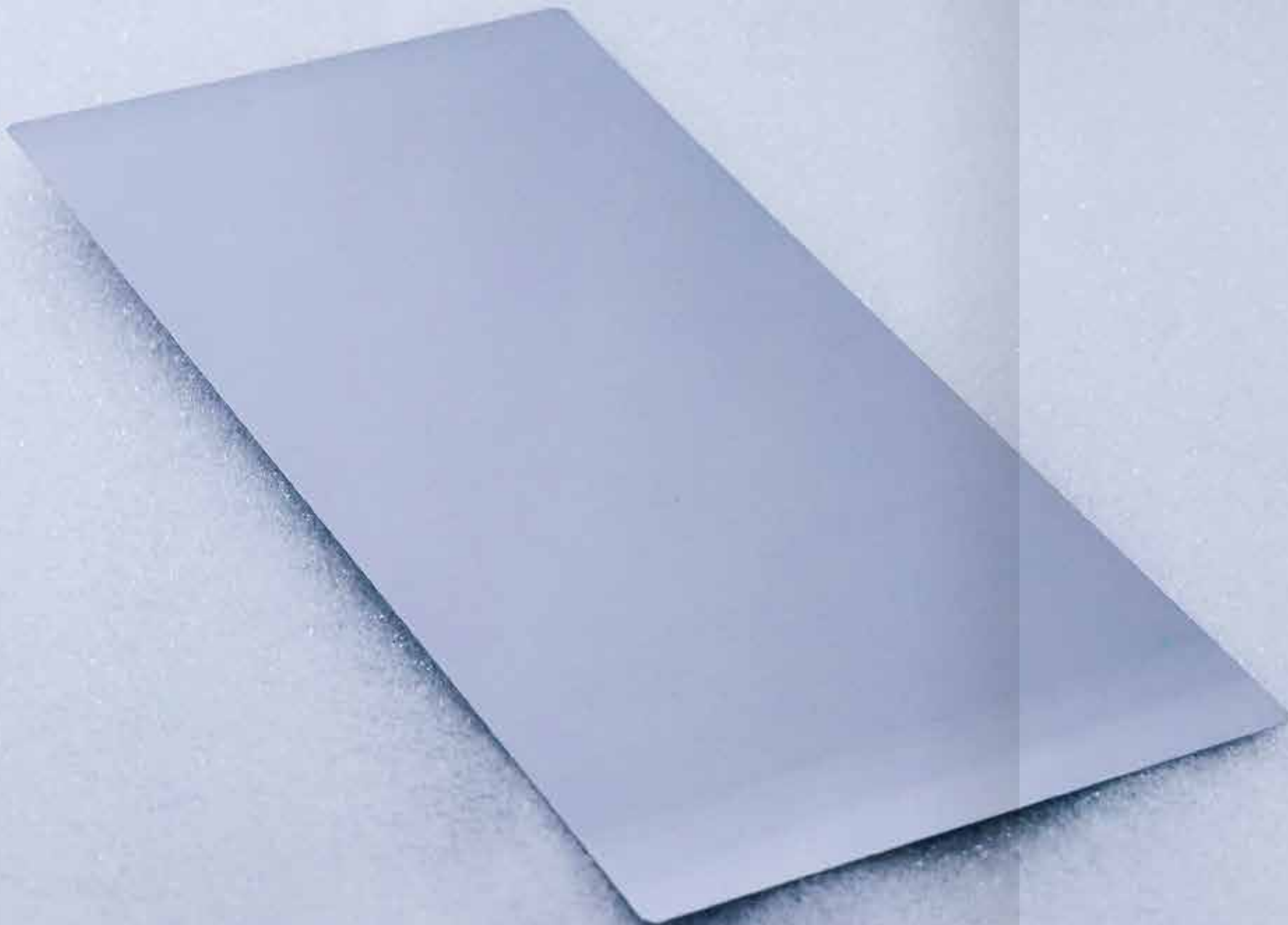


Established process
low decay process



Stable quality
high satisfaction

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half-sliced silicon wafers



Leading technology
more reliable and efficient



Advanced equipment
boosting cost reduction and efficiency improvement

Single-glass series monocrystalline module

Maximum power

675W
12BB(210mm)

Model

- HS-M10/108H
- HS-M10/120H
- HS-M10/144H
- HS-M12/120H
- HS-M12/132H



Double glass series

Maximum power

675W
12BB(210mm)

Model

- HS-M10/108G
- HS-M10/120G
- HS-M10/144G
- HS-M12/120G
- HS-M12/132G



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Summary of advantages



Ideal for large power stations

Quality silicon wafers, high power module output and excellent cost performance make it an ideal choice for large power stations.



Strong PID resistance

Selected packaging materials and strict process scheme ensure the PID resistance of modules.



Higher power generation capacity

The series and parallel designs reduce the series resistance (RS) of modules, lower internal electrical performance loss, and improve the power generation capacity of the system.



Suitable for harsh outdoor environment

It is suitable for harsh outdoor environment as proved by sand, salt spray, ammonia, and other weather resistance tests.



Lower light attenuation

Lower oxygen and carbon content leads to lower LID.



Preferred in high-heat areas

Cell slicing technology greatly reduces string current and internal loss of modules, making the product an ideal choice for projects in high-heat areas.

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Honghui Solar

Honghui Solar (Anhui) Co., Ltd. was jointly established by Huamin Holdings, Anhui Huasun Energy Co., Ltd., and Hunan Yujing Machinery Co., Ltd. in 2023. As a new energy company, the company focuses on monocrystalline silicon wafers for silicon heterojunction solar cells, and has also made investments in the project dedicated to producing monocrystalline silicon wafers for silicon heterojunction solar cells in Xuancheng.

Leveraging a robust shareholder foundation, market-leading slicing technology, a strong technical team, and experienced management team, as well as superior resources in the silicon heterojunction solar cell industry, Honghui Solar is poised to capitalize on the rapid growth within the silicon heterojunction solar cell industry and strives to become a leading manufacturer of monocrystalline silicon wafers for silicon heterojunction solar cells.



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Project benefits

Great potential of silicon heterojunction solar cells

With the increasing demand for cost reduction and efficiency improvement in the PV industry, HJT - the fully symmetric structured solar cell is expected to become a mainstream cell in the coming years.



Strong support from government policies

As a significant part of the initiative to establish "China's Silicon Heterojunction Solar Cell Capital" within the Xuancheng Economic Development Zone, the project has received strong policy backing from the government, which includes measures such as tax rebates, incentives for talents, equipment incentives, and assistance in facility construction. These policies have facilitated the seamless production process and effective cost management for the company.



Significant advantages of shareholder resources

Huamin Holdings

As a listed company, Huamin Holdings benefits from a vertically integrated industrial layout and a robust capital platform, which enables the company to achieve efficient resource allocation and effective coordination across the industrial chain.

Anhui Huasun Energy Co., Ltd.

As a leading enterprise of silicon heterojunction solar cell, the company spearheads technology R&D while also maintaining a prominent production capacity, which enables the company to offer steady orders and reliable technical support.

Yujing Machinery Co., Ltd.

As one of the few listed companies in China that possess expertise in silicon heterojunction solar cell slicers, the company boasts advanced equipment that guarantees improved product quality and operational efficiency.

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New wear-resistant materials

Wear-resistant castings
PIP technology

Focus on low-carbon technology for 28 years
Pioneer and leader of comprehensive and efficient ball mill energy saving technology solution
Drafting unit of national standards for chromium-manganese-tungsten wear-resistant castings

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Huamin Holdings Ningxiang Business Center

The Ningxiang Business Center is the Huamin Holdings' main production base for wear-resistant casting products and is established with the "Hunan Research Center for the Engineering Technology of High-Efficiency Ball Milling and Wear-Resistant Materials". The comprehensive and efficient ball mill energy saving technology independently developed by the center is the only technology in the industry included in the Catalogue of National Key Energy Conservation and Low-Carbon Technologies for Promotion, and is widely applied to the thermal power, mining, and cement industries.

With outstanding technological innovation capabilities, professional new product development capabilities, and excellent market application service capabilities, the Ningxiang Business Center has forged strong partnerships with leading enterprises in the industry, including China Huaneng Group, CHN Energy, Pangang Group, Ten Pao Group, Conch Cement and Zhongnan Cement, and has successively established industry-university-research partnerships with institutions of higher education, including Central South University, Tsinghua University, Hunan University and China Academy of Engineering Physics.

To reinforce its market competitiveness, the Ningxiang Business Center remains steadfast in its commitment to innovation and the continual enlargement of its technical expertise, and has developed innovative wear-resistant bends and wear-resistant sleeves for concrete pump pipes within the construction machinery sector, which can greatly reduce customers' operational costs.

core products

Grinding balls, liners,
concrete pump pipe castings

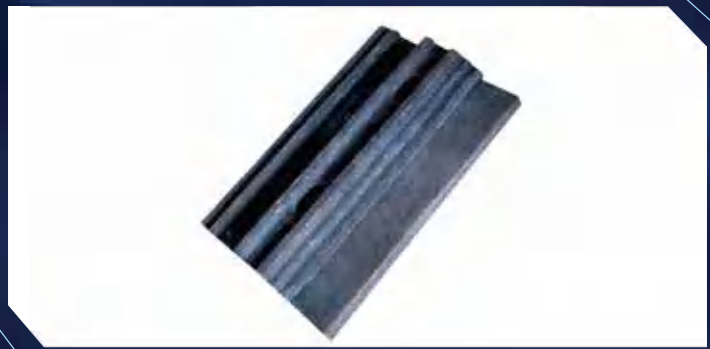
Grinding balls



Step liner



Split step liner



Wear-resistant rubber and wear-resistant cast steel combined liner



Bend



Product features



Customizable



More energy-efficient



More wear-resistant and durable



Easy to disassemble and assemble

In light of the whole process of the ball milling system, the company amalgamates various technologies, for instance, material testing, material design, and structural design, and thus creates the comprehensive and efficient ball mill energy saving technology solution, which contributes to energy conservation, reduced consumption, and enhanced production across energy-intensive domains such as mining, cement, and thermal power. Furthermore, the company engages in application research pertaining to grinding balls, liners, bends, and other products. Through continuous researches, the company innovates and develops products that are not only more energy-efficient but also more marketable.

Application effects



Thermal power industry

Reduce energy consumption by 15%-40%
material consumption by 30%-60%



Mining industry

Reduce energy consumption by 8%-30%
material consumption by 30%-60%



Cement industry

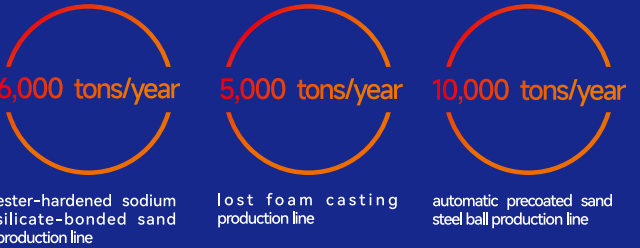
Reduce energy consumption by 4%-26%
material consumption by 30%-70%

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Sichuan Hongyu Technology

Established in 2017, Sichuan Hongyu New Materials Technology Co., Ltd. is a private high-tech enterprise with a specialization in the production of castings made from new materials. The company has the power to engage in import and export trade, with its products enjoying strong global sales, and it has established strategic partnerships with industry giants such as ESCO, Danieli, and Metso.

Production capacity



Spare parts for metal crusher



alloy steel hammer head



manganese steel hammer head



crusher protective cap

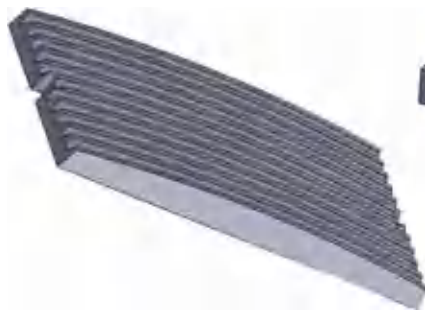


Crusher ring gear

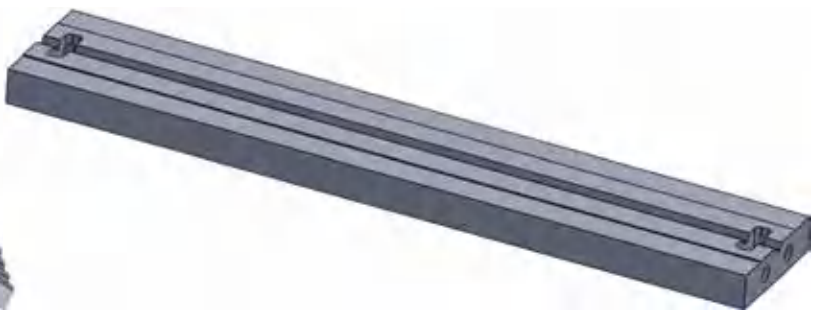


crusher grate

Spare parts of mine crusher



Jaw crusher tooth plate



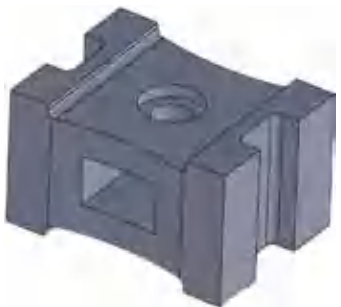
flat hammer of reaction crusher



liner for ball mill



rolling mortar wall



hammer head of sand making machine

Core products

Product features



Stable quality and high yield

The products have been certified by the ISO9001 quality management system, with a qualified rate of 100%



Increase in wear resistance by 1.5-2 times

The product is made of low-alloy steel containing V and Ti for significantly higher wear resistance.



Good mechanical properties

It has high strength and toughness at extremely low temperatures.

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Hongyu Intelligent

Established in 2015, Hunan Hongyu Intelligent Manufacturing Co., Ltd. is a state-level high-tech enterprise focusing on the R&D, production, and sales of surface modification technology and precision parts. The company has a complete machining and PIP surface treatment shop for shaft parts, and can provide comprehensive solutions for corrosion resistance, wear resistance, high precision, and long service life for various ferrous metal parts.

R&D technology

PIPtechnology

Application scenarios

National defense and military industry, rail transit, engineering machinery, petroleum equipment, coal mining machinery,

Sample cases

Military small arms, high-speed rail brake lining steel back, high-speed rail elastic rod and bolt, piston rod, pin roll,





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Core advantages

Applied to Fujian ship



Wear and corrosion resistance

Temperature minimized to 420℃ and NSS
≧ 1,000h due to the low-temperature heat
treatment technology



Enhanced precision

Improved precision and optimized performance of parts



Extended service life

Improve the performance of parts, extend the
service life and save more cost

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Ingenuity and quality boost win-win cooperation

Eco-partner



Advancing steadily as a reputable company



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SOCIAL RESPONSIBILITY



Sustainable concept

With the mission of creating a better world with zero carbon, we continue to increase R&D investment, accelerate the development of the PV industry, and uphold the concept of environmental protection, to boost the realization of carbon peak and carbon neutrality.



Sustainable innovation

Driven by innovation, we pursue high efficiency, openness and collaboration. We keep innovating technologies and delivering stable and reliable products to create value for customers and promote the development of PV new energy.



Sustainable public welfare

We uphold long-term concept in our development and public welfare practice, and expand more diversified public welfare scenarios, aiming at making solar energy a solution benefiting all, and achieve common growth of enterprise value and social value.



Sustainable management

We integrate sustainability into our strategic business activities, improve management systems, attach importance to the joint realization of employee value and enterprise development, to ensure the long-term sustainable development.

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Pursuit of a zero-carbon planet motivates us to keep moving forward

We remain unwavering in our pursuit of innovation, continuously propelling ourself toward a more promising future.

With robust R&D and production capabilities for both PV new energy and new wear-resistant material, we deliver a range of efficient and professional green solutions, bringing high value-added excellent services to all our partners.

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