



2023

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) REPORT

Stock code: 300316



ZHEJIANG JINGSHENG MECHANICAL & ELECTRICAL CO., LTD.

THE CRYSTAL OF TECHNOLOGY ENJOYS
GREAT PRESTIGE IN THE WORLD



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About This Report

This is the 3rd Environmental, Social, and Governance (ESG) Report published by Zhejiang Jingsheng Mechanical & Electrical Co., Ltd. The Report discloses the Company's development practices and major achievements in economical, environmental, social, and corporate governance responsibilities for the year 2023. It aims to communicate effectively with various stakeholders and systematically respond to the expectations and requirements of stakeholders.

Time Frame

The Report covers the period from January 1, 2023, to December 31, 2023. To enhance the comparability and perspectiveness of the Report, some content appropriately refers to previous and subsequent years.

Basis for Compilation

UN Sustainable Development Goals (SDGs) 2030
Global Reporting Initiative *GRI Standards*
Chinese Academy of Social Sciences (CASS) *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 5.0)*
Chinese National Standard Guidelines on *Social Responsibility Reporting* (GB/T36001-2015)
Sustainability Accounting Standards Board *SASB Standards*
Shenzhen Stock Exchange Self-disciplinary Supervision Guidelines for Listed Companies No. 2—Standardized Operation of Listed Companies on GEM Board

Data Source

The data in this Report comes from the raw data of the Company's actual operation, public data from government departments, annual financial data, relevant internal statistical reports, third-party questionnaires and third-party evaluation interviews. The financial data in this Report is in CNY. In case of any inconsistency between this Report and the financial report, the financial report shall prevail.

Report Terminology

For the purpose of presenting the economic, social and environmental responsibilities of Zhejiang Jingsheng Mechanical & Electrical Co., Ltd. (hereinafter referred to as "JSG", the "Company" or "we") and its subsidiaries, the full names and abbreviations of some of the subsidiaries covered in this Report are as follows:

Huixiang E&H	refers to	Hangzhou Huixiang Electronic Hydraulic Technology Development Co., Ltd.
JingHuan Electronic	refers to	Inner Mongolia JingHuan Electronic Materials Co., Ltd.
Ningxia JingHuan	refers to	Ningxia Jinghuan New Material Technology Co., Ltd.
Jingrui Electronic	refers to	Zhejiang Jingrui Electronic Materials Co., Ltd.
Jinghong Precision	refers to	Zhejiang Jinghong Precision Machinery Manufacturing Co., Ltd.
Jingxin Green Diamond	refers to	Zhejiang Jingxin Green Diamond Technology Co., Ltd.
Jingsheng Photonics	refers to	Zhejiang Jingsheng Photonics Technology Co., Ltd.
ZVISION Optoelectronics	refers to	Hangzhou ZVISION Optoelectronics Technology Co., Ltd.
Jingchuang Automation	refers to	Zhejiang Jingchuang Automation Equipment Co., Ltd.
Jingyu New Materials	refers to	Zhejiang Jingyu New Materials Co., Ltd.
Meijing New Materials	refers to	Zhejiang Meijing New Materials Co., Ltd.
Qiushi Semiconductor	refers to	Zhejiang Qiushi Semiconductor Equipment Co., Ltd.
Ningxia Xinjingsheng	refers to	Ningxia Xinjingsheng Electronic Materials Co., Ltd.

* See the Company's 2023 Annual Report for the scope of the specific holding subsidiaries covered in this Report.

Report Acquisition

This Report is published in electronic format and can be accessed on the Shenzhen Stock Exchange website (<http://www.szse.cn>) and CNINFO (www.cninfo.com.cn). The Report is available in both English and Chinese. In the event of any discrepancy in the interpretation of the two texts, the Chinese version shall prevail.

Chairman Message



Zhejiang Jingsheng Mechanical & Electrical Co., Ltd.
Chairman

Dr. Cao Jianwei

For 17 years, JSG has always adhered to the mission of "To become a leading equipment supplier of semiconductor materials; To facilitate high-tech industry development for green intelligent manufacturing", stayed true to its entrepreneurial spirit of developing the two main industries of semiconductors and photovoltaics, focused on the dual-engine sustainable development strategy of "advanced materials and advanced equipment", continued to innovate, and strived for mutual growth and win-win cooperation with our partners.

In the semiconductor sector, leveraging the domestic replacement trend, JSG fully utilizes its core advantage of strong innovation capability to accelerate the layout of core equipment in the semiconductor industry chain and capture the market for domestic replacement of semiconductor equipment. The Company has progressively achieved a breakthrough in the localization of 8-12 inch semiconductor silicon wafer equipment, with its products leading in market share among domestic semiconductor silicon growth furnace. Through continuous innovation, JSG has achieved a series of innovative results, including the development of internationally advanced 8-inch single-chip and double-chip silicon carbide epitaxial growth furnaces, optical measurement equipment for silicon carbide substrates and epitaxial wafers, 12-inch three-axis thinning and polishing equipment for wafers and packaging ends, initiation of 6-inch and

8-inch silicon carbide projects and acceleration of key technology breakthroughs and industrialization. Amidst the accelerated development trend of domestic production in semiconductors, the Company has driven rapid growth in its semiconductor business.

In the PV sector, as a leading domestic PV equipment supplier in both technology and scale, JSG has established a core product system spanning silicon wafer, cell, and module segments, and gradually forged a path of technology-driven and platform-driven development. In 2023, the Company continued to strengthen R&D and technological innovation, vigorously developed new products and achieved numerous accomplishments, including launching the fifth-generation mono crystal puller, introducing semiconductor superconducting magnetic field technology to the PV field, enhancing cell efficiency from the material end, achieving customer recognition for new PV cell module equipment, leading in quartz crucible market share, and achieving significant breakthroughs in diamond wire technology. Furthermore, from an industrial chain innovation perspective, the Company collaborates with industrial chain customers to promote integrated intelligent factory construction, advancing towards a green future. In the process of the PV industry's transition from rapid growth to intensified competition, JSG has completed its strategic transformation from scale-driven rapid development to innovation-led high-quality development. Looking ahead, we will continue to embrace the vision of creating a green

ecosystem, with innovation as the engine, propelling the continuous advancement of the clean energy transformation process.

We practice sustainable development with robust governance. Under the leadership and supervision of the Board of Directors, we continuously improve modern enterprise management levels, with the Board's Strategy and Investment Committee overseeing and guiding the Company's ESG work, and the management and the executive teams implementing them. Meanwhile, we enhance our governance system, proactively fulfill information disclosure obligations, protect the rights and interests of investors, actively communicate with stakeholders, and convey the Company's value.

Over the past 17 years of entrepreneurship, if we were to encapsulate JSG's journey of sustainable development, it would be our consistent commitment to the principle of technological innovation. Investment in technological innovation is our most valuable initiative, serving as both an intrinsic requirement for the Company's sustainable development and a crucial responsibility for promoting the healthy growth of the semiconductor and PV industries. In 2024, we will continue to uphold our core values of "honesty and optimism, loyalty and dedication, struggle orientation, partner accomplishment, pioneering and innovation, and co-creation of brilliance", unite the strength of forging ahead, and continue to write a new chapter.

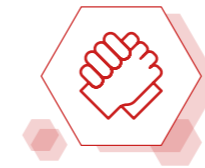
Company profile

Zhejiang Jingsheng Mechanical & Electrical Co., Ltd., established in 2006, is a leading domestic high-tech enterprise specializing in "advanced materials and equipment". It was listed on the stock exchange in 2012. The Company boasts a technical research and development, and management team centered around professors and PhDs, with more than 1,678 R&D personnel, including over 41 PhDs and post-doctorates. It possesses national-level post-doctoral workstations, national enterprise technology centers, overseas R&D centers, and several specialized research institutes.

The Company has become a global leader in PV equipment technology and scale, and a leading domestic enterprise in 8-12 inch large silicon wafer growth and processing equipment. Its large-size sapphire silicon growth process and technology have reached an international leading level, making it a leading enterprise with core technologies and scale advantages.

The Company has successfully grown industry-leading 8-inch silicon carbide crystals and has achieved autonomous control over large-size silicon carbide crystal growth and processing technology. The company provides intelligent factory solutions for the semiconductor industry, PV industry, and compound substrate industry, meeting customers' needs for digital and intelligent production modes.

The Company has been honored with numerous awards, including the First Prize for Technological Progress in Zhejiang Province, maintaining the top position in terms of tax contribution in the Chinese electronic special equipment industry for six consecutive years, being listed in the Hurun China 500 Most Valuable Private Companies for four consecutive years, making it to the top ten most promising listed companies on the Growth Enterprise Market for three consecutive sessions, being recognized as a best practice case in corporate governance by the China Listed Companies Association in 2023, being ranked among the ESG Pioneer 60 2023, and being ranked in the Forbes China Top 50 Innovative Enterprises List in 2021.



Vision

The crystal of technology enjoys great prestige in the world



Mission

To become a leading equipment supplier of semiconductor materials
To facilitate high-tech industry development for green intelligent manufacturing



Values

Honesty and optimism
Loyalty and dedication
Struggle orientation
Partner accomplishment
Pioneering and innovation
Co-creation of brilliance



Company Development History

2006

- Shangyu Jingsheng Mechanical & Electrical Engineering Co., Ltd. established

2007

- Developed the first domestic fully-automatic mono crystal silicon growth furnace and achieved batch sales

2008

- Successfully developed the largest fully-automatic Czochralski mono crystal silicon growth furnace in China

2009

- Successfully developed the first domestic dual-source JSH450 multicrystal ingot furnace

2010

- Underwent a shareholding reform to become: Zhejiang Jingsheng Mechanical & Electrical Co., Ltd.

2011

- Successfully developed the domestic first gas-cooled multicrystalline silicon casting furnace
- Successfully developed the first sapphire silicon growth furnace

2017

- Acquired 10% shares and jointly established the Zhonghuan Advanced Semiconductor Materials Co., Ltd with Zhonghuan
- Developed a 12-inch semiconductor superconducting magnetic field mono crystal puller
- Invested in semiconductor precision parts base through JingHong Precision
- Established JSG Japan Co., Ltd., starting the path of international R&D for semiconductor equipment

2016

- 8 The 8-inch zone melting silicon mono crystal puller passed the national 02 special project acceptance
- Established Jingchuang Automation, starting the equipment service journey

2015

- Acquired ZVISION Optoelectronics, aiding in the creation of automated intelligent production lines
- The 300mm Czochralski silicon mono crystal growth equipment passed the national 02 special project acceptance

2014

- Established JingRui Electronic, with a production capacity of 12 million pieces of sapphire slicing and polishing projects

2013

- Established JingHuan Electronic to engage in the sapphire crystal material business

2012

- Listed on the GEM of the Shenzhen Stock Exchange

2018

- Successfully developed a 6-inch SiC crystal growth furnace
- Established PRIMET Japan Co., Ltd., expanding into the high-end semiconductor precision component field
- Established Qiushi Semiconductor, initiating the development of semiconductor CVD equipment

2019

- Successfully developed various equipment for G12 silicon wafers, double-side grinding machines for 8-12 inch silicon wafers, and polishing machines for 6-8 inch silicon wafers
- Achieved full coverage of 8-inch semiconductor silicon wafer growth, slicing, polishing, and CVD processing equipment

2020

- Jointly established the Ningxia Xinjingsheng with Lens Technology
- Successfully grew a 700Kg level sapphire crystal
- Completed the technical identification of the third-generation semiconductor CVD equipment
- Successfully developed a 12-inch precision double-side polishing machine

2021

- Successfully developed a 12-inch semiconductor hard-axis Czochralski silicon mono crystal puller
- Successfully developed the process exhaust gas treatment equipment for the semiconductor industry
- Developed the first 8-inch silicon wafer thinning machine
- Developed the first chip-end LPCVD, officially entering the IC manufacturing field

2022

- Crystal Laboratory successfully grew the first 150kg deep red ruby
- Successfully developed a fully-automatic diamond growth furnace
- JSG celebrated its tenth anniversary of listing
- Successfully developed an 8-inch N-type SiC crystal

Major 2023 Events

- January**
 - JSG was selected as a key enterprise research institute in Zhejiang Province. Jingrui Electronic grew an industry-leading 8-inch N-type silicon carbide wafer.
- February**
 - JSG's Technology Center was recognized as a national enterprise technology center. JSG released a 6-inch double-chip silicon carbide epitaxial furnace.
- March**
 - Zhejiang Meijing New Materials Co., Ltd. was officially established.
- May**
 - Meijing New Materials became the first company in China to develop and mass-produce 42-inch quartz crucibles. The School of Mechanical Engineering of Zhejiang University held the inauguration ceremony of "Jingsheng Building". JSG released the fifth generation of mono crystal puller, integrated sorting and boxing equipment, and tungsten wire.
- June**
 - The internationally advanced 8-inch monolithic silicon epitaxial furnace was successfully developed.
- September**
 - Dr. Cao Jianwei, Chairman of JSG, served as a torchbearer for Hangzhou 19th Asian Games
- October**
 - Jingsheng Photonics Technology Co., Ltd. held its founding ceremony. JSG continuously received an "A" rating in information disclosure for 10 years. Jingxin Green Diamond cultivated high-quality synthetic diamonds of 10 carats.
- November**
 - JSG was approved as a Zhejiang Provincial Engineering Research Center. JSG signed a contract to start the project with an annual output of 250,000 pieces of 6-inch and 50,000 pieces of 8-inch silicon carbide substrate wafers.
- December**
 - JSG held its 2023 Global Suppliers Conference.

2023 Honors

National Level

- 3 subsidiaries listed as Specialized, Refined, Special, and Innovative Little Giants
- National Enterprises of Zhejiang Merchants 2023
- Top 500 New Economy Enterprises in China
- 2023 High-tech Enterprise
- 29th Batch of Newly Recognized National Enterprise Technology Centers
- Hurun China 500 Most Valuable Private Companies
- Ranked the top position in terms of tax contribution in the Chinese electronic special equipment industry for six consecutive years
- 15th China Semiconductor Equipment Innovation Products
- 2023 China Brand Value Evaluation Certificate

Provincial Level

- Provincial Engineering Research Center
- Ranked among the top 30 companies in terms of operating income in the 22nd Zhejiang Provincial Electronic Information Manufacturing Industry
- Top 500 High-Tech Enterprises with Innovation Capability in Zhejiang Province
- 2023 Provincial Industrial Internet Platform Creation List
- Dr. Cao Jianwei, Chairman, was awarded the 2023 May Day Labor Medal of Zhejiang Province
- Dr. Cao Jianwei, Chairman, was awarded the 2022 "Science Entrepreneur" in Zhejiang Province

ESG Awards

- 2023 Best Practice Case in Corporate Governance by China Association for Public Companies
- Top 60 ESG Pioneers 2023

Sustainable Development Management

ESG Management

JSG aims to "To become a leading equipment supplier of semiconductor materials , To facilitate high-tech industry development for green intelligent manufacturing", actively assuming responsibilities to shareholders, the environment, customers, employees, and the community.

JSG's ESG Management Philosophy



The Company places emphasis on ESG risk control and governance, has gradually improved its ESG management system, and has formed a three-tier ESG management organizational structure of "Decision-Making - Management - Execution". Currently, the Board of Directors serves as the decision-making layer, with the Strategy and Investment Committee underneath acting as the management layer, regularly reporting to the Board of Directors. Additionally, an ESG Working Group comprising the heads of various functional departments has been established to comprehensively coordinate ESG matters. The ESG Working Group is responsible for formulating ESG management regulations, conducting communication and information disclosure, reporting the progress and results of ESG work to the Strategy and Investment Committee, and coordinating the daily ESG management work of various departments.

JSG's ESG Management Organizational Structure

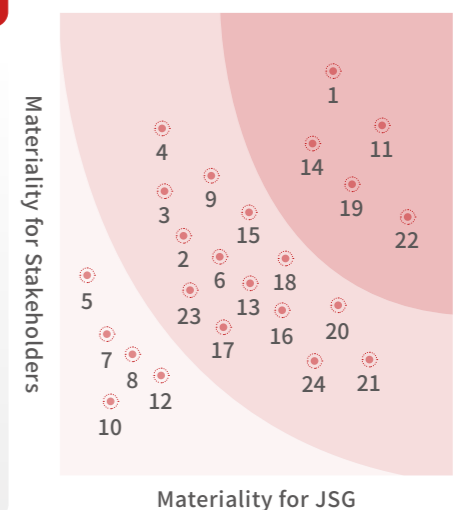


Material Issue Analysis

JSG has identified and confirmed the ESG material issues for 2023 by considering the macro policies and development trends, taking into account the development of its own ESG work and the focuses of its stakeholders, referring to international authoritative standards, benchmarking against the focuses of ratings such as MSCI ESG, and communicating with external experts and projects. The Company responds to stakeholder demands and disclosures through the entire process of issue identification and screening, to stakeholder research, comprehensive analysis of the results, and ultimately to the formation of a material issue matrix. The analysis results of material issues provide an important reference for the Company's future ESG management work.

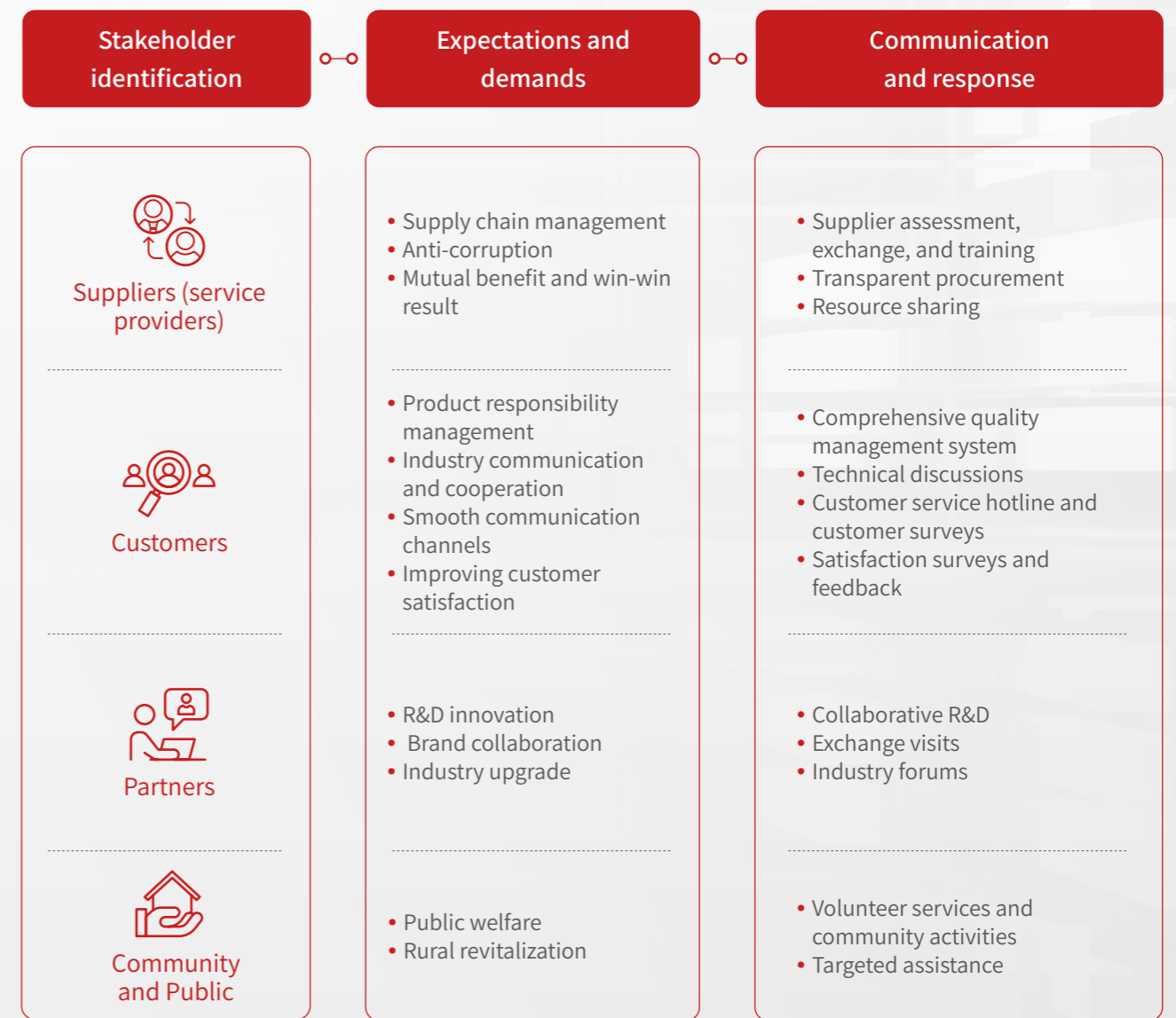
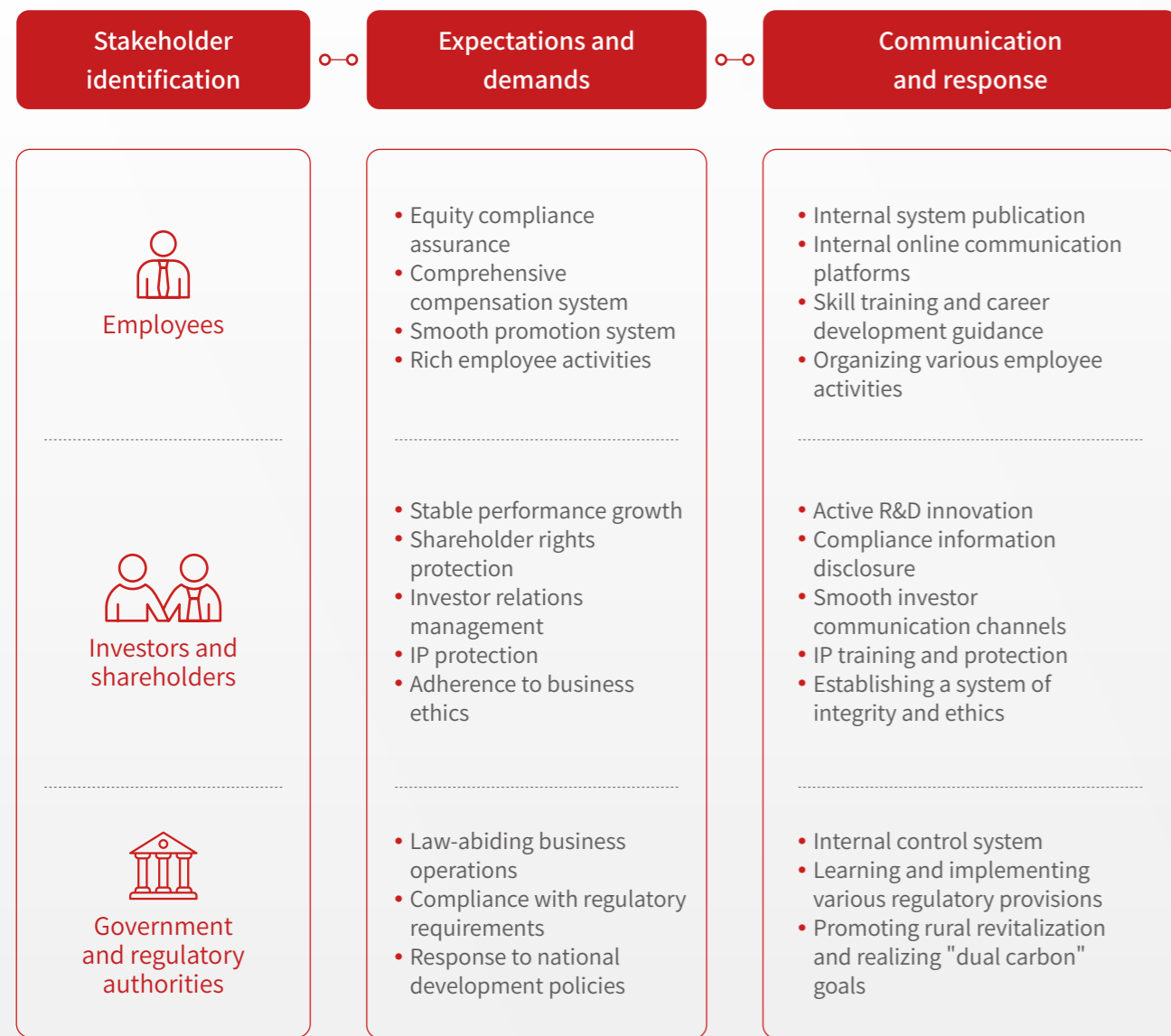


Governance issues	Environmental issues	Social issues
1 Corporate governance	9 Energy and resource management	17 Employee rights, development, and health
2 Digital transformation	10 Green logistics (including packaging, transportation and warehousing)	18 Product quality and safety
3 Information security and privacy protection	11 Clean technology opportunities	19 Technology R&D and innovation
4 Risk management	12 Source of raw materials	20 Transparent procurement
5 IP protection	13 Emission management	21 Customer service
6 Business ethics and anti-corruption	14 Supply chain management (including environmental)	22 Leading industry development
7 ESG management		23 Public welfare
8 Compliance with information disclosure		24 Gender equality



Stakeholder Communication

JSG attaches great importance to stakeholder communication. As a group that mutually influences and shares mutual benefits with the Company, the expectations and demands of stakeholders are an important reference for the Company's sustainable development work. The Company regularly understands the expectations and feedback of external stakeholders such as investors, the government, customers, employees, suppliers, and the media through various channels.



Responding to the UN Sustainable Development Goals

JSG supports the United Nations 2030 Agenda for Sustainable Development and promotes the realization of the UN Sustainable Development Goals (UN SDGs 2030) through its actions.

SDG 17: Partnerships for the goals

Corresponding Sections: Long-term layout and robust governance, Focusing on Innovation and Development, Working Together for Win-win Cooperation
JSG empowers technological innovation through industry-academia-research cooperation, assisting in the collaborative development of specialties and industries. It establishes honest, transparent, and mutually trustworthy relationships with suppliers, creating a responsible supply chain and promoting cooperation for mutual benefits across the entire industry chain

SDG 16: Peace, justice, and strong institutions

Corresponding Section: Long-term layout and robust governance
It establishes a governance system with clear accountability, compliance, and efficiency, strengthens business ethics management, pays attention to information security and intellectual property protection, and maintains the sustainable operation and development of the company.

SDG 13: Climate action

Corresponding Sections: Seeking Zero-carbon Driven Green Development, Focusing on Innovation and Development
JSG firmly grasps opportunities in clean technology, increases investments in green technology, continuously monitors its greenhouse gas emissions, increases the use of clean energy, and constantly improves its energy-saving and emission-reduction efforts.

SDG 11: Sustainable cities and communities

Corresponding Sections: Seeking Zero-carbon Driven Green Development, Fulfilling Social Responsibilities by Contributing to the Society
JSG adheres to the environmental protection and low-carbon design concepts, and contributes to the promotion of clean energy technology and innovation, creating green energy for the world. In addition, JSG actively organizes public welfare activities to return the society with various practical actions.

SDG 10: Reduced inequalities

Corresponding Section: Cultivating Talents for A Promising Future
JSG adheres to an equal employment policy, offers fair compensation and benefits, and creates a harmonious and equal working environment.



SDG 3: Good health and well-being

Corresponding Sections: Seeking Zero-carbon Driven Green Development, Cultivating Talents for A Promising Future
JSG continuously improves its occupational health and welfare system, implements various health and safety measures, and fully guarantees the physical and mental health of its employees.

SDG 4: Quality education

Corresponding Sections: Cultivating Talents for A Promising Future, Working Together for Win-win Cooperation
JSG consistently enhances its employee training, creating a training brand system centered around Jingsheng Academy. For several years, it has conducted various training activities such as new employee training, team leader leadership training, "Porter Cup", "Lu Ban Cup", etc., empowering employees. The Company has established long-term educational support partnerships with universities, which vigorously support national R&D personnel.

SDG 5: Gender equality

Corresponding Section: Cultivating Talents for A Promising Future
It values the rights of female employees, practices equal pay for equal work among male and female employees, and focuses on the development of female employees.

SDG 8: Decent work and economic growth

Corresponding Section: Cultivating Talents for A Promising Future
JSG provides employees with market-competitive salaries, develops and implements long-term compensation incentive programs.

SDG 9: Industry, innovation, and infrastructure

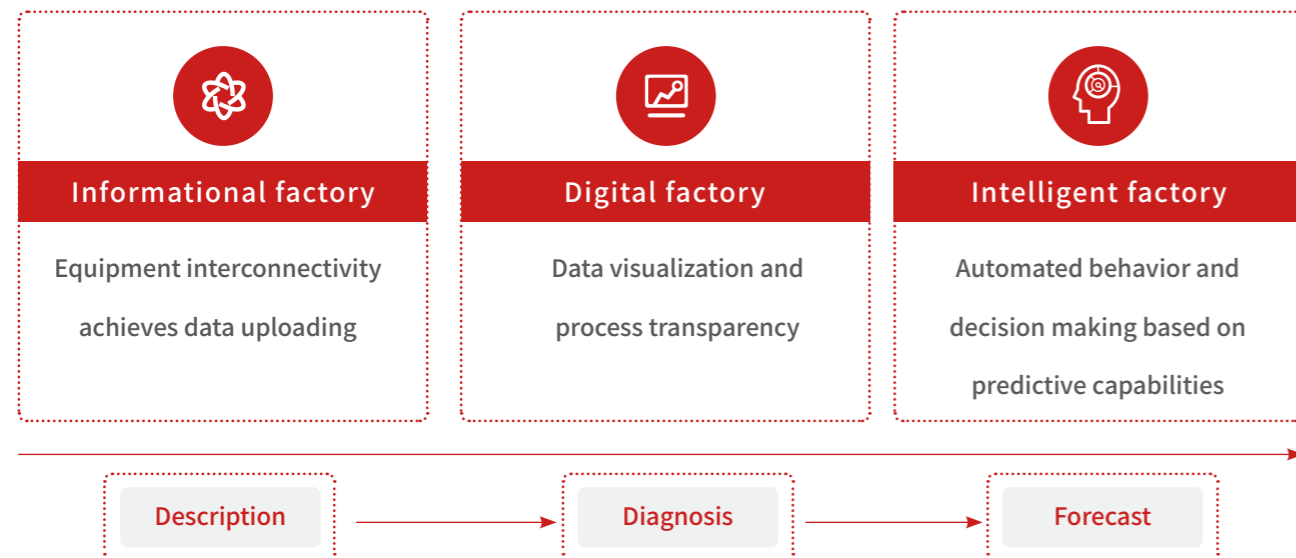
Corresponding Sections: Focusing on Innovation and Development, Working Together for Win-win Cooperation
It insists on innovation-driven, independent R&D, and is committed to leading the development of the global PV equipment industry with innovative technologies and products

SPECIAL SUBJECT

Digital Intelligence Drive and Green Development

JSG actively responds to the national digitalization strategy, takes digital innovation as the fundamental path for development, explores equipment digitalization and intelligence based on cloud computing, and focuses on the integration of the industrial digital brain and intelligent manufacturing bases of the future factories. With dual-carbon green circular development as the foundation, it promotes the construction of "Industrial Brain + Future Factory", achieving synergy in R&D, supply chain, production manufacturing, and after-market services, providing customers with solutions that combine lean **manufacturing+digital+AI big data**, and advancing high-quality development in manufacturing through intelligent management.

JSG's intelligent solution



Digital Green Logistics

JSG adheres to dual-carbon green circular development, and continuously optimizes and innovates in lean production and full supply chain management. The Company upgrades "isolated operations" to "continuous flow", utilizes Milk Run for precise material distribution, employs WMS for intelligent warehouse management to confirm goods and allow for inspection-free storage, and coordinates with TMS for loading and route planning, to achieve efficient, agile, lean, and flexible digital factory management.

Milk Run precise material distribution model

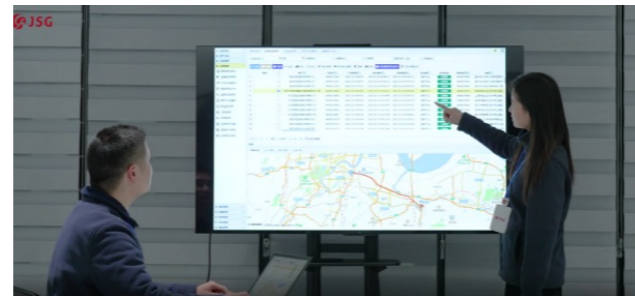
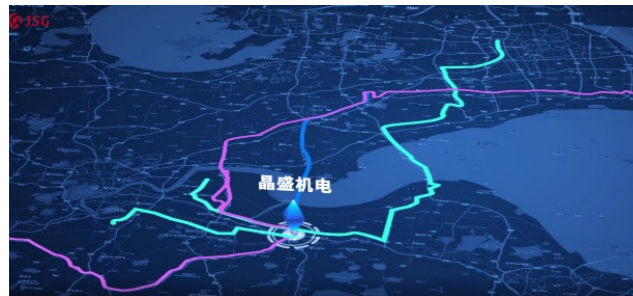


Suppliers prepare goods according to SRM requirements and use unified standard recycled green packaging apparatus to load and unload the whole vehicle **within 15 minutes**, which is expected to increase loading and unloading efficiency by **more than 50%** and vehicle loading rate by **more than 30%**.



Circulating packaging and boxing

The Company implements green access, with recyclable vehicles picking up goods in a planned route and specified time window, achieving integrated goods collection and delivery, reducing waiting time and energy consumption within the factory. Along the delivery route, the Company has set up real-time monitoring of the transit process and, since 2022, has opened **7 circulating pickup routes**, saving energy, reducing emissions, and improving receiving efficiency.



Circulating pickup routes

Key Performance

The circulating pickup routes have improved overall transportation efficiency by over **40%**, reducing transportation distance by **40% to 70%**, achieving an annual reduction of around **3,000** tons of greenhouse gas emissions.

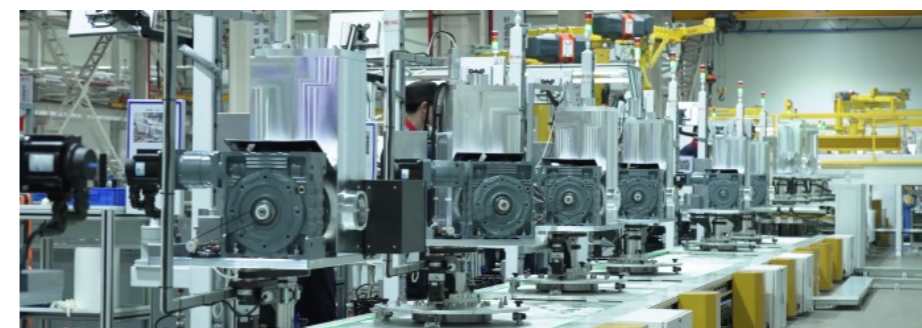
Automatic Green Production

Automatic circulation is an important embodiment of the lean layout of digital factories. JSG continuously enhances lean management and digital manufacturing, and has fully completed the lean automation upgrade of production lines, and effectively implemented a series of lean improvements such as automatic vacuuming on seed crystal lines, RGV automatic circulation on crucible lines, automatic lifting of rotary plate valves, and automatic strapping and packing of composite boxes. Combined with the recycling of packaging tools, it effectively reduces solid waste production in the parks, rapidly increases factory capacity, and builds new advantages in green intelligent manufacturing. Furthermore, the Company has designed foolproof and ergonomic workstations, and combined with fixtures and inspection tools to ensure effective control of key points, ensuring both safety and efficiency in operations. As a result, assembly personnel have been reduced by **35%**, and labor intensity has significantly decreased, further establishing a new benchmark in industry production.

Lean automation upgrade of production line



Automatic vacuuming of seed crystal line



Automatic binding and packing of integrated box



Key Performance

The daily production capacity of JSG's factory increased by **20%**, the total working hours per mono crystal puller improved by **20%**, and the output of solid waste was reduced by **83%**.

Promoting Intelligent Development of the Industry

As an important player in the global PV industry, JSG has always been deeply committed to the path of green and sustainable development. By insisting on technology-driven strategies and standing at the forefront of innovation, integrating digital technology, and AI big data as supports for development, the Company is dedicated to researching and developing more intelligent, green high-tech products and solutions. This commitment provides a strong impetus for the transformation of the PV industry and contributes to the global energy transition.

Case | Product integrated with digital AI technology, propelling the PV industry to new heights

With the advent of the N-type era, the industry has placed higher demands on the quality of silicon wafers. The Company launched its fifth-generation mono crystal puller, which introduces superconducting magnetic field technology widely used in the semiconductor field into the PV sector. Building on the foundation of the original intelligent whole-plant silicon growth control system and AI data analysis system, it provides customers with an open secondary platform for mono crystal puller. This enables customers to independently program the process and logic of the mono crystal puller, thus deeply mining data value and creating differentiated core competitiveness.

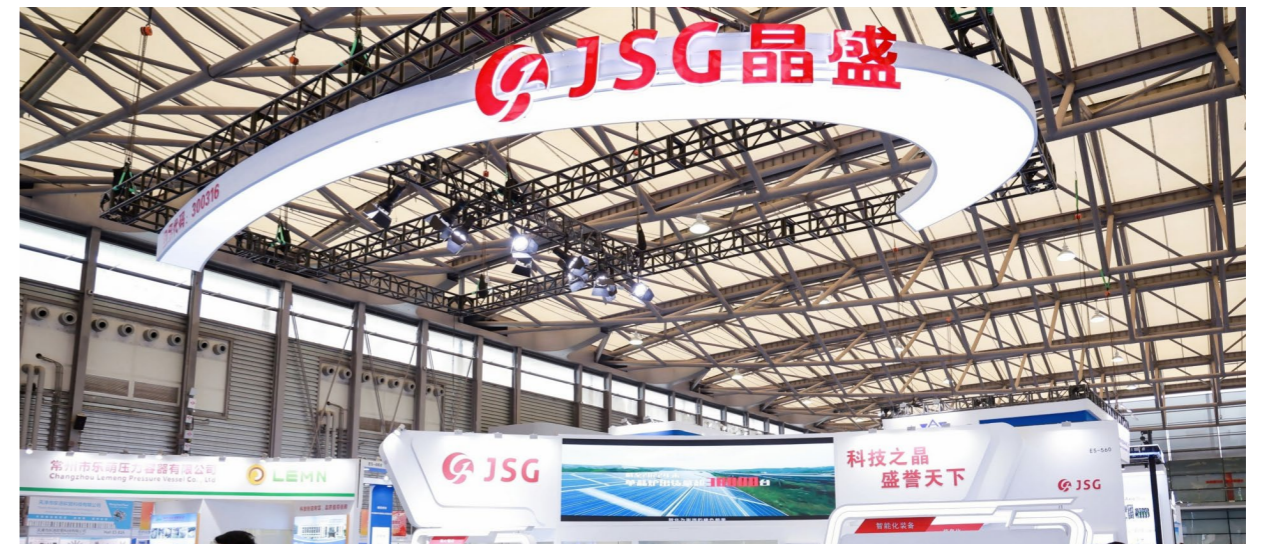


The 5th-generation mono crystal puller

Case | Debut at the 6th China International PV Industry Conference, empowering the industry with digital value



In November 2023, the Company participated in the 6th China International PV Industry Conference with its latest PV equipment, auxiliary materials, consumables, and intelligent factory solutions. Through this Conference, the Company offered a comprehensive intelligent factory solution that integrates lean **manufacturing+digital+AI big data** to its customers, using digital products to drive the transformation of the PV industry and contribute to the global energy transition.



Participated in the 6th China International PV Industry Conference

01

Forging Ahead on Solid Footprint

Our Philosophy

Centering on the core values of "honesty and optimism, loyalty and dedication, struggle orientation, partner accomplishment, pioneering and innovation, and co-creation of brilliance", JSG has established a sound governance structure and a comprehensive internal control and risk management system. By protecting the rights and interests of investors, and upholding business ethics, the Company has constructed an orderly information security environment, valued IP protection, and steadily promoted the long-term sustainable development of the Company.

Our Actions

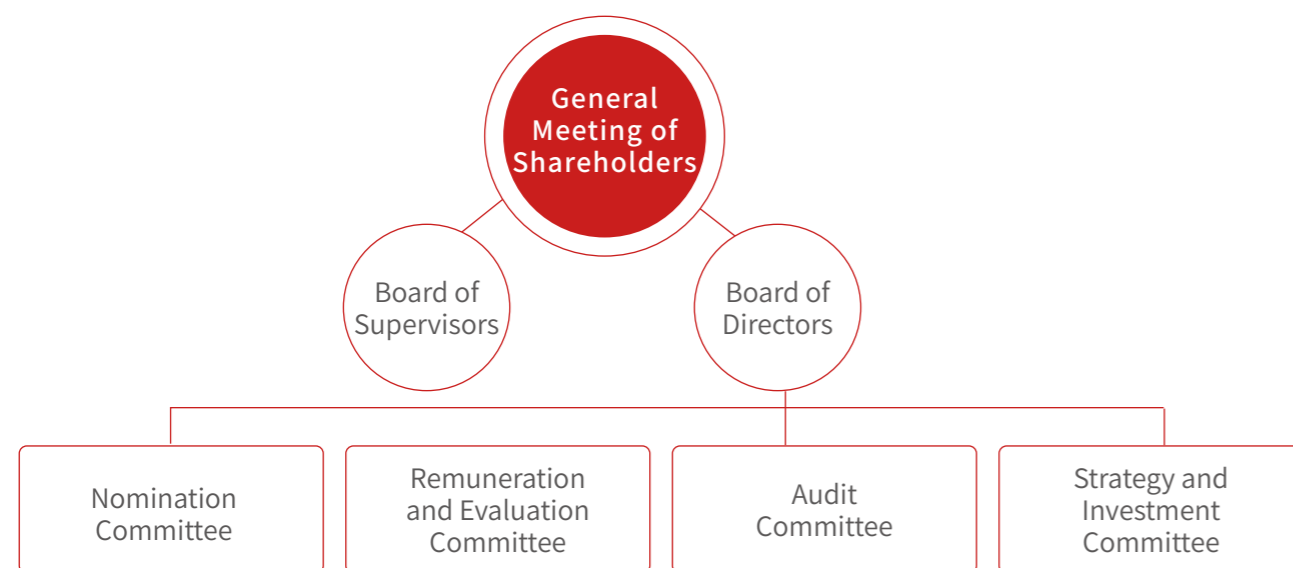
- Compliance Operation
- Risk Management
- Business Ethics
- Privacy and Information Security
- IP Protection

Compliance Operation

Three-mechanism Governance

JSG strictly abides by the "Company Law of the People's Republic of China", the "Securities Law of the People's Republic of China", the "Code of Corporate Governance for Listed Companies", and the legal regulations of the Securities Regulatory Commission and the stock exchanges. It has established a governance structure composed of the General Meeting of Shareholders, the Board of Directors, the Board of Supervisors, and the management team, and continuously improved various governance systems and the working rules of the three mechanisms, ensuring the legality, compliance, authenticity, and effectiveness of major company decisions, promoting standardized operations, and improving the comprehensive governance level.

Organization chart



Composition and responsibilities of the three mechanisms

General Meeting of Shareholders

The General Meeting of Shareholders of the Company decides on the business policies and investment plans of the Company, and reviews important matters of the Company.

Board of Directors

The Board of Directors of the Company is a permanent decision-making body, mainly exercising the powers granted by laws, regulations, Articles of Association, and the General Meeting of Shareholders.

Board of Supervisors

According to the "Articles of Association", the Board of Supervisors supervises the Company's business management and decision-making, safeguarding the legitimate rights and interests of the Company and its shareholders. The Board of Supervisors includes shareholder representatives and an appropriate proportion of company staff representatives. The chairman of the Board of Supervisors is elected by more than half of the supervisors. Staff representatives are democratically elected by the Company's staff through Workers' Congress, Employee Meeting, or other forms.

Key Performance

In 2023, the Company held **4** General Meetings of Shareholders, **12** Board Meetings, and **11** Supervisory Meetings. A total of **65** resolutions were considered.

The Board of Directors of the Company has established four specialized committees: Nomination, Compensation and Assessment, Audit, and Strategy and Investment. The rules of procedure for each committee have been revised and improved, operating strictly according to the rules of procedure of each specialized committee, providing scientific and professional advice for the decision-making of the Board of Directors.

Committee Responsibilities and Independence under the Board of Directors

Committee Name	Key Responsibility	Committee Independence
Audit Committee	<ul style="list-style-type: none"> Understand the progress of business operations and major issues; Guide internal audit work and review the Company's financial statements and business data; Propose the appointment or replacement of external audit institutions; Supervise the Company's internal audit system and its implementation; Responsible for communication between internal and external audits; Review the Company's financial information and its disclosure 	<ul style="list-style-type: none"> The Committee consists of 3 independent directors, with 100% independence; Ms. Fu Qi is the chairperson, and Mr. Zhao Jun and Mr. Pang Baoping are committee members.
Strategy and Investment Committee	<ul style="list-style-type: none"> Review the long-term development strategy and major investment and financing decisions of the Company, in light of the development of the industry in which the Company operates and its own development situation. 	<ul style="list-style-type: none"> The Committee consists of Dr. Cao Jianwei (chairperson), Ms. Qiu Minxiu, and Mr. Zhou Zixue.

Committee Name	Key Responsibility	Committee Independence
Nomination Committee	<ul style="list-style-type: none"> Advise and make recommendations to the Board of Directors on the selection of directors (including independent directors), General Manager and other senior management of the Company, and be responsible to the Board of Directors. 	<ul style="list-style-type: none"> The Committee consists of Mr. Zhao Jun (chairperson), Mr. Pang Baoping, and Mr. He Jun; The Committee includes 2 independent directors.
Remuneration and Evaluation Committee	<ul style="list-style-type: none"> Review the compensation policy and assessment schemes for the directors and senior management of the Company, evaluate and review the work situations of the directors and senior management according to performance evaluation standards, review the implementation of the Company's restricted stock incentive plan. 	<ul style="list-style-type: none"> The Committee consists of Mr. Pang Baoping (chairperson), Ms. Fu Qi, and Mr. Mao Quanlin. The Committee includes 2 independent directors.

Board Independence and Diversity

JSG, in accordance with relevant laws and regulations and the "Articles of Association", has established governance systems such as the "Independent Director Work System" to promote the diversity and professional balance of the Board of Directors. The members all possess rich industry experience and professional capabilities in engineering, accounting, law, and other fields, ensuring the comprehensive governance and insight ability of the Board of Directors, making reasonable decisions, improving risk response capabilities, protecting investors' interests, and enhancing the professionalism of corporate governance.

Key Performance

In 2023, the Company's Board of Directors consists of **9** directors, including **3** independent directors and **2** women directors.

Independence and diversity of board members

Type	Name	Gender	Professional Ability		
			Industry Experience	Risk Management	Financial Management
Chairman	Cao Jianwei	Male	√		
Executive director	Qiu Minxiu	Female	√		
Executive director	He Jun	Male	√		
Executive director	Mao Quanlin	Male	√		
Executive director	Zhu Liang	Male	√		

Type	Name	Gender	Professional Ability		
			Industry Experience	Risk Management	Financial Management
Executive director	Zhou Zixue	Male	√		√
Independent director	Zhao Jun	Male		√	
Independent director	Fu Qi	Female			√
Independent director	Pang Baoping	Male	√		

Information Disclosure

JSG strictly abides by the "Company Law of the People's Republic of China", "Securities Law of the People's Republic of China", "Measures for the Administration of Information Disclosure by Listed Companies", and other laws and regulations, and formulates the "Information Disclosure Management System" and other systems to proactively disclose the relevant information in a truthful, accurate, timely, fair and complete manner, effectively guard against the risk of information disclosure, and adequately safeguard the shareholders' right to know, in particular the small and medium-sized shareholders. **Since listing, the Company has consecutively received an "A" grade in the Shenzhen Stock Exchange's annual information disclosure evaluation for 10 years.**

All information that needs to be disclosed is announced through the designated information disclosure media, "Securities Times" and CNINFO (www.cninfo.com.cn).

Key Performance

In 2023, the Company disclosed **163** announcement documents, including **4** regular reports, and there were **NO INCIDENTS OF VIOLATIONS** of information disclosure regulations resulting in penalties.

Investor Relations Management

JSG has established internal systems such as the "Investor Relations Management System" based on laws and regulations like the "Guidelines for Investor Relations Management of Listed Companies" and the "Guideline No. 2 for the Self-Regulatory Supervision of Listed Companies on the Shenzhen Stock Exchange - Standard Operation of Companies Listed on the GEM". It continuously improves public, fair, transparent, and multi-dimensional investor communication channels, actively engages in communication and interaction with investors, deepens investors' understanding of the Company's production and operations, better conveys the Company's investment value, and enhances investors' identification with the Company.

Investor communication activities



The Company always regards returning to shareholders as its core concept. Based on the profit distribution policy of the "Articles of Association" and relevant regulations, it establishes a continuous, stable, and scientific return mechanism for investors through share repurchase, increased cash dividends, and optimized dividend timing. It shares development achievements with investors, protects the interests of all shareholders, strengthens the market's confidence in the high-quality development of the Company's business, maintains and ensures the investment value for long-term investors, and promotes the Company's continuous and healthy development.

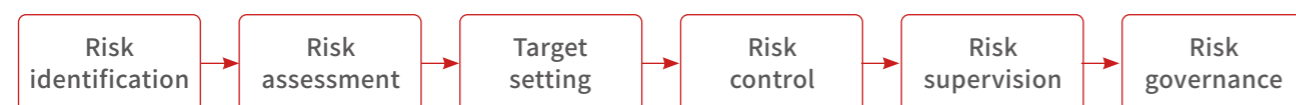
Key Performance

- From September 2023 to January 2024, the Company has implemented its share repurchase plan through centralized bidding transactions, legally repurchasing shares worth **CNY 100 MILLION**, totaling **2,173,984** shares.
- Since the year of listing, the Company's cash dividend rate has been maintained at over **20%**, with a cumulative dividend amount exceeding **CNY 2.7 BILLION** (including 2023 profit distribution).

Risk Management

JSG strictly adheres to legal and regulatory requirements, continuously improves its corporate governance structure, enhances its risk management systems, establishes a sustainable and regular risk management operation system, clarifies responsibilities and powers at all levels of risk management, sets up a complete risk management process, and takes measures to keep risk within an acceptable range, driving the Company's rapid development.

Risk management process



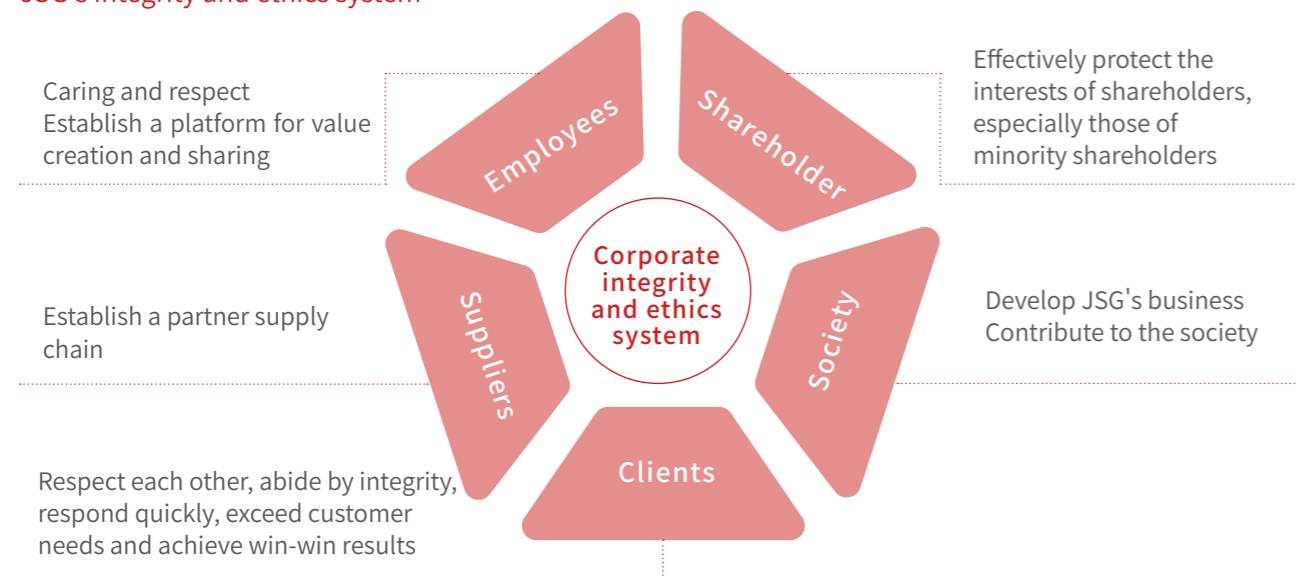
Main risk response measures of the Company

Possible risks	Potential Risk	Response Measure
Industry fluctuation risk	The Company's main products are equipment used in the photovoltaic (PV) and semiconductor integrated circuit industries. Leveraging years of technology and expertise in the growth and processing of brittle crystal materials, the Company has extended its portfolio to include sapphire materials, silicon carbide materials, and core auxiliary consumables for the related industry chain, such as quartz crucibles, diamond wires, and precision parts. The products are primarily utilized in the semiconductor, PV, and LED industries, which are influenced by downstream end-market demand and industry policies. Benefiting from the robust market demand in downstream industries, the Company has rapidly developed and continuously improved its performance. However, a slowdown in market growth or a decline in demand due to cyclical or policy fluctuations could adversely affect the Company's business performance.	The Company remains committed to technological innovation, actively extends the application field of semiconductor industry chain by continuously increasing the research and development of new products, expands the new material business with broad market demand and development prospects, and gradually improves the supporting system of industrial chain products. By gradually extending its business layout, the Company aims to mitigate the impact of single-industry fluctuations on its performance, thereby strengthening its core competitiveness and risk resilience.
Market competition risk	The semiconductor and PV industries have promising development prospects. With the technological advancement and the continuous improvement of the industry chain ecology, more and more new players are entering the industry. Furthermore, the top players in the industry continuously increase their production capacity expansion by virtue of their advantages in brand, scale and technology, and implement the integration strategy to expand upstream and downstream of the industrial chain, thus intensifying competition in the industry.	The Company keeps abreast of cutting-edge industry technologies, and prepares for future developments based on its R&D innovations. By continuously launching innovative products and maintaining high-quality and advanced offerings, combined with strengthened technical services, the Company aims to reduce costs and enhance efficiency for customers, thereby securing and gradually increasing its market share of core products.
Technology R&D risk	The Company operates in a technology-intensive industry. For years, it has focused on the R&D, production, and sales of key equipment and materials used in the semiconductor and PV industries, emphasizing in-house R&D and technological innovation, guided by market demand and forward-looking predictions for product development. As the technological level of the industry continues to rise, the demands on products are also increasing. If the Company cannot quickly launch new products that meet market demands as scheduled, it could affect the market competitiveness of its products and adversely impact the Company's business development.	The Company adheres to a dual-drive R&D model based on technological innovation and in-depth exploration of customer needs. It has established a complete R&D control system covering design production, process improvement, product certification testing, and project development applications. By strengthening research on national industrial policies and industry development trends, tracking the direction and cutting-edge dynamics of the PV and semiconductor industries, and analyzing customer needs, industry markets, competitive enterprises, and new products and technologies, the Company determines the objectives, directions, and paths for new product development, and actively cultivates, reserves, and introduces high-level R&D technical talent to ensure the sustainability of its R&D innovation.
Risk of loss of technical personnel	The Company possesses a group of core technical and R&D personnel with rich industry experience and innovative capabilities, and profoundly masters the technology and expertise in the growth and processing of brittle materials. These core personnel are the foundation for the Company's continuous technological and product innovation. The semiconductor and PV industries continue to be in short supply of high-end technical talents, and the competition for talents among manufacturers is intensifying. If there is a significant loss of core technical personnel, it could lead to the diffusion of core technologies, reducing the Company's technological advantages and innovation capabilities, and thereby affecting its business development.	The Company mitigates this risk by providing a good career development platform for technical talents, strengthening corporate culture construction, improving the compensation incentive system, and continuously implementing equity incentive policy. These measures aim to integrate company development with employee development, attract and retain talents and maintain team stability. The Company signs confidentiality agreements with key technical personnel, clearly defining non-compete obligations and responsibilities to minimize or eliminate the risk of technical diffusion due to the loss of key technical personnel.
Order fulfillment risk	As of the end of the reporting period, the Company had a substantial number of orders in hand, but customers might adjust project schedules based on their industry outlook and development, leading to uncertainties in executing contracts that have not yet been completed with the Company. Some downstream customers might cancel orders or request delayed deliveries, posing risks to the Company in fulfilling unexecuted orders.	In the process of market development, the Company reduces order fulfillment risk by strengthening due diligence to understand the business conditions of target customers, focusing on developing large, financially strong, and well-managed quality customers, implementing strict customer credit management systems, signing standardized commercial contracts, and promoting sound payment term management.

Business Ethics

JSG places a high emphasis on adhering to principles and norms of business ethics throughout its production, operation, and management processes, insists on fair competition, and strictly carries out anti-corruption management, steadily promoting the Company's sustainable and high-quality development. JSG actively constructs an integrity and ethics system, using self-examination, public supervision, and oversight from other relevant parties to ensure lawful and compliant operations. It also focuses on fostering a healthy development of an integrity culture, regularly conducting integrity-themed propaganda, education, and training for all employees, continuously improving employees' awareness of integrity and honesty in their professional conduct.

JSG's integrity and ethics system



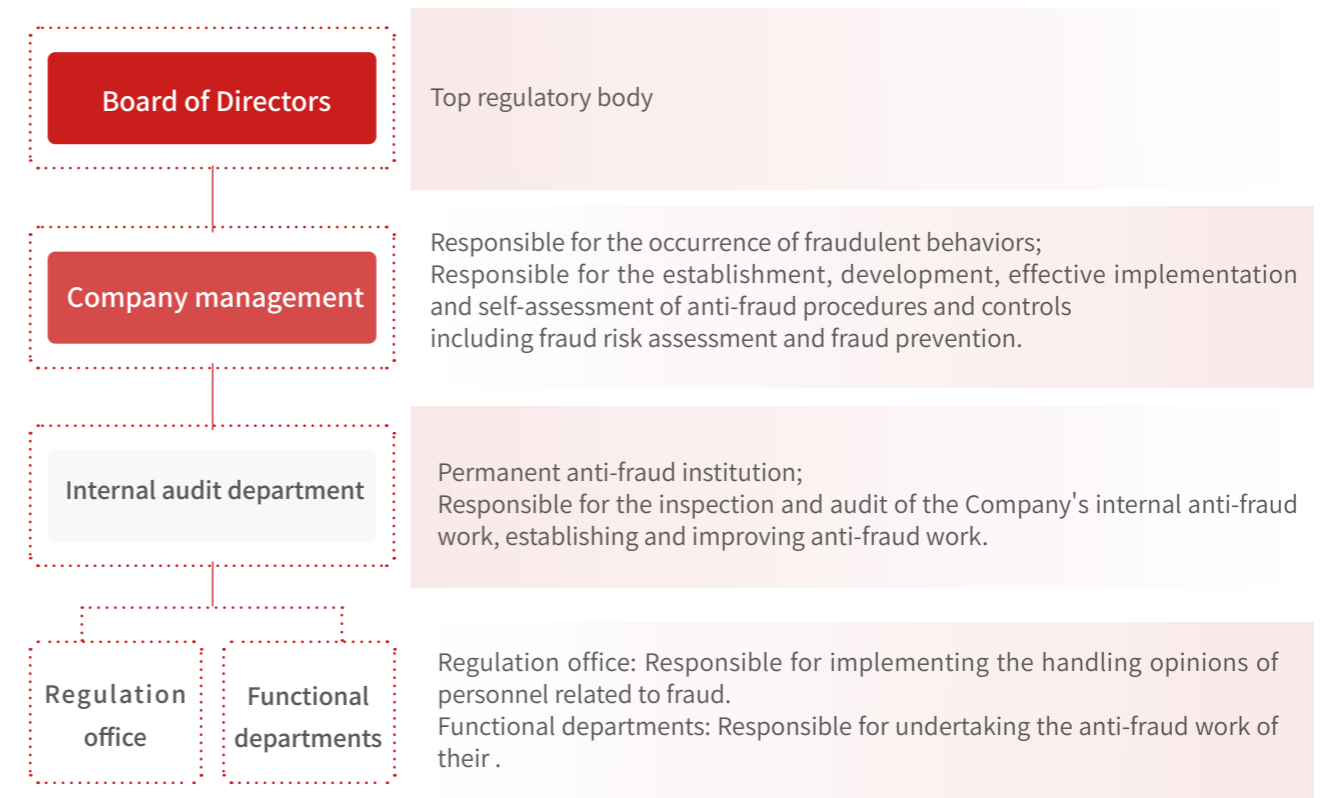
Fair Competition

JSG is committed to establishing transparent cooperation relationships with upstream and downstream suppliers and partners. In business operations, it practices the principles of fairness, justice, and openness, opposes unfair competition behaviors like price monopolies, conducts anti-unfair competition legal and regulatory training for **all employees**, continuously enhances the transparency of business activities, and is determined to maintain a good market economic order.

Business Ethics

JSG, in accordance with laws, regulations, securities markets, and regulatory bodies' stipulations and requirements, has developed and regularly updated "Anti-Fraud Management Measures" and other internal systems. It has established an organizational structure coordinated by the Company's board of directors as the highest governing body for anti-corruption issues, the internal audit department as a permanent institution, and various functional departments for collaborative management. This structure and specific internal control procedures and mechanisms effectively prevent fraud, strengthen the company's integrity and compliance governance, reduce corporate risks, and standardize business conduct.

Anti-corruption management organizational structure and responsibilities



The Company continuously strengthens anti-corruption management, conducts anti-corruption audits, and corruption risk investigations across all business departments, focuses on business ethics, and implements continuous audits throughout the year. The Company has established a corruption reporting mechanism in the "Anti-Fraud Management Measures", setting up hotlines, e-mail, and anonymous mailboxes for reporting channels. The "Anti-Fraud Management Measures" have established a whistleblower protection mechanism, stipulating that investigators must keep the investigation process and afterwards confidential, not disclosing the whistleblower and the investigation's related information (except for publicly announced information). Those who violate confidentiality rules or retaliate against whistleblowers or investigators will be dismissed or have their labor contracts terminated, and if laws are broken, they will be referred to judicial authorities.

Complaint channel

Report telephone: 0571 - 89905290 (ext. 8081)

Report mailbox: ia@jsjd.cc

The Company actively fosters an anti-fraud corporate culture, clearly defining the red lines of fraudulent behavior to employees. Upon hiring, the Company signs an "Integrity Commitment" with employees and conducts anti-corruption training for new employees. Moreover, the Company regularly communicates and trains on the Company's anti-fraud policies, procedures, related measures and regulations through various forms such as employee handbooks, company rules and regulations, intranet announcements, negative event warnings, and specialized integrity training to ensure no improper benefits are exchanged in business operations.

Case | Conducting anti-corruption and integrity training, and strengthening the construction of the Company's integrity culture

In 2023, the Company carried out a series of thematic educational activities with "Party building leading the construction of clean culture", strengthened the company's clean culture and enhanced the legal awareness of employees by visiting clean education bases, inviting the public security organs to carry out clean thematic lectures, legal knowledge training and other activities.



Integrity training

Key Performance

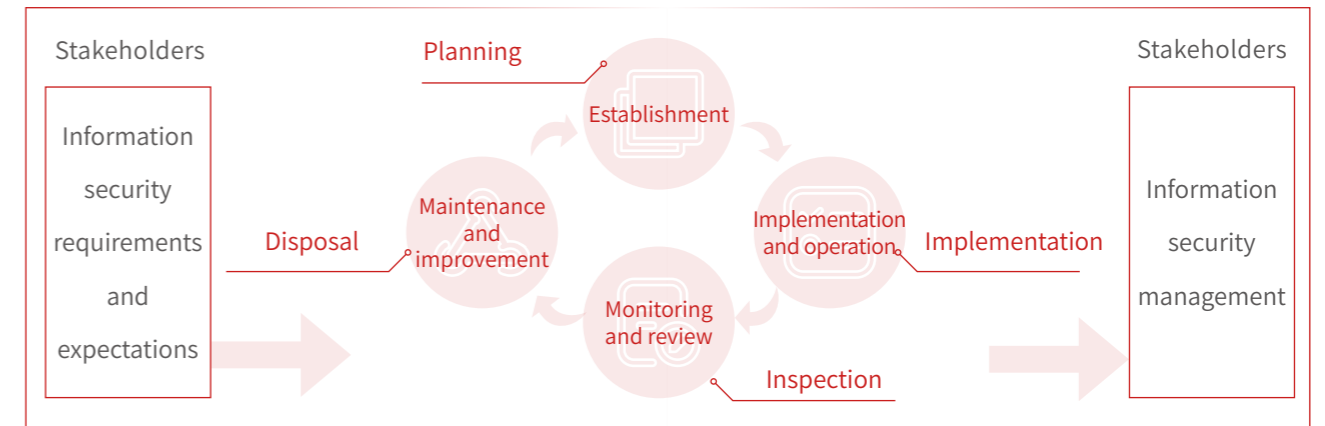
In 2023, the Company carried out **3** training sessions on business ethics and anti-corruption, and the coverage rate of employees trained on anti-corruption topics reached **100%**.

Note: In 2023, the company has not hired any contractors or part-time employees, and all employees were regular employees.

Privacy and Information Security

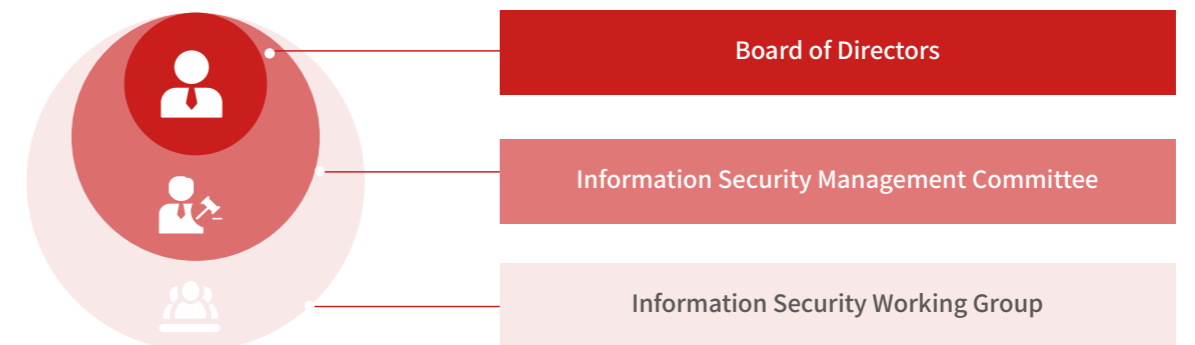
JSG strictly abides by laws and regulations such as the "National Security Law of the People's Republic of China" and the "Cybersecurity Law of the People's Republic of China", has formulated systems like the "Information Security Management Manual", "Information Security Risk Assessment and Management Process", and added management methods such as "Management Specifications of Group Encryption System", "Management Specifications of Group Domain Control", "Measures for the Management of Meeting Room Equipment", etc., It has continued to build an information security management system and established an information security management system model to safeguard information privacy and security against ISO 27001.

Information security management system model



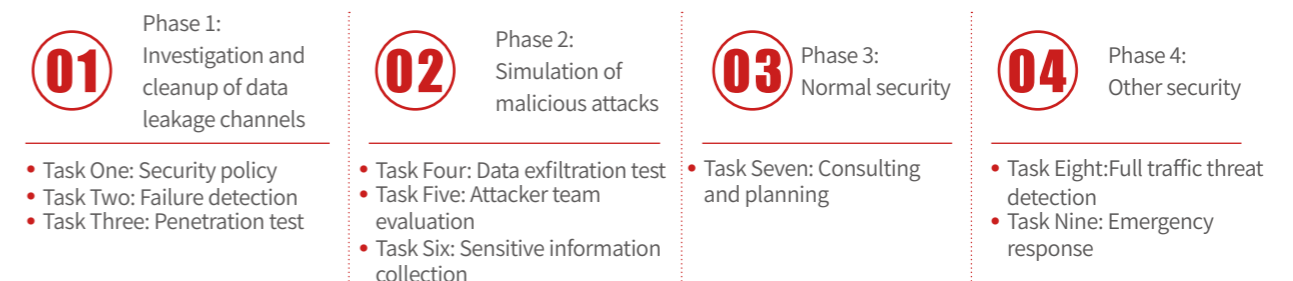
The Company has established an organizational structure for information security management, forming a three-tier structure of "Board of Directors-Information Security Management Committee-Information Security Working Group", with the Chairman of the Board of Directors and the Vice President of Operations serving as the Director of the Information Security Management Committee (ISMS) and the Executive Deputy Director of the ISMS, respectively. This leadership drives the heads of multiple departments such as the R&D Center, Sales Center, and IT Department, along with security officers, to collectively promote privacy and information security work.

Organization chart of information security system



The Company has planned and implemented the "JSG Security Service Implementation Plan", comprehensively tested the Company's network security protection capabilities, improved the monitoring and emergency response abilities for network security incidents, and continuously refined an information security management system and operational system that adapts to business development and meets the needs of secure growth.

Network security penetration project with "four major measures and nine tasks"



The Company enforces strict data control, conducts daily data security inspections to assess potential risks in data storage, transmission, and processing, promptly identifies and fixes vulnerabilities, and establishes systems such as "Data Backup Strategy Execution Form" and "Data Backup and Recovery Registration Form" to prevent data loss or damage due to hardware damage, software failures, human errors, virus infections, etc., thus ensuring the security and integrity of the Company and customer data.

Data security inspection content

Data Type	Inspection Content
Data stored in data server	Data centers, servers, storage devices, etc.
Business data	File sharing, and virtual machine business system data
Backup data	Backup data of various business systems

The Company strictly complies with the requirements of the "Personal Information Protection Law of the People's Republic of China", the "Data Security Law of the People's Republic of China" and the "Cybersecurity Law of the People's Republic of China", strengthens the management of data compliance, and carries out compliance risk assessment, compliance review and compliance training for the collection, use, transmission and handling of the privacy of its employees, visitors and partners in the course of its daily operations, so as to safeguard the privacy and information security of the Company and its customers.



Information security training site

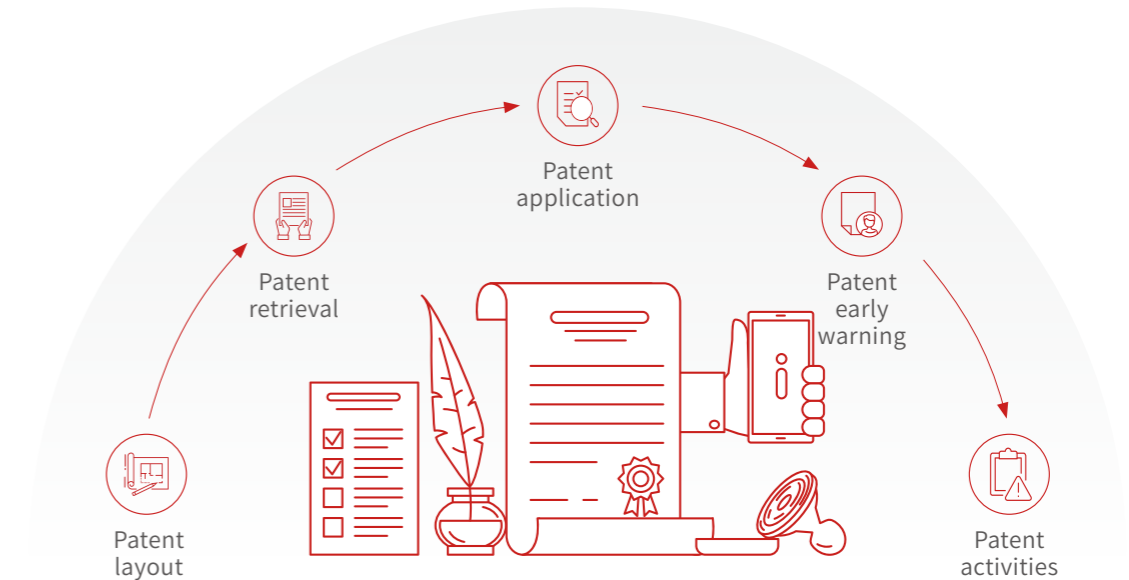
Key Performance

In 2023, the Company conducted **6** new employee information security training and **4** special training on information security and privacy protection.

IP Protection

JSG is committed to the path of independent intellectual property (IP) rights, attaches importance to the management and protection of IP rights, and has established an IP management system centered on the "Measures for the Management of Intellectual Property", "Patent Management Procedures", etc. to standardize the IP management work and to promote the formation of technological innovation and independent IP rights.

IP protection management process



Key Performance

In 2023, the company added **345** newly authorized patents, including **92** new inventions. As of December 31, 2023, the Company has a total of **914** valid patents, including **172** invention patents (including **7** international patents).

The Company focuses on independent R&D and technological innovation, has formulated the "Measures for the Management of Patent Award Selection", and established an intellectual property application incentive mechanism. Centering on invention and creation, it adheres to the principles of objectivity, fairness, justice, and openness in the selection process, rewards R&D personnel who submit patents with corresponding IP application rewards, motivates employees' enthusiasm and initiative for R&D and innovation, promotes the quality of patents, continuously inherits the enterprise culture gene of valuing R&D, and continuously creates a strong research atmosphere and good R&D conditions.

Four dimensions of patent award selection



Key Performance

In 2023, the Company awarded a patent award of **CNY 1,370,000**.

02

Seeking Zero-carbon Driven Green Development

Our Philosophy

JSG aims to "To become a leading equipment supplier of semiconductor materials, To facilitate high-tech industry development for green intelligent manufacturing". It has established a sound environmental management system, actively responded to changes in the climate, attached great importance to the environmental protection of its own production and operations, and raised the awareness of environmental protection and safety among all employees, to realize sustainable development of the environment and operations.

Our Actions

- Environmental Management
- Addressing Climate Change
- Green operation
- Safe production

Environmental Management

JSG attaches importance to clean production, implements green concepts, sets environmental management objectives, guides all employees to participate in environmental protection control and green energy saving, and implements assessment and scoring of environmental protection indexes of suppliers to drive the upstream and downstream enterprises of the industrial chain to jointly improve the environment and promote the healthy development of the green energy industry. In 2023, the Company was rated as **a Grade A credit level unit in environmental protection** by the Department of Ecology and Environment of Zhejiang Province.

2023 environmental management objectives and achievements

Environmental Management Objective	Index	2022 Achievement	2023 Achievement
Clean energy utilization rate	≥ 60%	≥ 60%	≥ 60%
Recovery rate of total recyclable waste	≥ 80%	80%	82%
Recycling utilization rate of general solid waste	≥ 80%	82%	86%
Three-waste emission compliance rate	100%	100%	100%
Identification of important environmental factors and effective control rate	100%	100%	100%
Major environmental pollution accident	0	0	0
Administrative punishment for environmental protection	0	0	0

The Company strictly implements the "Environmental Protection Law of the People's Republic of China", the "Production Safety Law of the People's Republic of China", the "Fire Control Law of the People's Republic of China", and other laws and regulations. It has established an Environment, Health, and Safety (EHS) management system and EHS management team, and formulated an "EHS Environmental Management Manual" and other policies to standardize environmental management and control work in various production links, enhance resource conservation and environmental protection, and achieve sustainable development of the environment and business operations. In 2023, the Company successfully completed its first certification of the energy management system and continued to contribute to energy saving and emission reduction through standardized management.



Environmental management philosophy

- Establish green concepts
- Promote clean production
- Facilitate high-tech industry development for green intelligent manufacturing
- Achieve sustainable development of environment and business



Environmental management policy

- Comply with environmental regulations
- Fully participate in control
- Prevent environmental pollution
- Continuously improve environment



ISO 14001 Environmental Management System Certificate



ISO 50001 Energy Management System Certificate

Addressing Climate Change

The international community clearly recognizes that promoting green and low-carbon development with clean energy is the fundamental way for humanity to address global climate change, the backbone of achieving global carbon neutrality goals and the key to sustainable global development. As a leading high-end equipment manufacturing enterprise in the international PV industry in both technology and scales actively assumes the responsibility of promoting green development and vigorously promotes the realization of the national dual-carbon goals.

Greenhouse gas emissions

Category	Unit	2022	2023
Total greenhouse gas emissions	tCO2	146,478	276,046
Greenhouse gas emission intensity	tCO2/CNY10,000 revenue	0.14	0.15

Note: 1. It contained the GHG emission in JSG's operation and production in 2022 and 2023.
2. The value was calculated based on the "Notice on the Management of Greenhouse Gas Emission Reporting for the Power Generation Industry from 2023 to 2025" issued by the Ministry of Ecology and Environment of the People's Republic of China (HBQHH [2023] No. 43), the "Electronic equipment manufacturing Guidelines for Accounting Methods" and the "Reporting of Greenhouse Gas Emissions for Enterprises (Trial) and Guidelines for Accounting Methods and Reporting of Greenhouse Gas Emissions for Machinery and Equipment Manufacturing Enterprises (Trial)".

The Company actively practices the use of green and clean energy, firmly grasps the opportunities of clean technology, and fully utilizes the existing roofs and carports of each plant to promote rooftop PV power generation by constructing power generation systems and laying PV panels, etc. It continues to explore and apply more green technologies, and contributes to the achievement of dual-carbon goals. Currently, the rooftop distributed PV power stations have been built in three parks in Zhejiang, Inner Mongolia and etc., covering an area of **over 70,000 square meters**.

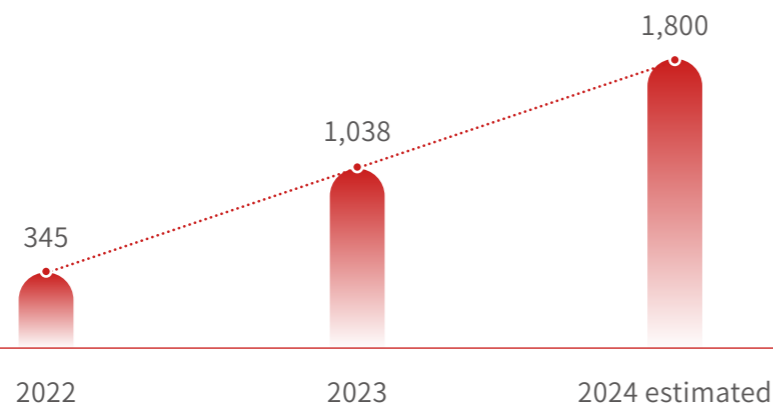
Key Performance

In 2023, the Company's total PV power generation amounted to **10.38 MILLION** kWh, saving approximately **2,958** tons of standard coal, reducing carbon dioxide emissions by **5,446** tons, sulfur dioxide emissions by about **183** tons, and nitrogen oxide emissions by about **91** tons.

2022-2024 PV installation situation and planning of the Company

2022	2023	2024
Capacity: 8,743.32 KWP	Added capacity: 3,935.995 KWP	Estimated new capacity: 7,472.345 KWP
		Greenhouse Gas emissions can be reduced 9,217 tons

PV power generation of the Company (unit: 10,000 KWH)



PV installation

Green Operation

JSG takes green development as its duty, integrates green and sustainable development concepts into corporate culture and production operations, improves the entire process of pollution control mechanisms, continuously standardizes environmental management processes, enhances the efficiency of energy and resource utilization, strengthens the Company's energy-saving and energy-substitution capabilities, and responds to societal expectations with practical actions to contribute to the construction of a green and blue home.

Treatment of three wastes

JSG attaches great importance to the management of waste gas, waste water and waste residues (three wastes) and continuously strengthens the investment and management of the three wastes. It has established dedicated departments to manage the treatment of waste water, waste gas, solid waste, and hazardous waste, supervise chemical safety, maintain the Company's environmental protection facilities, comprehensively enhance the level of waste management, and reduce the use of toxic and hazardous substances. At the same time, the Company uses environmentally friendly packaging and promotes green logistics to minimize the impact on the environment and make positive contributions to society and the environment.

Waste water management

The Company's waste water primarily consists of domestic and industrial waste water. Domestic waste water originates from office and residential areas, while industrial waste water mainly comes from the use of purified water and the preparation of concentrated water. The Company has formulated "Code of Waste Water Management" to collect and treat all types of wastewater generated, further reducing environmental pollution. Additionally, the Company has set up a waste water reuse system to reuse waste water twice to enhance the secondary utilization rate of waste water and reduce waste water discharge to a greater extent.

Key Performance

In 2023, the total wastewater discharged by the Company was **958,056.79** cubic meters, and the total volume of recycled waste water was **45,907.27** cubic meters.

Case | Reduced waste water discharge by upgrading the treatment system, reducing costs and increasing efficiency

Jingyu New Materials now uses pure water equipment that generates RO concentrate during the purification process. This concentrate, containing excessive impurities and organic matter, cannot be directly used in production. Jingyu New Materials added a three-way valve and an electromagnetic valve to the drainage pipe of the pure water equipment, channeling the concentrate to a collection barrel. By installing a booster pump at the barrel's outlet, the concentrate is transported for use in flushing toilets across various floors and for adjusting chemicals in the sewage station. This project saves approximately CNY 68,185 annually in tap water costs and concentrate treatment. Furthermore, Jingrui Electronic introduced a new intermediate water reuse system for treating waste water from the thinning machine, with a capacity of up to 20 cubic meters per hour. It is estimated to save about CNY 320,000 in treatment costs annually.



New waste water treatment equipment

Waste gas treatment

The Company's waste gas mainly comes from production and daily activities. Production-related waste gas primarily consists of acidic organic gases and particulate matter, which is effectively managed through activated carbon adsorption and spray devices. Daily waste gas mainly includes vehicle exhaust, for which the Company advocates green transportation by promoting electric vehicle charging facilities within the plant area, reducing exhaust emissions. The Company has also established "Code of Waste Gas Management" to effectively collect and treat all types of emissions, ensuring compliance with national and local emission standards and preventing environmental pollution due to non-compliant emissions.

Waste gas emission and management

Waste Gas Type	Emission (Total Amount Approved)	Emission Concentration
PM	1.765t/a	≤ 120mg/m ³

Waste treatment

The Company has established a "Solid Waste Management System" to scientifically and rationally manage environmental monitoring and the statistics of waste recycling, promoted the use of recycling bins and recyclable packaging, and reduced excessive packaging waste in product packaging and transportation to achieve cost reduction and efficiency improvement. Moreover, the Company actively conducts various training sessions to enhance employees' knowledge and skills in handling chemicals, solid waste, and hazardous waste.

Waste discharge

Category	Unit	2021	2022	2023
Total recyclable waste	Ton	1,300	1,800	1,500
Total general solid wastes	Ton	400	600	1,100
Total general solid waste recycled	Ton	800	1,200	140 ^{note}

Note: The Company's previous product packaging involved a significant amount of cardboard, wood, and other packaging materials. In 2023, the Company primarily replaced the original packaging materials with turnover boxes, pallets, and other alternatives, reducing excessive packaging and achieving multiple cycles of reuse.

Case | Chemical safety training successfully conducted, improving employee's safety awareness

May 2023, the Company organized chemical safety training, divided into groups and batches, to educate employees equipped with chemical safety knowledge. The training covered the classification of general chemicals, chemical usage standards, etc. The assessment was conducted in a Q&A format to ensure participants mastered the knowledge of chemical safety management, correct management processes and methods. A total of 180 employees participated in the training, accumulating 3 hours of training time.



Chemical safety training

Case | Waste sorting training successfully conducted, strengthening solid waste management

The Company conducted waste sorting training, including solid waste sorting and hazards, principles and technologies of solid waste treatment, and relevant legal requirements, to further enhance employees' understanding of solid waste, promote the classified placement of waste, reduce the time spent on waste sorting, effectively decrease environmental pollution, and prevent resource wastage.



Waste sorting training

Resource Conservation

JSG is committed to improving energy efficiency and reducing resource waste. It has formulated the "Code of Energy and Resource Management", and set goals for water and electricity conservation, as well as overall resource and energy savings. JSG is committed to achieving the goal of emission reduction and promoting green production by introducing and improving water treatment equipment, exploring water and power saving technology and optimizing the efficiency of equipment and other energy-saving and consumption-reducing measures.

Water resource management

The water resources used by the Company primarily come from municipal tap water and treated recycled/reclaimed water, serving the needs of production, operation, and daily life.

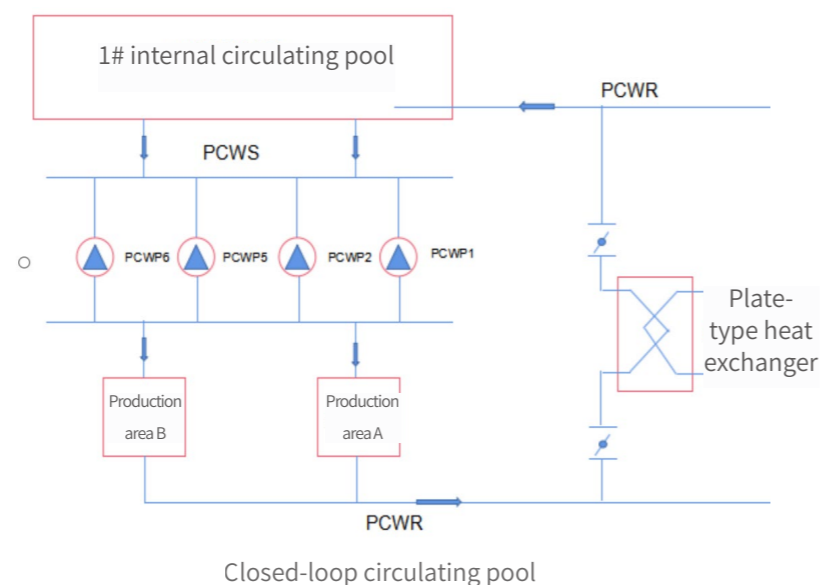
Water consumption

Type	Unit	2021	2022	2023
Purchased municipal water	m ³	742,142	922,323	3,028,793
Consumption intensity of water resources	t/CNY10,000 revenue	1.24	0.87	1.68

Note: In 2023, the expansion of the materials business (crucibles, silicon carbide substrates) led to an increase in water consumption.

Case | Adopted circulating pool for cooling, improving water resource utilization

The Company's sapphire silicon growth furnace employs a closed-loop circulating pool for cooling, operating 24 hours a day with a 1,000 cubic meter water pool powered by water pumps. With 16 water pumps working simultaneously, the annual recycled water usage reaches 34,560,000 tons.



Energy management

The energy consumed by the Company includes diesel, gasoline, and purchased electricity, with electricity being the primary energy source. The Company continuously reduces energy consumption and improves energy efficiency through various measures such as eliminating and replacing equipment with new ones, improving processes, and using energy in a scientific way. In production, the Company prioritizes energy-saving and low-energy-consumption auxiliary equipment; in daily operations, the Company has eliminated three diesel forklifts to reduce diesel usage and gives priority to electric vehicles for business travel to reduce gasoline consumption, thereby comprehensively reducing energy consumption and promoting green and harmonious development of the Company and the environment. In 2023, the Company received the ISO 50001 Energy Management System Certificate for energy management activities related to the production of polycrystalline silicon ingot casting furnace, mono crystal puller, and their auxiliary equipment.

Energy consumption

Type	Unit	2021	2022	2023
Diesel consumption	Liters	860	166,056	34,710
Gasoline consumption	Liters	3,521	31,084	15,080








Electricity consumption

Type	Unit	2021	2022	2023
Purchased electricity consumption	kWh	288,453,817	255,969,990	484,010,108
Operating income	CNY10,000	596,136	1,063,831	1,798,319
Purchased electricity consumption intensity	kWh/CNY10,000 revenue	483.87	240.61	269.15
Floor area of all plants	10,000 m ²	54.79	89.14	128.88
Purchased electricity consumption intensity	MWh/10,000 m ²	5,264.72	2,871.55	3,755.51

Green officing

JSG always adheres to the original intention of environmental protection, and integrates environmental protection into the Company's operation through measures such as waste sorting, paperless office, and organizing green activities. The Company has planned a series of specialized training covering in-depth interpretations of environmental protection policies and regulations, identification and management of environmental risks, and the latest knowledge on environmental protection technologies and processes, to enhance the environmental awareness and responsibility of all employees.

Green operation measures of the Company

- 
 - Install fresh air systems in all areas to effectively ventilate work areas and improve the working environment
- 
 - Conduct waste sorting, implement the "three reductions and four separations" method, and periodically carry out environmental inspections
- 
 - Reduce printing devices, centralizing to one device per floor and promoting double-sided printing
- 
 - Stagger air conditioning usage during summer and set temperature controls
- 
 - Install charging stations in the parks
- 
 - Implement tree planting and carry out green environmental work
- 
 - Develop ecological landscape belts, renovate ecological fishponds, and use filtration systems to improve water quality



Charging stations of the Company



Ecological fishpond in the park



Environmental protection banners

Safe Production

JSG always adheres to the concept of production safety, pays attention to chemical safety, emphasizes on the cultivation of employees' emergency response ability, strictly abides by the "Law of the People's Republic of China on Work Safety", "Law of the People's Republic of China on Prevention and Control of Occupational Disease" and the requirements on the safety restriction of chemicals, and formulates systems such as the "Chemical Safety Management System", "Emergency Response Plan for Sudden Environmental Pollution Accidents", and other systems. The Company has built an occupational safety and health management system and organizational structure, set safety management goals and tracked the achievement of the goals, implemented strict chemical safety control in the whole process from product design, procurement, manufacturing to shipment, and obtained ISO 45001 Occupational Health and Safety Management System Certificate, which provides a strong guarantee for the Company's high-quality development.

2023 safety management objectives and achievements

Safety Management Objective	Index	Achievement
Identification and effective control rate of major hazard sources	100%	100%
Major production safety accidents/personal injury accidents	0	0
Rectification rate of hidden safety hazards	100%	100%
Complete rate of safety facilities and equipment	100%	100%

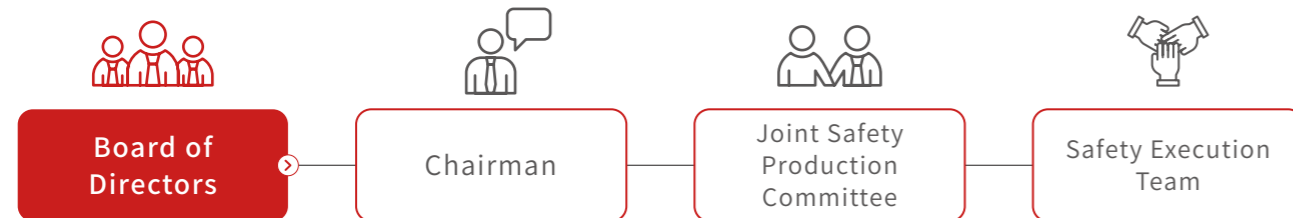


ISO 45001 Occupational Health and Safety Management Systems Certificate

Safety Management Organization

Under the EHS management system, JSG has established a Joint Safety Production Committee and a Safety Execution Team, meticulously planned safety management and audit work, and incorporated safety management objectives into the requirements of the entire safety production process. Through safety and health tiered management, priority optimization processes are continuously improved for positions with high labor intensity, potential periodic fatigue, and possible occupational hazards, reducing the risk of occupational health and safety to employees.

Safety management organizational structure



Responsibilities of Joint Safety Production Committee

- Implement the principle of "safety first, prevention foremost, and comprehensive management", enforce all relevant laws, regulations, rules, and standards, study important issues on safety production, and report safety work to superior authorities and local safety committees in a timely manner;
- Implement comprehensive management of safety work of companies in the joint area, and be responsible for coordinating, guiding and supervising safety production work;
- Review and approve the safety production policies, objectives, management plans, regulations, safety measures, and plans of the affiliated companies and supervises their implementation.

Responsibilities of Safety Execution

- Diligently implement national guidelines, policies, laws, and regulations on safety production and the Company's safety management regulations;
- Implement the work requirements conveyed by the Joint Safety Production Committee, and improve the supervision and management of safety, environmental protection, fire safety, special equipment, occupational health, and other safety supervision work in each regional company;
- Participate in formulating and revising various regulations on safety production and supervise their execution;
- Assist the Company leaders in organizing safety production meetings, regularly organize department heads for major safety inspections, organize accident investigations, and implement the principle of "no leniency";
- Be responsible for organizing the Company's safety production publicity, education, and job safety skills training, supervising the implementation of the three-level safety education for employees;
- Be responsible for organizing the compilation and improvement of emergency plans for production safety accidents, environmental and hazardous waste accidents, and organizing emergency plan drills;
- Organize the Joint Safety Production Committee to hold a safety special meeting semi-annually, the Safety Execution Team to hold a safety special meeting quarterly, and each area to organize a safety special meeting monthly, regularly collaborating with various departments for on-site safety production inspections.

Safety Production Training

JSG vigorously promotes the construction of safety culture, formulates annual safety training plan, combines internal and external trainings, organizes employees to participate in all kinds of safety and emergency training, and supplements it with diversified assessment methods, such as question and answer, examination, practical operation, and obtaining certificates, etc., to enhance the awareness of production safety of the whole staff, strengthen the skills of self-help and rescue to deal with all kinds of environmental protection accidents, minimize the hazards of the accidents, and enhance the practical ability of the staff to work in a safe way.

2023 Safety Training Plan

Training time	Training subject	Trainee
January	2023 Assessment Rules of Safety Production Responsibility System	Team leaders and above
February	Special Training for Winter Safety Production	Team leaders and above
March	Special Equipment Training and Certification	Users
April	Fire Safety Knowledge Training	Team leaders and above
May	Waste sorting training	Safety officers
June	First Aid Knowledge Training	Safety officers
July	Chemical safety training	Safety officers
August	Security Skills Training	All security personnel
September	Safety Production Knowledge Contest	Participants
October	Fire Training	Team leaders and above
November	EHS System Training	System specialists
December	Solid Waste Knowledge Training	Safety officers
	Solid Waste Knowledge Training	Safety officers
	Special Operation Personnel Training	Special type of work
	Accident Case Training	Safety officers
	Hazard Source and Environmental Factors Training	Team leaders and above
	Emergency Knowledge Training	All members
	Electrical Safety Training	Safety officers
	Logistics Service Personnel Training	Logistics service personnel

Key Performance

In 2023, JSG conducted more than **38** safety training sessions according to its annual training plan.



Case | AED training successfully carried out, enhancing employees' first aid awareness



To ensure the health and safety of its employees, the Company has specially installed automatic external defibrillators (AED) and invited external Red Cross rescuers to conduct on-site classes, aiming to enable employees to master the basic knowledge of emergency care and key AED first aid practices, and to improve the emergency response ability of the employees in the face of accidents, so that they can play the role of "the first rescuer" before the arrival of professional ambulance personnel. In 2023, the Company held a total of 2 first aid training sessions, certifying 114 individuals.



First aid knowledge training

Case | Fire drill training successfully organized, enhancing fire safety awareness



Improve employees' awareness of fire safety and enhance their emergency response capabilities to fires, including mastering correct firefighting techniques, the Company organized fire drill training activity. This activity included segments on emergency evacuation, firefighting drills, and emergency first aid, covering topics such as fire safety basics, extinguishing fires, evacuation, and first aid. Participants learned about the principles and use of fire extinguishers, became familiar with evacuation routes and precautions, and mastered evacuation techniques and skills.



Fire safety drill training

Case | Conducted the Safe Production Month activity of "Everyone cares about safety and everyone can respond to emergencies"



In June 2023, the Company and its subsidiaries implemented multiple measures to closely follow the theme of Safe Production Month, which is "Everyone cares about safety and everyone can respond to emergencies", to effectively grasp all the work, implement the safety issues, and to organize and carry out a series of activities for safe production month. The Company and its subsidiaries created a strong atmosphere of production safety by carrying out publicity activities, hanging production safety banners, production safety slogans, broadcasting publicity videos and thematic educational films, etc.; carrying out the "I eliminate hidden dangers" activity for the whole staff, and investigating hidden safety dangers in depth; organizing and carrying out emergency response drills, knowledge contests on production safety, firefighting skills competitions, expert lectures and other activities to enhance safety knowledge and practical ability in the learning process, and to strengthen the safety awareness and safety responsibility of all cadres and employees.



Expert lecture on safety production



Emergency drill in Safe Production Month



Knowledge contest in Safe Production Month

Case | Emergency knowledge training successfully conducted, strengthening employees' emergency capabilities



In November 2023, the Company conducted a 2-hour emergency knowledge training session with 200 participants. The training detailed emergency evacuation techniques and emergency first aid knowledge, including an emergency drill to further solidify employees' abilities to respond to emergencies and handle them proficiently, with an aim to strengthen self-rescue and emergency skills in the event of various environmental accidents, ensuring effective organization, rapid response, efficient operation, and no chaos in emergencies.



Emergency Knowledge Training

03

Focusing on Innovation and Development

Our Philosophy

JSG firmly believes that innovation and quality assurance are vital to a company's lifeblood, and takes innovation and development as the core driving force of its development. Through continuous exploration and innovation, JSG leads the development of the PV and semiconductor industries, helps promote and innovate clean energy technologies, and creates green energy for the world while continuously improving and building a higher-quality product and service system to promote the entire industrial chain to a higher level.

Our Actions

- Technology R&D
- Quality Management
- Customer Service

Technology R&D

JSG places research and development at the core of its development, always insists on implementing R&D innovation in a dual-wheel drive mode of technological innovation and in-depth excavation of customers' needs, and continuously strengthens investment in research and development to continuously strengthen its own R&D strength and innovation ability, so as to ensure the sustainability of the Company's competitiveness and to create greater value for its customers.

Scientific Research Management

JSG has built and perfected its R&D system, focusing on strategic R&D, product and technology R&D, and process and technical support R&D. By strengthening the research on national industrial policies and industry development trends, tracking the development direction of the PV and semiconductor industries as well as technological frontiers, collecting and analyzing information on customer demands, industry markets, competitive enterprises, and new products and technologies, the Company determines its R&D objectives, directions and paths, plans for the establishment of a series of core technological development platforms and industrialization platforms for its products and technologies, and continues to research and develop new products and technologies that meet the market demands and the Company's development strategies, to ensure that the Company is in an advantageous position in the industry and provide more high-quality production capacity for the country and the industry.

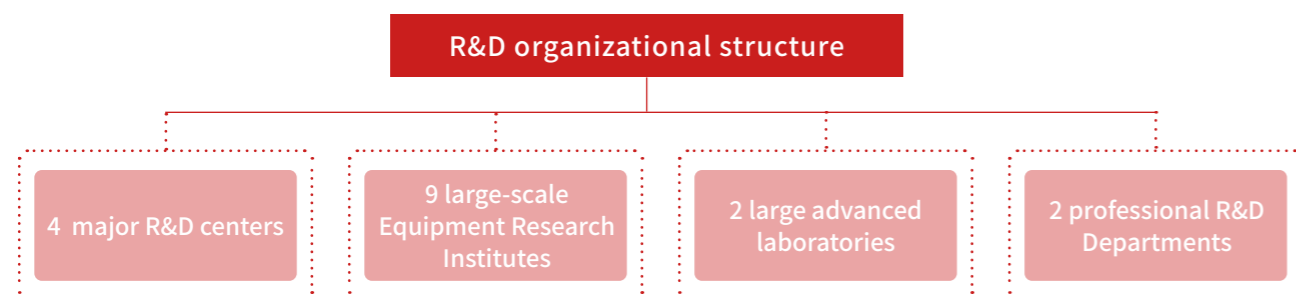
Key Performance

In 2023, the Company's R&D investment amounted to **CNY 1,145,395,200**, accounting for **6.37%** of the revenue, an increase of **43.83%** over the same period last year.

Scientific Research Platform

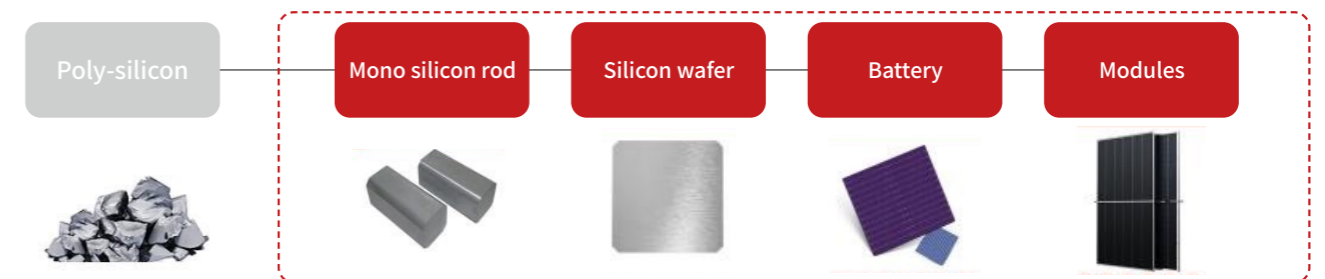
JSG is constantly optimizing its R&D organizational structure, which includes 4 major R&D centers, 9 large-scale equipment research institutes, 2 large advanced laboratories, and 2 professional R&D departments. Additionally, the company actively promotes the construction of R&D platforms, holding national postdoctoral research stations, state-level enterprise technology centers, Zhejiang Semiconductor Equipment Industry Research Institute, Zhejiang Semiconductor Equipment Precision Parts High-tech Enterprise R&D Center, Zhejiang Province Foreign Experts Station, Zhejiang Provincial Key Research Institute in Industrial 4.0, Zhejiang Jingsheng Electric Crystal Growth Equipment Research Institute, Zhejiang Semiconductor Intelligent Manufacturing Key Enterprise Research Institute, and Zhejiang Semiconductor Material Growth Processing Equipment Key Enterprise Research Institute, among others.

Organization chart of R&D platform



Opportunities in Clean Tech

JSG has always adhered to its core strategy of **"To become a leading equipment supplier of semiconductor materials, To facilitate high-tech industry development for green intelligent manufacturing"**. The Company's core business is in upstream the green energy industry chain, covering silicon wafers, cells, and components in the PV equipment field. Relying on years of deep understanding of PV materials, equipment technology, and processes, JSG continuously increases investment in technological innovation, deepens cooperation with upstream and downstream industry chains, produces multiple scientific research achievements, and promotes an eco-friendly industrial chain ecosystem.



Key Performance



As of December 31, 2023, the Company's total unfilled contracts for crystal growth equipment and intelligent processing equipment order amounted to **CNY 28.258 BILLION**, including **CNY 3.274 BILLION** for semiconductor equipment orders. The fully automatic mono crystal silicon growth furnace is the core process equipment in the Company's PV industry chain, with an estimated reduction of GHG emissions of **80 MILLION** tons CO₂ equivalent.

Note: The value was calculated based on the 2022 national power grid average emission factor of 0.5703t CO₂/MWh published in the "Notice on the Management of Greenhouse Gas Emission Reporting for the Power Generation Industry from 2023 to 2025" issued by the Ministry of Ecology and Environment of the People's Republic of China (HBQHH [2023] No. 43), the "Construction and Operation of PV Power Generation in 2021" and "Construction and Operation of PV Power Generation in 2022" published by the National Energy Administration, the annual average power generation per GW of installed PV capacity obtained according to the "Cumulative Solar Power Generation in 2022" published by the National Bureau of Statistics, as well as the expandable PV installed capacity mentioned earlier.

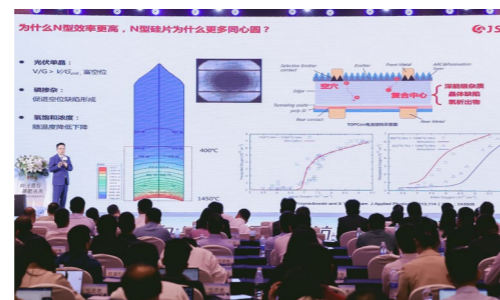
Green innovation, advancing clean energy transformation

Case | Released three innovative products, leading technological innovation in the PV industry

In May 2023, the Company invited over 200 industry-leading clients and investors to a product launch event, showcasing the release of three innovative PV products. These products include the fifth-generation mono crystal puller, an integrated sorting and boxing machine, and tungsten wire, marking significant achievements in response to the increasingly stringent quality requirements for silicon wafers in the PV industry.

The 5th-generation mono crystal puller

- Provide customers a single-machine open secondary platform for mono crystal puller, allow users to independently program processes and logic on the platform, deeply mine data value, and create differentiated core competitiveness.
- Introduce superconducting magnetic field technology widely applied in semiconductor field into PV field, to effectively eliminate concentric circles, improve minority carrier lifetime, expand the effective resistivity range, and bring the efficiency of N-type cells closer to the theoretical limit once again.



Dr. Cao Jianwei, Chairman of the Board of Directors, explained the 5th-generation mono crystal puller

Integrated sorting and boxing equipment

- It is a new generation of integrated equipment that combines high-speed AI detection, sorting, and automatic packaging.
- It achieves high production efficiency, high detection rate, high yield, reduced manpower, and intelligent operation, connecting the last station of silicon wafer intelligent factory.



Dr. Zhu Liang, Vice President, explained the sorting and boxing equipment

Tungsten wire

- Feature high tensile strength, high toughness, high breaking force, fatigue resistance, and corrosion resistance. It is more suitable for "large size + thinning" silicon wafer cutting, having surpassed the carbon steel wire and showing the feasibility of continuous thinning.



Dr. Fu Linjian, Vice President of Operations, explained tungsten wires

Case | Huixiang E&H superconducting magnet debuts, ushering in the mass production era in the PV field



In August 2023, the first mass-produced superconducting magnet for PV monocrystalline furnaces, developed by Huixiang E&H, successfully debuted. This marks the beginning of superconducting magnets into the mass production era in the PV field. Moreover, JSG's fifth-generation PV mono crystal puller will be widely introduced to superconducting magnetic field technology. This project's implementation meets the demand for expansion of PV mono crystal puller in the era of N-type silicon, helps open the process window for low-oxygen N-type silicon growth, improves the quality of N-type silicon wafers, stimulates production capacity, achieves lower costs in reducing concentric circles and oxygen content in N-type silicon crystal pulling, and drives global progress in PV intelligent manufacturing technology towards a more efficient and environmental-friendly new era.



Huixiang E&H's first mass-produced superconducting magnetic field for PV mono crystal puller successfully debuted

Scientific breakthroughs, promoting the domestication of semiconductor materials and equipment

Case | Jingxin Green Diamond breaks through core technological barriers to successfully cultivate 10-Carat synthetic diamonds



In November, Jingxin Green Diamond's R&D team successfully completed the cultivation of 10-Carat synthetic diamonds, marking a significant advancement in key core technologies in the industrialization process of large-sized synthetic diamonds. As a new generation of semiconductor material, high-quality synthetic diamonds can be used not only in jewelry making but also widely in high-tech industries such as 5G communications and advanced equipment. In the future, Jingxin Green Diamond will continue to adhere to its mission of "letting sunlight into diamonds", dedicating itself to technological innovation in the synthetic diamond process, breaking industry bottlenecks, meeting market demands, and facilitating industry upgrades.

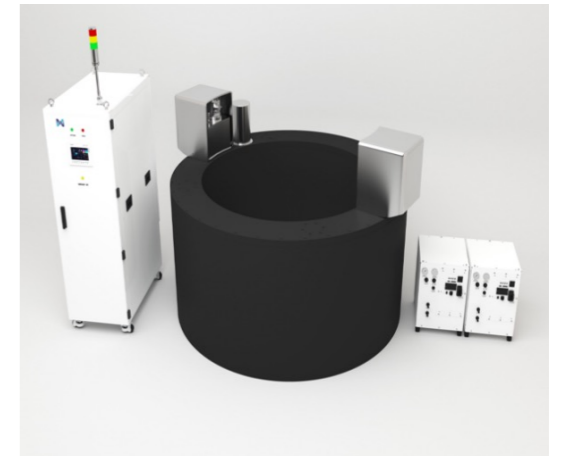


Jingxin Green Diamond realized the cultivation of 10-Carat synthetic diamonds

Case | Huixiang E&H achieves leadership internationally by making 12-inch transverse magnetic field over 5000Gs for the first time



In September 2023, Huixiang E&H achieved a new breakthrough in the development of semiconductor-grade mono crystal superconducting magnetic fields - the 12-inch dry transverse superconducting magnetic field over 5000Gs for the first time. This marks Huixiang E&H as the first domestic company capable of stably mass-producing MCZ superconducting magnets with 5000Gs. Compared to international MCZ superconducting magnet manufacturers with 3000-4000Gs, Huixiang E&H has overcome numerous technical challenges in superconducting magnet design and manufacturing processes, significantly improving crystal pulling effects, laying the foundation for high-end semiconductor crystal pulling processes, meeting the differentiated needs of the semiconductor industry for Czochralski silicon mono crystal processes, and creating greater benefits for customers.



12-inch transverse magnetic field without liquid helium

Case | 8-Inch single-wafer silicon carbide successfully developed, leading technical upgrades in the domestic silicon carbide industry



In June 2023, the Company successfully developed an 8-inch monolithic silicon epitaxial furnace with an international advanced level. This equipment achieves epitaxial quality with doping uniformity within 4%. The 8-inch monolithic silicon epitaxial furnace is compatible with the production of 6-inch and 8-inch silicon carbide epitaxial wafers. It solves the control difficulties such as temperature field uniformity and flow field uniformity in cavity design, realizing a mature and stable 8-inch silicon carbide epitaxial process. This equipment marks another significant technological breakthrough for the Company in the field of third-generation semiconductor equipment, providing ample equipment support for the technological and capacity upgrading in the domestic silicon carbide industry.



8-inch monolithic silicon epitaxial furnace

Case | JSG Innovation Industrial Park Project Building established, accelerating the development and innovation of domestic large silicon wafer equipment

In January 2023, the main building of the JSG Innovation Industrial Park Project was established, marking an important step in the Company's strategic layout towards "three major manufacturing bases "two major experimental centers".

To support the development of 12-inch large silicon wafers, the Company invested CNY800 million to build a testing experimental line of 12-inch integrated circuit large silicon wafer equipment in the industrial park, equipped with industry-leading testing and detection equipment, and constructed a testing environment site that meets high standards. This improves the Company's hardware facilities in the testing and detection links, provides testing that meets different testing requirements, tracks and applies new semiconductor technologies. After the experimental line was put into use in July 2023, it will accelerate the development and innovation of domestic large silicon wafer equipment, promote the Company's equipment process improvements and achieve international leadership, provide customers with silicon wafer equipment and silicon wafer production line testing, accelerate the innovation process, solve the difficult problems of customers in the core technology of the semiconductor track being "strangled", accelerate the transformation of scientific and technological achievements of enterprises, and speed up the domestication process of large silicon wafer equipment and auxiliary materials consumables.



Building capping ceremony



The first (set) product in Zhejiang Province in 2023

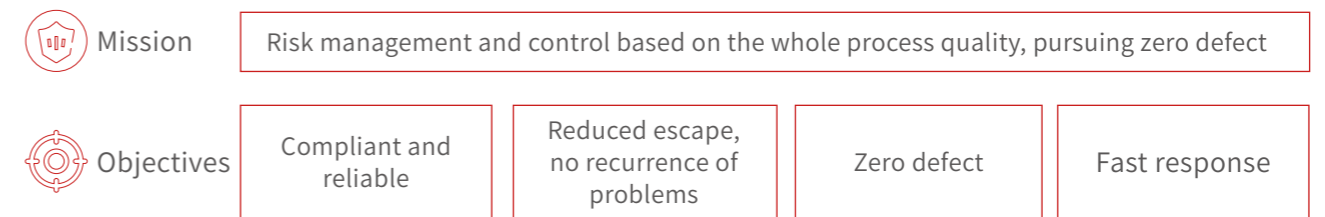


Listed in the First Batch of Eagle Enterprises in Zhejiang Province

Quality Management

JSG has always been adhering to the principle of quality first, formulated and optimized systems such as "Planning and Control Procedure for Product and Service Realization", "Quality Objective Management Procedure", "Product Protection and Control Procedure", etc. The company has built a quality management system, and continuously improved standardized management, after-sales standard management, supplier management, tooling equipment management, risk management, testing center standardization management, materials and finished products improvement management, and other tasks through the QFD (Quality Function Deployment) model with PDCA as the core concept, to ensure the quality management throughout the lifecycle of product.

Whole process quality control



Key Performance

In 2023, the Company added **33** new system documents, expanded the standard matrix by **22**, introduced **71** new system documents, and optimized **70** documents.

The Company prioritizes informatization and intelligent construction to drive quality management. In 2023, it successfully launched the SAP project, established the overall framework of the JSG integrated digital management platform, created an integrated system architecture that "focuses on financial management, standardization of business processes, standardization of data management, timely sharing of business data, and visualization of business decisions". This integration allowed for the interconnectivity of systems like SAP, BPM, SRM, etc., integrated the entire process from customer demand to development orders, planning, purchasing, and production delivery, and deepened integration of "upstream and downstream" business with "front/middle/back-end" functions, thus promoting comprehensive collaboration across finance, planning, sales, purchasing, production, and inventory, and enhance the Company's operational efficiency and quality control level.



All employees celebrated the launch of the SAP system

In accordance with ISO 9001 quality management system certification, the Company has established a complete R&D quality control system from design and production, process improvement, product certification and testing, project development and declaration. In 2023, the Company further strengthened its quality management system certification, expanded certifications for multiple management systems, and conducted regular audits of the existing quality management system to improve product quality stability, systematic level of quality control, and the Company's overall quality consciousness and management level, enhancing its competitive advantage both internationally and domestically.

Changes in management system certification



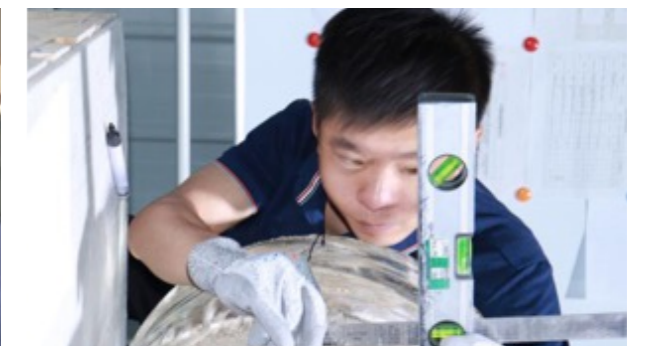
ISO 9001:2015 Quality Management System Certificate

Case | Quality Month series activities successfully concluded, solidifying the foundation of quality management

In May 2023, Ningxia Xinjingsheng launched the 2023 Quality Month activities themed "Establish quality consciousness, solidify the quality foundation, enhance quality effectiveness", organized quality management training and knowledge competitions, strengthened process quality control, and held a summary commendation meeting for Quality Month, creating a positive environment where everyone cares about, values, and pursues quality, deepening the implementation of the "quality strengthens enterprise" strategy, and practicing the goal of "quality wins".



Summary meeting for Quality Month



Quality Month activity site

Case | Ningxia JingHuan initiated the QCC quality improvement project to strengthen product quality management

In July 2023, Ningxia JingHuan held its inaugural QCC quality improvement project launch ceremony to further enhance the quality management awareness of all employees, and strengthen the ability of all employees to collaborate innovatively and improve problems, with group leaders from quality, machining, wire slicing, polishing, equipment, tooling, etc. presenting the project implementation plan, objectives, and expected outcomes. The project aims to integrate team wisdom and strength to solve identified work issues, deeply embed the QCC concept into daily operations, reduce redundant work processes, enhance quality control capabilities, increase customer satisfaction, and surpass customer needs with better quality and service.



QCC event launch

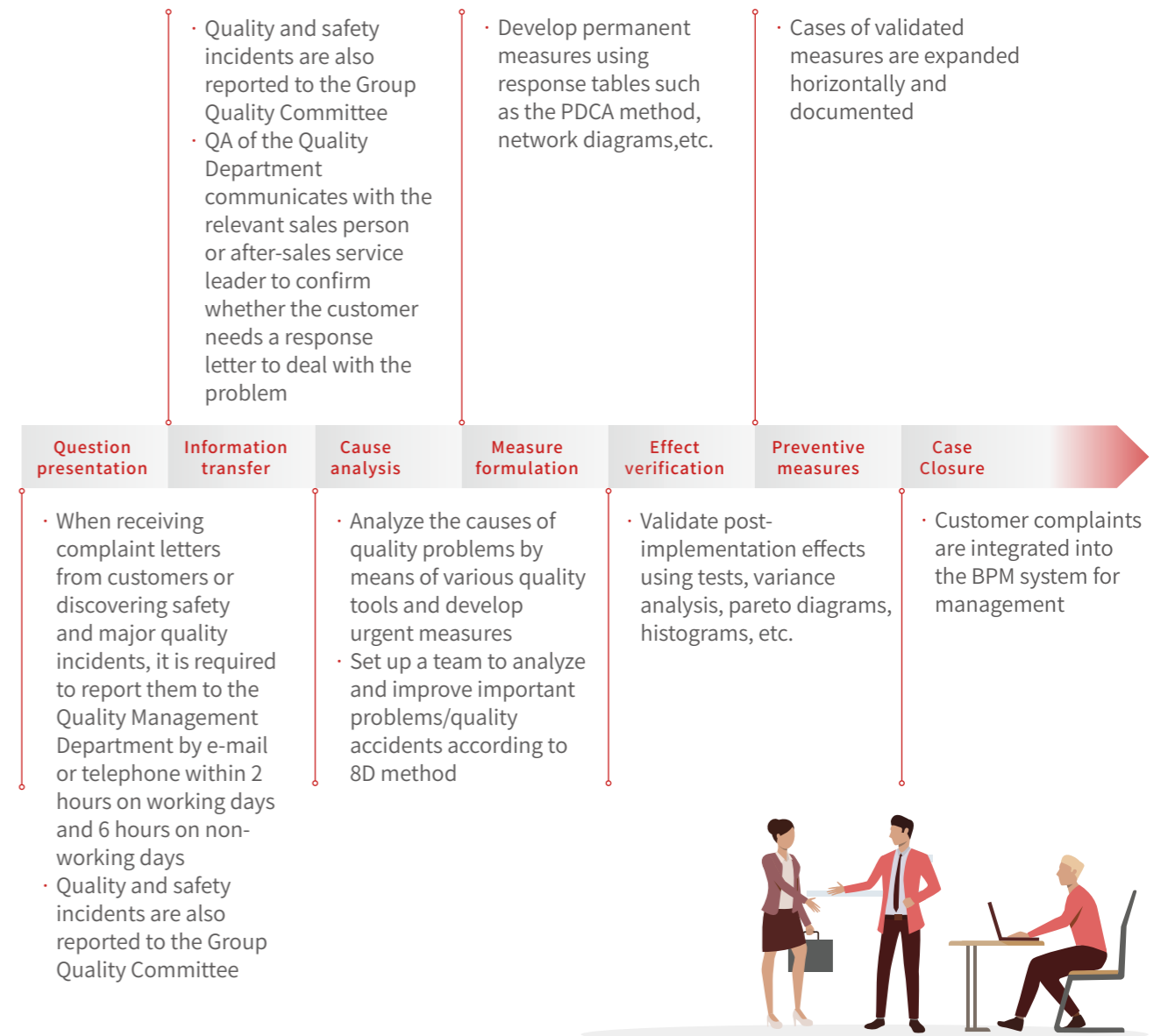
Customer Service

JSG adheres to a customer-first service philosophy and is committed to satisfying every customer with high-quality services. The Company has established systems like "Customer Complaint Management Process", "Customer Satisfaction Management Process", and "Customer Training Management Process", focusing on customer complaint feedback and process handling, strengthening customer satisfaction management, standardizing customer training management processes, and providing high-quality services to customers.

Customer Communication Feedback

JSG attaches importance to customer feedback, holds regular customer satisfaction surveys, conducts quarterly satisfaction survey planning and monthly satisfaction research for project and spare parts customers, and regularly holds satisfaction weekly meetings to address customer issues, with relevant department heads analyzing causes, following up on processes, and implementing improvement measures to achieve an early detection, feedback, and closing loop for issues in all processes.

Product or service complaint management process



Key Performance

In 2023, the customer satisfaction rate was **97.8%** and the customer complaint resolution rate was **100%**.

Case | Huixiang E&H won "Best Service Team" Award, earning high recognition for outstanding service

In 2023, the after-sales service team of Huixiang E&H's exhaust equipment was awarded the "Best Service Team" of 2022 by Tianjin Zhonghuan Advanced Materials Technology Co., Ltd., which was highly praised by the customer and evaluated as the best service team of Azeus. In the future, Huixiang E&H will continue to build a more professional service team with the mission of "focusing on high-end equipment manufacturing and creating a national excellent brand", and demonstrate the corporate value of "struggle orientation, partner accomplishment" through actions.



Huixiang E&H received the "Best Service Team" Award of 2022 from Tianjin Zhonghuan



JSG's Xining Service Station received a banner from customers

Customer Training

JSG values empowering customers, establishes training processes, and specifies the needs identification, training plan, implementation, and continuous improvement during customer training. It provides comprehensive training on equipment technical specifications, operation instructions, and common fault handling to ensure the achievement of the expected training outcomes.

JSG PDCA customer training process

Plan (P)

- Coordinate customer training content based on needs;
- Identify essential training needs based on equipment installation progress;
- Prepare the customer training plan

Do (D)

- Conduct customer training according to the plan;
- Timely adjust and resolve issues encountered during the training process;
- Responsible for feedback and reporting on problem resolution progress.

Action (A)

- Organize the summary and review of training evaluations;
- Develop and implement improvement plans;
- Share accumulated knowledge and experience.

Check (C)

- Issued training questionnaires to obtain customers' evaluations of the training, including evaluations of trainers' competence, course content, and training effectiveness.



04

Working Together for Win-win Cooperation

Our Philosophy

JSG, with modern supply chain construction as the link, continuously improves supply chain management to support and strengthen the Company's first and second growth curves, better respond to market changes, improve organizational resilience, and enhance market competitiveness. Additionally, the Company continuously carries out diversified cooperative activities, breaks through cooperation barriers, explores industry cooperation frontiers, and supports the breakthrough of the third growth curve, fully enhancing the sustainable development of the Company.

Our Actions

- Supply Chain Management
- Industry Cooperation

Supply Chain Management

JSG centers its efforts on "focusing on the industrial chain supply chain to enhance the innovation chain, continuously enhancing technological support capabilities", and is committed to creating a flexible and resilient supply chain system, and leveraging company strength to promote both international and domestic dual circulation. Through continuous strategic supplier management processes, practicing transparent and honest procurement, creating innovative supply chains, conducting procurement training, and strengthening supplier cooperation and communication, the Company ensures high-quality development

Integrated Supply Chain Management

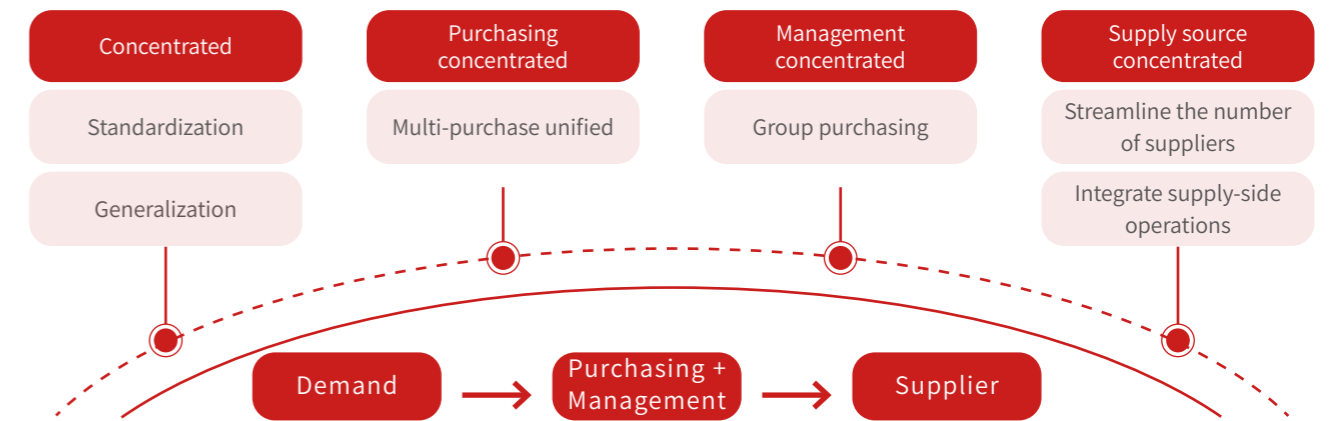
To build a safe and stable integrated supply chain management system, JSG has developed and perfected various system documents like "New Supplier Development Process", "Supplier Management Process", "Supply Chain Risk Control Process", "Supplier Performance Management Process", and "Supplier Audit Process". With "PDCA" as the core structure, the Company has built a standardized "trinity" supplier management process, added supplier risk assessment link on the basis of the original supplier management process, and revised the performance content of qualified suppliers for all materials, services and outsourcing procurement. The performance content of suppliers has been revised for all materials, services and outsourcing procurement, which effectively improves the timeliness of suppliers' delivery and the quality of materials, strengthens the ability of identifying, analyzing and evaluating supply chain risks, and improves the Company's supply chain management efficiency.

Supplier management process



The Company prioritizes enhancing the professional capabilities of purchasing personnel, addressing key points in modern supply chain management from the demand side, internal, and supplier perspectives, conducting targeted training for procurement staff, and continuously improving their purchasing management capabilities. Moreover, the Company regularly convenes annual supplier conferences, combines various experiences and perspectives, collaborates innovation and joint efforts to introduce new products and technologies that meet the market demand, and discusses the way of development, to build a high-quality supply chain that can quickly adapt to the market and develop flexibly.

Flexible supply chain procurement strategy



Case | 2023 Annual Supplier Conference successfully concluded, working together to face complex situations and grow with suppliers

In December 2023, the Company held the 2023 Annual Global Supplier Conference smoothly. The Conference, themed "Innovation · Integration · Breakthrough", was attended by Dr. Cao Jianwei, the Chairman of the Company, and other senior management members, along with representatives from nearly 200 global suppliers, gathering at the Innovation Center. During the conference, the Company's leaders shared experiences in supply chain management, discussed the challenges currently faced in the market, expounded on future product research and development directions, proposed specific measures to strengthen supplier management, and engaged in in-depth discussions with the suppliers present.

The successful conclusion of this Conference has profound significance for the Company to strengthen supply chain value, deepen strategic partnerships with suppliers, and achieve joint innovation and growth.



2023 Annual Supplier Conference site



Speech by Chairman Dr. Cao Jianwei at the 2023 Supplier Conference



Speech by President He Jun at the 2023 Supplier Conference

Case | Implemented procurement cost reduction management and commercial negotiation training to enhance employee's procurement management capabilities

In October 2023, the Company organized procurement team members to undergo training in procurement cost reduction management and commercial negotiation practices. By focusing on changing demands, data-driven thinking, internal collaboration, and supplier relations, the training guided employees to adopt new methods, tools, and processes to improve procurement efficiency and professionalism, reduce potential risks in procurement processes, and save procurement costs.

A total of 28 employees from the procurement teams of the Hangzhou and Shanghai bases participated in this training, which effectively enhanced their core competencies in supplier relationship management, selection assessment, cost analysis, price control, and negotiation skills.



Training of procurement cost reduction management and business negotiation practice

Sustainable Supply Chain Management

JSG continually optimizes the supplier performance evaluation process, maintains a "Qualified Supplier List", and ensures normal production operations and product quality through a series of processes including regular supplier assessments, key performance indicator statistics and monitoring, and analysis of interactive results. Additionally, the Company incorporates ESG factors into supply chain assessment indicators, evaluates suppliers on risk management, environmental, and social indicators using the "Supplier On-Site Inspection Scoring Form", and requires suppliers to provide a "Commitment to Non-Use of Banned Substances", which includes terms from the "Requirements of Concentration Limits for Certain Restricted Substances in Electrical and Electronic Products", to ensure that the products or services provided do not contain substances harmful to the environment and human health. In 2023, the Company optimized its supplier performance evaluation process by adding internal review meetings to further motivate suppliers to improve their capabilities and business performance, together building an outstanding and sustainable supply chain system.

Evaluation indicators of Supplier Site Visit Rating Form

Qualification	Technical level	Performance	Warehouse logistics
Safety management	Production equipment management	Product design	Safety
Environmental protection	Quality management system	Operating status	Financial risk

The Company advocates transparent procurement, considers integrity as the red line for supply chain construction, and signs integrity agreements with suppliers to enhance awareness and strictly enforce ethical procurement. Additionally, the Company practices transparent procurement through regular training on the topic of integrity and timely updating of the qualified supplier list.

Key Performance

In 2023, the Company had a total of **1,504** suppliers, of which **100%** signed the Supplier Code of Conduct; **100%** of the suppliers signed agreements that included environmental and labor requirements; **93%** of the suppliers conducted social impact assessments; **94%** of the suppliers conducted environmental impact assessments; and **100%** of the purchasers completed sustainable procurement training.

Industry Cooperation

As an industry-leading intelligent PV and semiconductors manufacturer, JSG shoulders the social responsibility of a leading enterprise, focuses on regional cooperation and joint development, maintains good cooperation and communication with the government, colleges and universities, and upstream and downstream of the industrial chain, and collects all the strengths to lead the industry's development and show the enterprise's commitment. As an industry hidden champion and high-tech enterprise, the Company is committed to collaborative innovation and mutual benefit, striving to bring domestic equipment to the global market and become the light of Chinese enterprise development.

Industry-academia Collaboration

JSG tirelessly explores new models of industry-academia collaboration, aiming to connect academic intellectual resources with the Company's leading technology as a formidable enterprise. By collaborating with domestic "985 Project" universities, JSG has established various research centers and joint full-time professional master's degree programs, injecting practical momentum into universities, enhancing the Company's innovative technology level, and refining its talent structure, thereby promoting sustainable development in the industry through industry-academia-research application.

Case | The "12-inch hard-axis mono crystal silicon growth furnace" research project completed, driving industry development with industry-academia-research collaboration

In February 2023, the Company completed the "12-inch hard-axis mono crystal silicon growth furnace" research project in collaboration with the School of Mechanical Engineering, Zhejiang University. The Company works with Zhejiang University and other universities to promote the in-depth integration of cutting-edge knowledge and first-class technology.

This project signifies the Company's significant achievement in continuous technical and knowledge exchange with universities like Zhejiang University, deepening the integration of cutting-edge knowledge and top-tier technology. Initiated by the Company in March 2021, the project focused on research for the 12-inch Czochralski hard-axis mono crystal silicon growth furnace, including vibration elimination at the growth interface, control of micro defects based on V/G theory, and oxygen content control. It achieved breakthroughs in precise transmission sealing and mechanical stability control of the hard-axis crystal pulling system, precise control of large-size silicon mono crystal growth rate and radial uniformity, and compatibility between diamond-structure transverse superconducting magnetic fields and hard-axis mono crystal growth furnaces. The project's main performance indicators reached an international advanced level, realizing import substitution.



Standard Setting

As a leader in the domestic PV industry, JSG maintains strong cooperation with government agencies, industries, and non-profit organizations, actively demonstrating its role as an industry leader and hidden champion. The Company continually participates in setting national, industry, and group standards, showcases its years of accumulated experience and expertise in semiconductor materials and equipment technology, and drives high-quality development in the industry with its leading R&D innovation capability and top-tier technology level. By the end of 2023, the Company led and participated in the establishment of 19 national, industry, and group standards.

Standards jointly prepared by the Company (partial)

Name	Standard Plan No.	Standard Type
Terminology for Integrated Circuit (IC) Manufacturing Equipment	GB/T 40577-2021	National
High Purity Alumina for Sapphire Mono Crystal	20211952-T-469	National
Monocrystalline Sapphire Bar	GB/T 31092-2022	National
Mono Crystal Silicon Furnace for PV	SJ/T 11854-2022	Industry
Positive-pressure Float Zone Crystal Growth Furnace	SJ/T 11853-2022	Industry

Name	Standard Plan No.	Standard Type
Correction Wheel for Wafer Precision Grinding Disc	/	Industry
Wafer Precision Grinding Disc	/	Industry
TDR Series Mono Crystal Growth Puller	T/ZZB 0044-2021	Group
Multicrystalline Silicon Casting Furnace	T/ZZB 0061-2016	Group
Chemical Vapor Deposition (CVD) Epitaxial Equipment for Preparing Silicon Carbide Semiconductor Materials	T/ZJATA 0017-2023	Group

Industry Collaboration

To exemplify the domestic industrial chain's internal circulation and contribute to the sustainable and high-quality development of the global PV and semiconductor sectors, JSG seeks long-term cooperation with enterprises in the industry, creating win-win and sustainable strategic partnerships. In 2023, the Company continued to strengthen its win-win cooperation model, joined hands with industry leaders to conduct strategic cooperation under the principle of mutual benefit, fully leveraged both parties' resources and advantages, and actively explored and developed innovative business to contribute to the sustainable development of the new energy industry.

Case | Strategic cooperation with Western Superconducting to support the development of global new energy industry

In June 2023, JSG and Western Superconducting Technologies Co., Ltd. held a strategic cooperation signing ceremony in Xi'an. Western Superconducting is a domestically leading and internationally advanced innovator and producer of superconducting materials, superconducting magnets, high-end titanium alloys, and high-performance high-temperature alloys, and has the world's first full-process R&D and production base for superconducting ingots, wires, and magnets. This strategic cooperation further strengthens and consolidates both parties' technical advantages and competitiveness in their respective fields, accelerates the supply of superconducting magnetic fields, continuously drives PV technology innovation, and jointly promotes industrial development.



JSG's strategic cooperation signing ceremony with Western Superconducting

Communication at Home and Abroad

As a key participant in the global PV industry, JSG adheres to the development strategy of "advanced materials, advanced equipment", focuses on the domestic production of high-end semiconductor equipment. The Company maintains active communication and cooperation with industry peers and actively participates in domestic and international industry exchange activities, shares cutting-edge technological achievements and experiences, aims to collaborate with top domestic and international industry enterprises in developing high-tech products and provides customers with high-quality solutions, thereby facilitating technological innovation and sustainable development in the industry.

Case | JSG participated SEMICON China in Shanghai, actively exploring domestic and international cooperation to aid industry development

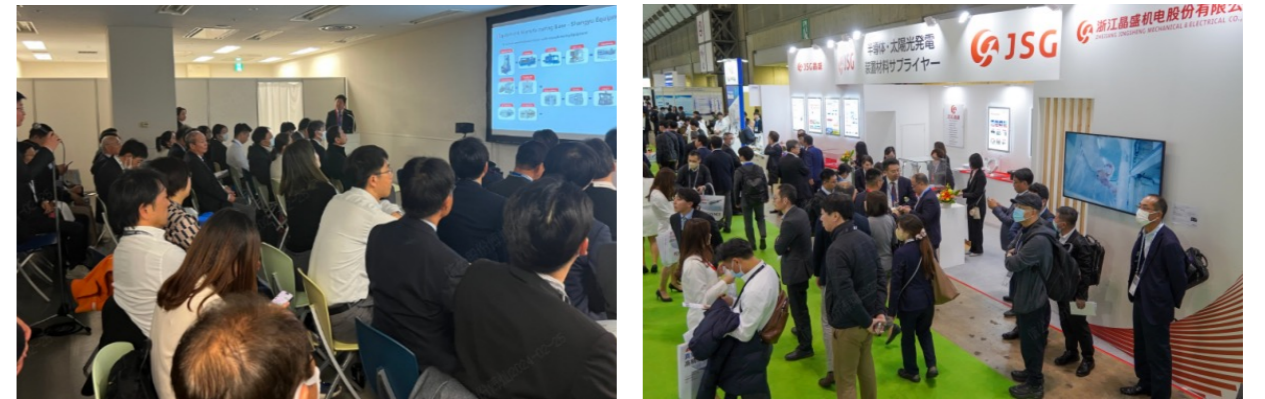
In June 2023, the Company showcased its core business of semiconductor equipment with the latest technology and innovative achievements at SEMICON China 2023 in Shanghai. During the exhibition, the Company displayed its latest domestic developments, including 8-inch silicon carbide epitaxial furnace, and demonstrated its technical strength and product level in the field of compound semiconductor substrate materials. This showcased the Company's leading technological strength and product innovation ability, helping to further expand its market domestically and internationally and contribute to the industry's development.



Exhibition site of the Company at SEMICON China in Shanghai

Case | Participated in SEMICON JAPAN 2023, promoting domestic semiconductor equipment and materials to the global industry giants

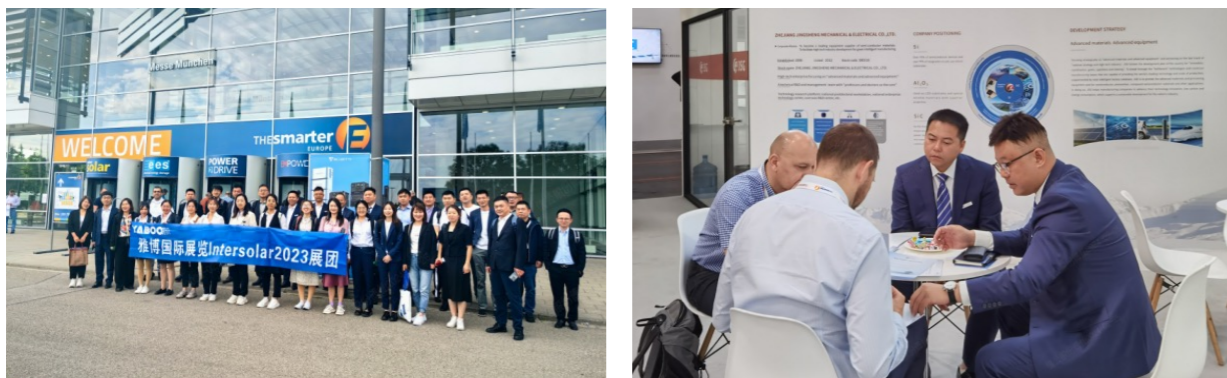
In December 2023, the Company's high-quality 8-inch silicon carbide substrates and 8-inch epitaxial growth equipment made their first international appearance at SEMICON JAPAN 2023 in Tokyo, Japan, attracting many attending industry experts and customers. This exhibition marked an important step towards the Company's goal of becoming a global leader in technology and scale in the semiconductor equipment industry. It also represented a milestone in assisting domestic semiconductor enterprises in entering the global market and integrating into the global industrial chain.



Exhibition site of the Company at SEMICON JAPAN 2023 in Tokyo, Japan

Case | JSG participated the Intersolar Europe in Munich, Germany, strengthening exchange and cooperation with domestic and international peers

In June 2023, the Company presented its PV smart manufacturing solutions and advanced equipment like the PV low-oxygen mono crystal puller, which leads the industry's latest technology, at the Intersolar Europe in Munich, Germany. These solutions provide intelligent management and data-driven decision-making for customers, meeting their needs for quality improvement and efficiency enhancement. This participation was an important opportunity for the Company to strengthen communication and cooperation with domestic and international peers and a key step in the joint development and progress with global PV smart manufacturing technology enterprises.



Exhibition site of the Company at Intersolar Europe in Munich, Germany



汇聚能量 不负韶华 赢



05

Cultivating Talents for A Promising Future

Our Philosophy

Employees are the foundation of the Company's development. JSG firmly believes that providing a broad platform and opportunities for employee growth is the Company's social responsibility. JSG always regards talents as the cornerstone of high-quality development, adheres to the values of "working hard, partner accomplishment" and continues its people-oriented management philosophy. It focuses on employee rights protection and development, establishes comprehensive training programs and development paths to uncover employee potential and enhance their abilities, continuously improves employee benefits, offers diversified care, and injects continuous vitality and innovation into the Company's development, promoting employees to grow together with the Company.

Our Actions

- Employee Rights and Benefits
- Employee Development
- Welfare and Care

Employee Rights and Benefits

Talent is the foundation of the Company's substantial development. JSG places great importance on human resource development, and strictly adheres to laws and regulations such as the "Labor Law of the People's Republic of China", the "Labor Contract Law of the People's Republic of China", and the "Law of the People's Republic of China on the Protection of Women's Rights and Interests", as well as national employment policies. It efficiently manages and develops human resources, ensuring employees enjoy all legal rights and benefits, promoting mutual growth of the Company and its employees.

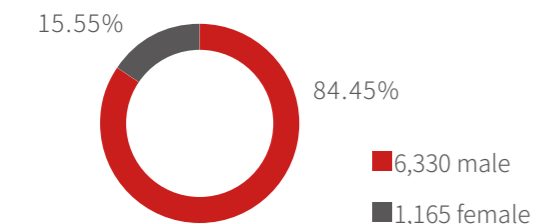
Compliant Employment

JSG actively builds harmonious labor relations, adheres to an equal, non-discriminatory employment policy, legally prohibits child labor, resists forced labor, ensures equal pay for equal work, protects the lawful rights of female employees, and treats employees of different ages, genders, ethnicities, religions, nationalities, disabilities, and cultural backgrounds equally. The Company is committed to creating a diverse, equal, and fair working atmosphere and adopts a zero-tolerance attitude towards any form of discrimination and unfair competition. Moreover, the labor management system developed by the Company covers not only the entire Company but also suppliers and contractors, aiming to maintain a healthy order in the labor market.

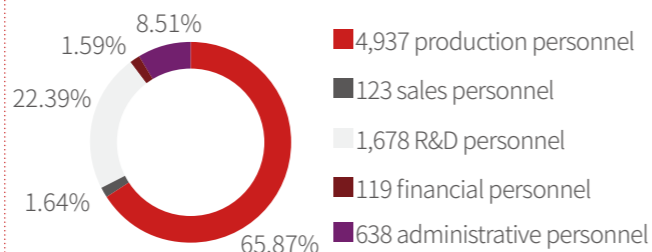
Key Performance

As of December 31, 2023, the Company had a total of **7,495** employees, including **304** ethnic minority employees and **5** disabled employees, with a **100%** labor contract signing rate.

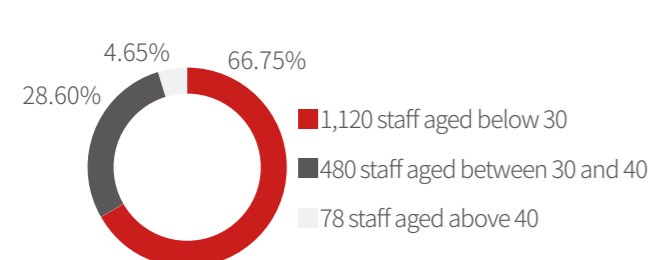
Distribution of male and female employees



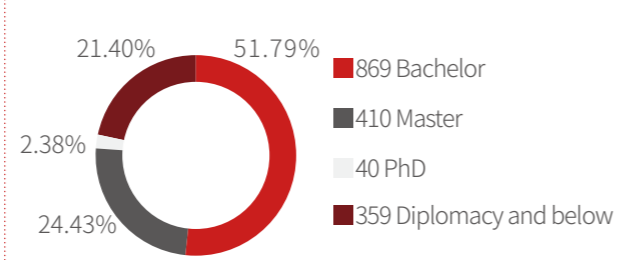
Staff position structure



Age structure of research personnel



Education degree of research personnel



The Company values talent development, has established a comprehensive talent development management strategy, implements strategic talent pool planning, continuously expands recruitment channels to include campus recruitment, social recruitment, internal referrals, etc., attracting talents from various backgrounds and specialties to empower the Company's long-term development and technological innovation, and injecting innovative kinetic energy into the Company's development. Additionally, the Company has formulated policies like the "Implementation Standard of Internal Referral Bonus for Recruitment of Internally Recommended Positions", established an internal referral mechanism covering nearly 65 positions across 17 business lines, and set up the "Bo Le Award" and bonuses, to stimulate employee enthusiasm and improve the Company's talent pool construction.



Internal referral poster

Democratic Communication

JSG highly values democratic communication, establishes and improves a democratic communication mechanism, and opens up diversified channels for democratic communication. This enhances employees' participation in important company decisions and management, deepens their understanding of the Company's operations, promotes internal and external information flow, communication coordination, and team collaboration, and achieves sustainable development for both employees and the Company.

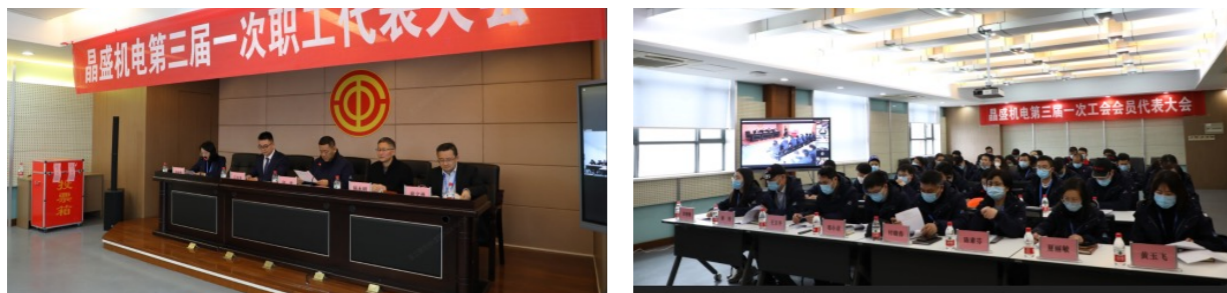
Workers' Congress

The Company always adheres to the principles of "equality, democracy, openness, and consultation", regularly convenes the Workers' Congress to listen to and understand employees' needs, and jointly discusses labor management-related matters, to foster a more harmonious and united corporate culture, and enhance the Company's cohesion and creativity.



Case | Workers' Congress successfully convened to improving the democratic management organization of employees

In February 2023, in accordance with the "Trade Union Law of the People's Republic of China" and the "Regulations on Democratic Management of Enterprises in Zhejiang Province" and other regulations, the Company held the first Workers' Congress of the third session. The main agenda of the Congress was to discuss and approve the recommendation list of candidates for the third Trade Union Federation Committee, the Financial Audit Committee, and the employee representative supervisors, focusing on democratic matters such as the "JSG Trade Union Work Report" and the "Funds Audit Report of JSG Trade Union". After discussion, deliberation, and voting at the Workers' Congress, the list of the third session of the Trade Union Federation Committee, the Financial Audit Committee, and the employee representative supervisors was unanimously approved, continuously improving employee democratic management.



The first Workers' Congress of the third session



Shangyu



Hangzhou



Hohhot

Windows of Employee Service Center



Employee evaluation channels established at service windows

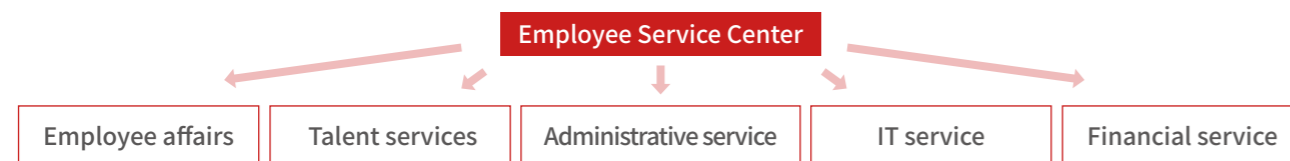


Service window information publicity

Feedback mechanism

The Company always prioritizes employee feedback, facilitating an upward feedback mechanism through various communication channels such as regular symposiums, soliciting opinions, and an employee mailbox. The Company conducts regular employee satisfaction surveys each year, covering aspects like affinity research and canteen satisfaction. In addition, the Company has established an Employee Shared Service Center, which provides an efficient communication and service platform for employees, discloses the contact information of the person in charge of the Center and the complaint e-mail address, responds to and solves the problems encountered by employees in a timely, coordinated and efficient manner, and publishes the information related to the human capital and the results of the handling on the bulletin board, so as to enhance the sense of belonging and satisfaction of the employees.

JSG's employee service center structure



Employee shared service feedback and complaint mailbox



Staff shared service comment and complaint e-mail

HRSSC@jsjd.cc

Case | Canteen satisfaction survey conducted to strengthen democratic management

In June 2023, the Company conducted a canteen satisfaction survey focusing on aspects such as balance portion of vegetables and meat, dining order, and dining environment. The aim was to improve the dining experience for employees, create a more harmonious working atmosphere, understand employees' needs and opinions, enhance employee satisfaction and work efficiency, and further promote the harmonious development of the Company.

序号	名称	创建人	开始日期	结束日期	状态
8512	6月食堂满意度调查	仲建芳	2023-06-25 09:30	2023-06-29 12:00	结束

Employee satisfaction survey



Employee Development

JSG always cares about the growth of employees, regards employees as the first wealth of the Company, actively empowers employees, develops their potential, provides broad development space for employees, and helps employees realize their self-worth. The Company has established a dual career development channel for technical experts and business talent, offered a comprehensive training platform and resources, and supplemented by project training, skills competitions, and incentive measures. This ensures fair and transparent promotion channels, enhancing the overall quality and professional skills of employees.

Compensation Incentives

JSG creates a fair and market-competitive overall compensation incentive system for all employees and distributes compensation based on the employees' work performance and contribution, which better attracts and retains outstanding talents, promotes employees' motivation, stimulates employees' creativity, and enhances the Company's overall competitiveness. Employee compensation includes fixed salary (job standard salary, position business allowance) and variable salary (stock incentive, special patent bonus, excellence award). The Company has implemented three phases of stock incentive plans and one employee stock ownership plan since 2015, benefiting **over 1,000** participants, effectively allowing employees to enjoy deserved rewards and promoting mutual progress between employees and the Company.

Compensation incentive system



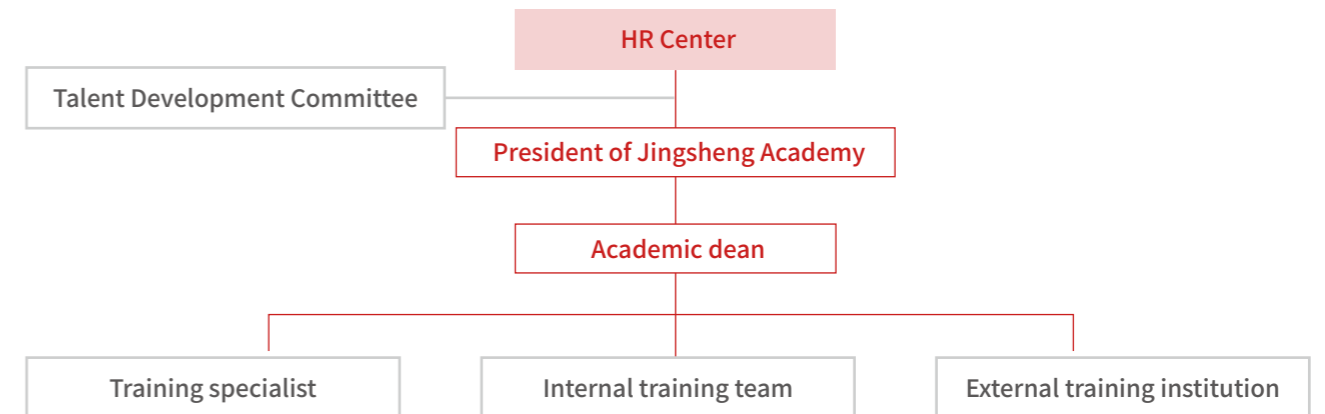
Employee Training

The cultivation and development of talent are crucial to the Company's strategic achievement and business development. JSG has always regarded talent as the cornerstone of its high-quality development, and has formulated a talent development system that covers all employees, as well as a rich talent training and development program to explore the potential of its employees, improve their abilities and empower them in all aspects, allowing them to obtain the career development that is suitable for them, and realizing the individual value of each employee.

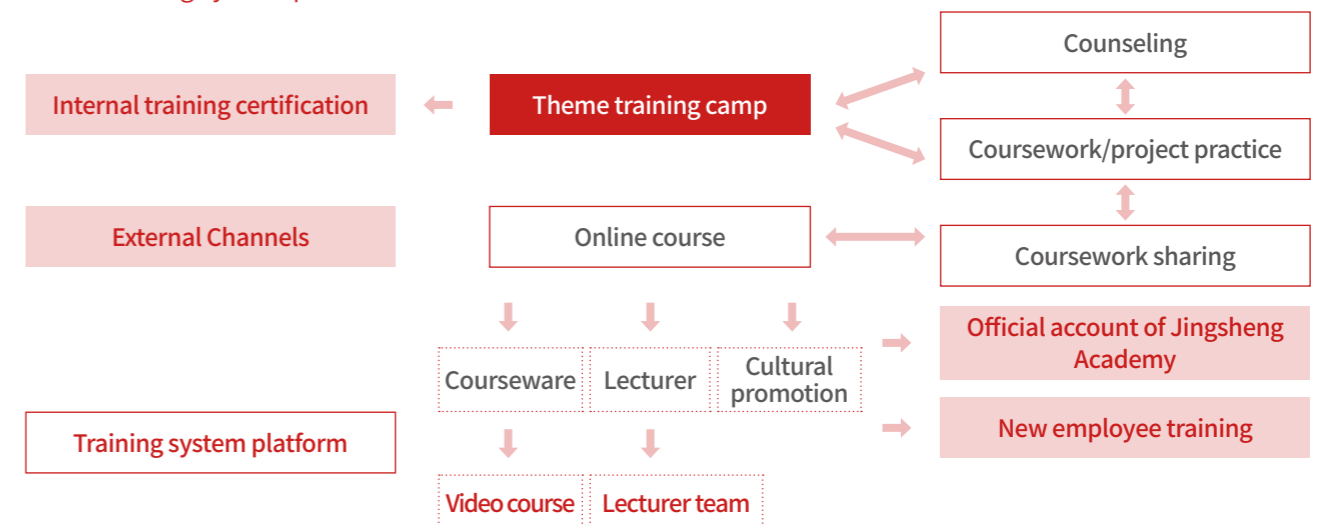
Jingsheng Academy

Jingsheng Academy is subordinate to the Group's HR Center and is an important part of JSG's talent development platform. The Company has established the "Code of Management for JSG Academy", and clarified related responsibilities and specific steps for educational training. Leveraging the JSG Academy platform, it has created a corporate university-type of continuous vocational training and career pathways for employees, focusing on enhancing the capabilities and skill levels of key personnel. The training adopts methods like competition-based training, simulation-based training, lecture-based learning, examination-driven learning, and integrated training and practice, supplementing and deepening some of the weaker links to provide employees with an excellent learning platform.

Organization chart of Jingsheng Academy



JSG's training system platform



Key Performance

In 2023, JSG Academy conducted **54** training sessions, with an average duration of **490** minutes per person.

Management trainee program

To achieve the goal of "Empowering employees, accomplishing the Company" and continuously drive the Company's development, JSG has formulated the "Code of Management Trainee Camp and Continuous Training" to deploy a talent strategy for the management trainee program. New hires from campus recruitment are selected as management trainees and undergo comprehensive training, including internships, position rotations, and training courses. While enhancing their overall quality and professional skills, the Company focuses on improving the soft skills of the management trainees, such as communication, teamwork, and innovation, enabling them to become high-quality talents capable of independently undertaking job responsibilities.

Case | JSG started 2023 new employee induction training camp



In July 2023, the Company launched the JSG 2023 Fresh Graduates Training Camp under the theme "Dream Chasing and Future Oriented", with more than 350 fresh graduates from over 60 universities participating. The Company leaders from various departments introduced courses such as "Industry and Products", "JSG Cultural Factors", and "College Graduate Role Transition and Career Planning" to new employees, accelerating their understanding of JSG's corporate culture and mastering the basic knowledge related to their positions.



Group photo of 2023 new employees

The Management Trainee Induction Training Camp, oriented towards professionalism and driven by capability enhancement, balances outcome and process indicators. Within two years, trainees are required to complete at least two professional training camp courses. The Company will arrange graduation defenses based on their work performance and capability assessment standards. Management trainees who pass the defense are awarded certificates and can officially start their careers at JSG.



2023 management trainees

Leadership training

JSG deeply realizes that under the increasingly prominent talent competition environment, how to attract and identify talents and how to improve the talent management system and management process have become compulsory courses for managers. The Company attaches importance to empowering managers, and has been conducting leadership training for many years to strengthen the leadership and management ability of managers, and to enhance their sense of mission for the importance of team management, so that they can better retain and lead the outstanding talents, lay the core of enterprise development, and increase the competitiveness of the enterprise.

Case | Organized team leader training to improve leadership and management skills



Starting from March 2023, the company launched a nearly five-month training program for all silicon carbide team leaders. The training program aims to improve the team leader's knowledge and management ability of the products and technological processes at multiple levels and in all aspects. Through the training of team leaders, the Company cultivates managers and inheritors with corporate culture and technician culture.

Team leader training outcomes

Improved site 6S management



Strengthen the idea of PDCA and improve the management level

Enhanced performance interview and communication skills

Improve team work planning and task arrangement

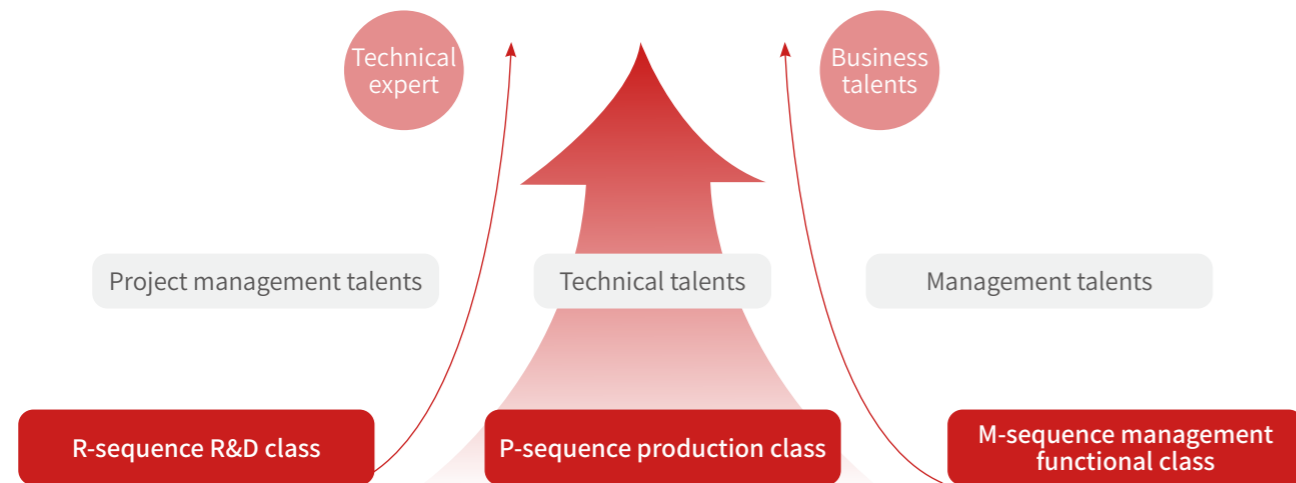


Team Leaders Training

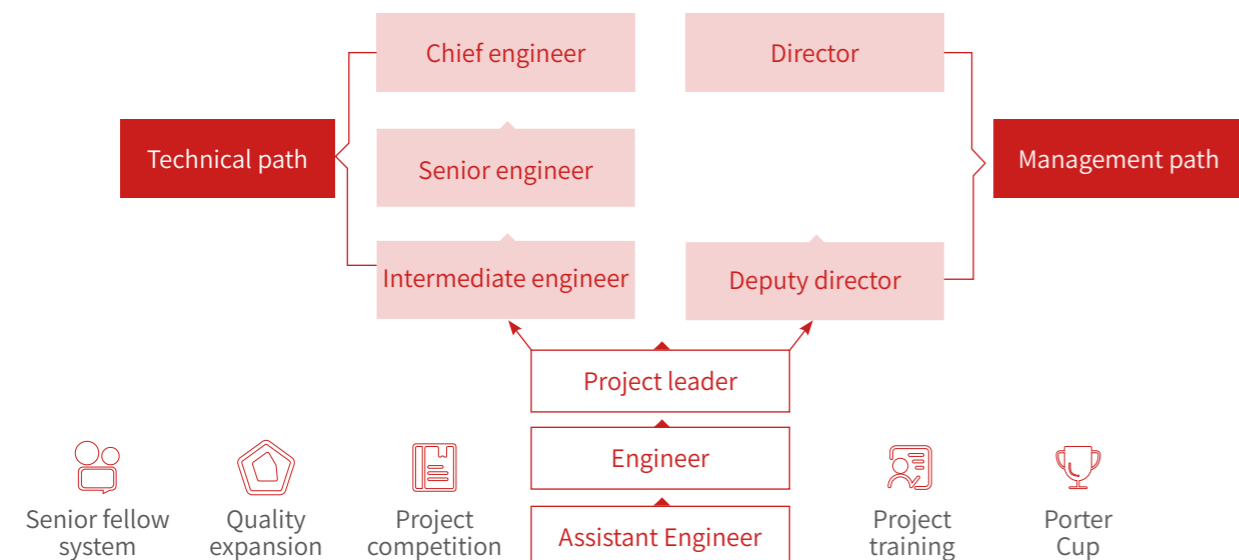
Career Development

JSG values every employee's outstanding performance and has established a perfect career development system, which has formed a working mechanism and process of evaluating performance as the standard and providing regular performance evaluation and feedback to employees, and provides all employees with performance evaluation and promotion opportunities twice a year. The Company offers three-sequence mode, allowing employees to develop towards technical experts and business talents through different sequence. Additionally, the Company has designed a dual-direction, multi-choice career path for R&D talents, supplemented by project training, competitions, and personality development activities, allowing them to grow together with the Company.

Development path map of JSG's three-sequence talents



Two-path development path of JSG's R&D personnel



Case | JSG hosted the Sixth Lu Ban Cup Skills Competition, enhancing the Company's R&D collaborative innovation capability

In 2023, JSG held its Sixth Lu Ban Cup Skills Competition with "Hammer" as the theme. The event aimed to foster more "JSG Artisans" through competition-based training and practice, and improve collaborative innovation capabilities in R&D, processes, and manufacturing, thus cultivating an engineer culture. The Competition involved mixed teams of mechanical engineers, process engineers, programming engineers, and manufacturing technicians, forming four teams. They demonstrated exquisite skills, an ultimate pursuit of detail, and stringent quality requirements, produced finely crafted "Hammers", and showcased exceptional manufacturing capabilities and innovative spirit.



Staff participating in the "Lu Ban Cup" studied carefully



All participants of "Lu Ban Cup" competition

Case | New Youth Endurance Challenge, demonstrating the youthful spirit of JSG

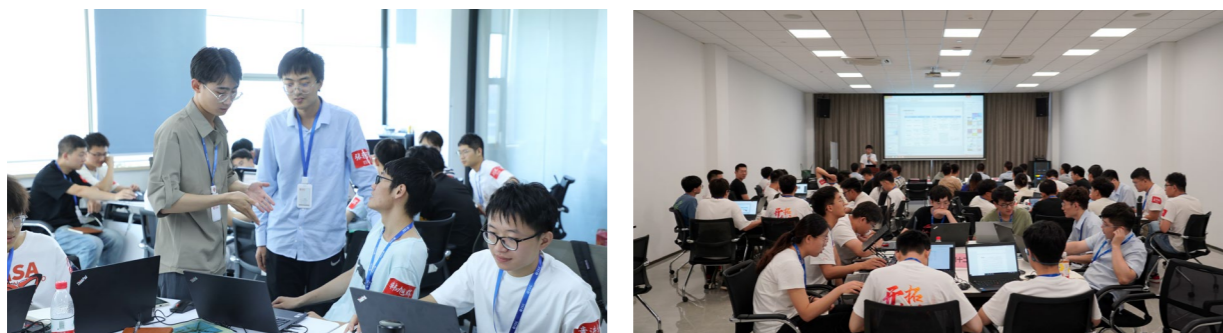
In September 2023, the Company conducted the 27-kilometer "Youth City · JSG 2023 New Youth Endurance Challenge". This event marked the ninth consecutive year of the challenge, with over 400 participants, including company executives, R&D directors, and new R&D and management trainees. After more than five hours, 21 teams reached the finish line, successfully completing the challenge. The Company, through this endurance challenge, honed the will and spirit of the new young employees, enhanced team coordination and cooperation, and ingrained the values of "struggle orientation, partner accomplishment" in every employee.



Youth City · 9th JSG 2023 New Youth March Challenge

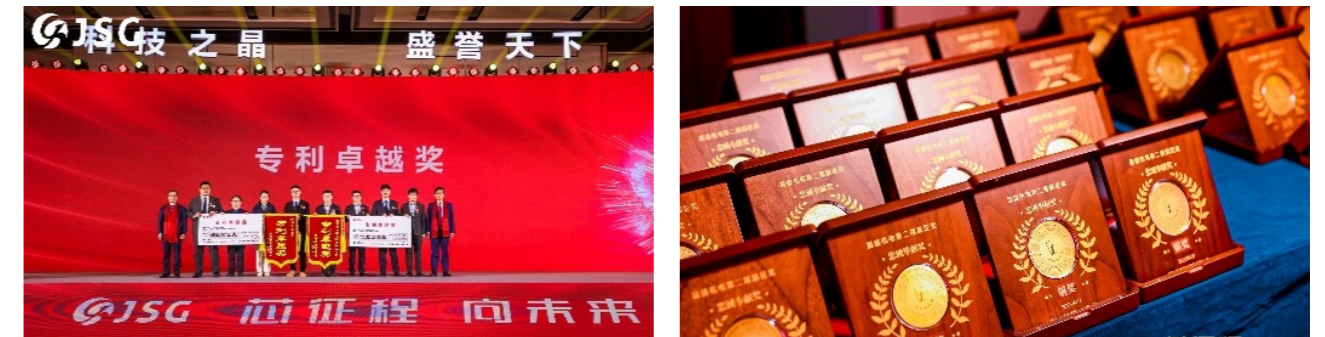
Case | JSG's 16th "Porter Cup" Concluded, enhancing corporate R&D competitive edge

In December 2023, the JSG R&D Center hosted the three-day 16th "Porter Cup" competition, themed "Realism and Innovation for Forward Progress", with over 60 mechanical, electrical, materials, and process engineers from the R&D Center participating. As an important event in JSG's R&D Center, the "Porter Cup" has been held for sixteen consecutive sessions. Through a "competition-based training and practice" approach, it enables participating employees to learn, communicate, and practice, fostering a culture of innovation among R&D personnel, mastering project management concepts and methods, and achieving rapid progress and growth. This enhances the corporate R&D competitive advantage and provides a powerful impetus for the Company's high-quality, sustainable development.



"Porter Cup" Competition site

The Company organizes the selection and commendation of outstanding employees, and recommends outstanding employees to the election of regional model workers, so that the positive work performance and professionalism of employees are fully affirmed by society as a whole, and employees are helped to obtain a sufficient sense of professional satisfaction and achievement. In January 2023, under the theme "Striving for the future, welcoming JSG's 'Core' era", JSG held its second "JSG Artisan Award" ceremony and 2022 Annual Commendation Conference, distributing a total of **CNY13.8 million** in various awards.



"JSG Artisan Award" conference site and trophy

Welfare and Care

JSG has fully considered the needs of employees and set up an influential welfare plan to protect the statutory benefits that employees should enjoy, and actively provide employees with a series of supplementary benefits to meet the material and spiritual needs of employees for work and life. The Company's welfare plan encompasses basic statutory benefits, subsidy benefits, holiday benefits, union benefits, learning benefits, social benefits, and family benefits, covering **100%** of employees for both income and non-income-related statutory benefits, including meal subsidies.

Employee welfare system





Staff canteen



Staff dormitory

The Company is committed to providing comprehensive protection for employees, advocating a balance between life and work, paying attention to the physical and mental health of employees, actively creating a working environment that combines work with leisure, and organizing various health training activities to give everyone the opportunity to relax after work. These efforts enrich the cultural life of employees, alleviate work pressure, and cultivate a healthy lifestyle. Additionally, the Company focuses on the care of female employees and those facing difficulties, offering warm-hearted assistance to these special groups.



Friendship basketball match



Bandminton match



Table tennis match



Billiards match

Case | Celebrated the Lantern Festival to enrich the life of employees



In February 2023, to enrich the cultural life of the employees and activate the festive atmosphere, the Company organized and carried out the "Lantern Festival Celebration" themed activities in the six parks, which demonstrated the elegance of JSG's employees and strengthened the cohesion of the employees to create a good corporate culture atmosphere, allowing employees to enjoy a warm, pleasant, and joyful Lantern Festival. Employees participated in making lanterns, guessing lantern riddles, and playing ring toss games, creating a festive and harmonious atmosphere at the event site.



Activity site



Case | Women-caring activity in Women's Day



In March 8, 2023, the Company organized a variety of colorful festival activities, delivering gifts and happiness to female employees, and allowing them experience a different festival. Various parks hosted various interesting activities and presented female staff with exquisite gifts such as cakes and roses, adding a touch of color to the festival, showcasing the Company's care for women, and enhancing employee cohesion.



Shangyu Precision Park and Equipment Park: Carried out tea art and hand-painted canvas bag activities, and distributed small cakes



Hangzhou Qiushi Park: Distributed movie coupons, cakes, roses and other gifts to female employees, and played ring toss game.



Shangyu Material Park: DIY cake and coffee making



Ningxia Jingsheng Industrial Park: DIY aromatherapy activity



Inner Mongolia Park: Conducted courses on beauty and skin care

06

Fulfilling Social Responsibilities by Contributing to the Society

Our Philosophy

JSG is always grateful to the society, actively organizes public welfare activities to repay the society through various practical actions, and promotes the development of the surrounding communities from education, sports, medical care and other aspects. JSG employees actively participate in blood donation, make donations to elementary schools and universities to support talent development, and assist in agricultural support to facilitate the smooth implementation of the rural revitalization strategy.

Our Actions

- Public Welfare
- Rural Revitalization

Public Welfare

Relying on society for development, JSG is grateful to society and actively engages in public welfare activities, such as sponsoring sports events, donating money to schools, and organizing blood donations, etc. JSG demonstrates its corporate social responsibility and the concept of corporate citizenship, makes positive contributions to the construction of a more harmonious and caring social environment, and contributes JSG's power to the promotion of social sharing and sustainable development.

Case | JSG sponsored the Marathon activity

In March 2023, the Company sponsored and participated in the "Welcoming Asian Games · 2023 National Half Marathon Championship (Shaoxing·Shangyu Station) & the 7th Shaoxing·Shangyu Cao'e River Half Marathon", with a total sponsorship amount of CNY300,000. This sponsorship not only raised health awareness among employees and strengthened team cohesion but also promoted local sports development, demonstrated the Company's sense of social responsibility, and supported local economic growth.



JSG sponsored the 7th Shaoxing · Shangyu Cao'e River Half Marathon

Case | JSG organized employee's blood donation event

In October 2023, the Company organized a blood donation event in the Shangyu Precision Park, with a total of 64 employees actively participating in the blood donation. Over the years, the Company has organized several blood donation events, with employees conveying a spirit of love and charity to society, contributing to the continuation of life. Through this activity, the Company and its employees conveyed positive social values, inspired a sense of social responsibility among employees, and helped build a more harmonious and caring social environment.



Employee's blood donation event

Case | "JSG Building" at the School of Mechanical Engineering of Zhejiang University inaugurated

In May 2023, senior executives of the Company were invited to attend the inauguration ceremony of the new building at the School of Mechanical Engineering of Zhejiang University. During the ceremony, Dr. Cao Jianwei, the Chairman, participated in the unveiling of the building and delivered a speech. The newly donated Building No. 1 was named "JSG Building", symbolizing the shared commitment between academia and industry to enhance self-reliance and strength in technology. It also marks the determination of both sectors to contribute to technological innovation and industrial upgrading.



JSG Building Plaque



Opening ceremony of "JSG Building"

Case | JSG made several donations to support the development of education



Donation to Bowen Elementary School

The Company donated **CNY100,000** to the Bowen Elementary School Scholarship to help Bowen Elementary School inspire and cultivate more outstanding students, and promote educational equity and social development.



Donation to Zhejiang University Education Foundation

The Company participated in the donation to Zhejiang University Education Foundation, totaling **CNY7,000,000**, to promote the cultivation of talents in universities and help the cultivation of national high-tech talents.

Full support for national education

Case | JSG ranked as one of the First Top 30 Enterprise Charities in Zhejiang

In July 2023, the 11th China Transformation Forum — the Forum for Common Prosperity and High-Quality Development — was held in Hangzhou, where the conference released the "First Top 30 Enterprise Charities in Zhejiang" list. The Company was listed among the Top 30 for its outstanding performance in promoting education development, scholarship donations, disaster relief efforts, and rural revitalization, among other public welfare areas. This recognition not only affirms the Company's charitable efforts but also acknowledges its continuous contributions to public welfare. In the future, the Company will continue to uphold the values of "struggle orientation, partner accomplishment", expressing gratitude to society and continually promoting social progress and economic prosperity.



Top 30 Enterprise Charities in Zhejiang

Rural Revitalization

Enterprises are participants, promoters, and beneficiaries of rural revitalization. For a long time, JSG has consistently leveraged its technical and resource advantages to support rural revitalization efforts, promote rural economic development, contributing to local economic growth and increased income for farmers in alignment with the rural revitalization strategy.

Case | JSG held the Fifth Lamb Roast Festival

In December 2023, the Company purchased specialty lamb meat from Ningxia and organized the fifth Lamb Roast Festival, a traditional cultural event for all employees. This event not only boosted employee job satisfaction but also supported rural industry development, contributing to local economic growth and increased income for farmers in alignment with the rural revitalization strategy.



Lamb Roast Festival

Key Performance

	Indicator	Unit	2021	2022	2023
Economy	Operating income	CNY10,000	596,136	1,063,831	1,798,319
	Net profit attributable to parent company	CNY10,000	171,172	292,437	455,751
	Total asset	CNY10,000	1,688,375	2,888,928	3,680,836
	Tax payment amount during the reporting period	CNY10,000	91,597	150,184	165,275

	Indicator	Unit	2021	2022	2023
Environment	Amount of investment in green environmental protection	CNY10,000	346	2,875	3,833
	PV power generation	10,000 KWH	148	345	1,038

	Indicator	Unit	2021	2022	2023
Society	Total number of employees	People	4,549	7,688	7,495
	Total number of R&D personnel	People	1,015	1,354	1,678
	Proportion of number of R&D personnel	%	22.31	17.61	22.39
	Total R&D investment	CNY10,000	35,358	79,633	114,540
	As of the end of the reporting period, the cumulative number of patents of the Company	Pcs	512	644	914
	As of the end of the reporting period, the cumulative number of invention patents of the Company	Pcs	66	81	172
	Number of new patents this year	Pcs	72	141	345
	Number of new invention patents this year	Pcs	9	15	92

Index of Indicators

GRI content index

Statement of used	Zhejiang Jingsheng Mechanical & Electrical Co., Ltd has reported the information cited in this GRI content index for the period from January 1, 2023 to December 31, 2023 with reference to the GRI Standards.
GRI 1 Used	GRI 1: Foundation 2021

GRI Standards+A4:C99	Disclosure	Location
GRI 2: General Disclosures		
G2-1	Organizational details	About This Report
G2-2	Entities included in the organization's sustainability reporting	About This Report
G2-3	Reporting period, frequency and contact point	About This Report
G2-6	Activities, value chain and other business relationships	Company Profile
G2-7	Employees	Employee Rights and Benefits
G2-8	Workers who are not employees	Employee Rights and Benefits 、 Refer to Annual Report
G2-9	Governance structure and composition	Compliance Operation
G2-10	Nomination and selection of the highest governance body	Compliance Operation
G2-11	Chair of the highest governance body	Refer to Annual Report
G2-12	Role of the highest governance body in overseeing the management of impacts	Refer to Annual Report
G2-13	Delegation of responsibility for managing impacts	Refer to Annual Report
G2-14	"Role of the highest governance body in sustainability reporting"	Sustainable Development Management
G2-16	Communication of critical concerns	Compliance Operation
G2-17	"Collective knowledge of the highest governance body"	Compliance Operation
G2-18	"Evaluation of the performance of the highest governance body"	Refer to Annual Report

GRI Standards+A4:C99	Disclosure	Location
G2-19	Remuneration policies	Employee Rights and Benefits
G2-20	Process to determine remuneration	Employee Rights and Benefits
G2-22	Statement on sustainable development strategy	Sustainable Development Management
G2-23	Policy commitments	Employee Rights and Benefits 、 Compliance Operation、 Environmental Management、 Supply Chain Management
G2-24	Embedding policy commitments	Employee Rights and Benefits 、 Compliance Operation、 Environmental Management、 Supply Chain Management
G2-26	Mechanisms for seeking advice and raising concerns	Business Ethics、 Welfare and Care
G2-29	Approach to stakeholder engagement	Stakeholder Communication
GRI 201: Economic Performance		
G201-1	Direct economic value generated and distributed	Key Performance
G201-3	Defined benefit plan obligations and other retirement plans	Employee Rights and Benefits
GRI 202: Indirect Economic Performance		
G203-1	Infrastructure investments and services supported	Green Operation
G203-2	Significant indirect economic impacts	Green Operation、 Public Welfare
GRI 205: Anti-corruption		
G205-1	Operations assessed for risks related to corruption	Business Ethics
G205-3	Confirmed incidents of corruption and actions taken	Business Ethics, We weren't involved in such incidents.
GRI 206: Anti-competitive Behavior		
G206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Business Ethics, We weren't involved in such incidents.
GRI 207: Tax		
G207-1	Approach to tax	Refer to Annual Report
G207-2	Tax governance, control, and risk management	Refer to Annual Report

GRI Standards+A4:C99	Disclosure	Location
G207-3	Stakeholder engagement and management of concerns related to tax	Refer to Annual Report
G207-4	Country-by-country reporting	Refer to Annual Report
GRI 301: Materials		
G301-2	Recycled input materials used	Green Operation
G301-3	Reclaimed products and their packaging materials	Green Operation
GRI 302: Energy		
G302-1	Energy consumption within the organization	Green Operation
G302-2	Energy consumption outside of the organization	Green Operation
G302-3	Energy intensity	Green Operation
G302-4	Reduction of energy consumption	Addressing Climate Change, Green Operation
G302-5	Reductions in energy requirements of products and services	Addressing Climate Change, Green Operation
GRI 303: Water and Effluents		
G303-1	Interactions with water as a shared resource	Green Operation
G303-2	Management of water discharge-related impacts	Green Operation
G303-5	Water consumption	Green Operation
GRI 305: Emissions		
G305-1	Direct (Scope 1) GHG emissions	Addressing Climate Change, Key Performance
G305-2	Energy indirect (Scope 2) GHG emissions	Addressing Climate Change, Key Performance
G305-4	GHG emissions intensity	Addressing Climate Change
G305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Green Operation
GRI 306: Waste		
G306-1	Waste generation and significant waste-related impacts	Green Operation
G306-2	Management of significant waste-related impacts	Green Operation

GRI Standards+A4:C99	Disclosure	Location
GRI 308: Supplier Environmental Assessment		
G308-1	New suppliers that were screened using environmental criteria	Supply Chain Management
G308-2	Negative environmental impacts in the supply chain and actions taken	Supply Chain Management
GRI 401: Employment		
G401-1	New employee hires and employee turnover	Key Performance
G401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Rights and Benefits
GRI 403: Occupational Health and Safety		
G403-1	Occupational health and safety management system	Safe Production
G403-2	Hazard identification, risk assessment, and incident investigation	Safe Production
G403-4	Worker participation, consultation, and communication on occupational health and safety	Safe Production
G403-5	Worker training on occupational health and safety	Safe Production
G403-6	Promotion of worker health	Safe Production
G403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Safe Production
GRI 404: Training and Education		
G404-1	Average hours of training per year per employee	Employee Development
G404-2	Programs for upgrading employee skills and transition assistance programs	Employee Development
GRI 405: Diversity and Equal Opportunity		
G405-1	Diversity of governance bodies and employees	Employee Rights and Benefits
GRI 406: Anti-Discrimination		
G406-1	Incidents of discrimination and corrective actions taken	Employee Rights and Benefits, We weren't involved in such incidents.

GRI Standards+A4:C99	Disclosure	Location
GRI 408: Child Labor		
G408-1	Operations and suppliers at significant risk for incidents of child labor	Employee Rights and Benefits, Supply Chain Management, We weren't involved in such incidents.
GRI 409: Forced Labor		
G409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Employee Rights and Benefits, We weren't involved in such incidents.
GRI 414: Supplier Social Assessment		
G414-1	New suppliers that were screened using social criteria	Supply Chain Management
G414-2	Negative social impacts in the supply chain and actions taken	Supply Chain Management
GRI 416: Customer Health and Safety		
G416-1	Assessment of the health and safety impacts of product and service categories	Customer Service
G416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Customer Service, We weren't involved in such incidents.
GRI 417: Marketing and Labeling		
G417-1	Requirements for product and service information and labeling	Quality Management
G417-2	Incidents of non-compliance concerning product and service information and labeling	Quality Management, We weren't involved in such incidents.
GRI 418: Customer Privacy		
G418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Customer Service, Privacy and Information Security, We weren't involved in such incidents.

Reader Feedback

Dear Reader,

Thank you very much for taking time out of your busy schedule to read the 2023 Annual Environmental, Social and Governance (ESG) Report of Zhejiang Jingsheng Mechanical & Electrical Co., Ltd. In order to provide you and other stakeholders with more valuable information and effectively promote the Company's ability and level of fulfillment of corporate social responsibility, we sincerely look forward to your comments and suggestions.

1. Choice Questions (please tick in the appropriate box)

Very Good Good Medium Relative Poor Poor

2. How are the report responses and disclosures to stakeholder concerns?

Very Good Good Medium Relative Poor Poor

3. How do you think JSG is doing in terms of economic responsibility?

Very Good Good Medium Relative Poor Poor

4. How do you think JSG is doing in terms of environmental responsibility?

Very Good Good Medium Relative Poor Poor

5. How do you think JSG is doing in terms of safety management?

Very Good Good Medium Relative Poor Poor

6. How do you think JSG is doing in terms of employee responsibility?

Very Good Good Medium Relative Poor Poor

7. How do you think JSG is doing in terms of community responsibility?

Very Good Good Medium Relative Poor Poor

8. Are the information, indicators and data disclosed in the Report clear, accurate and complete?

Very Good Good Medium Relative Poor Poor

9. Do you find the organization and layout of this Report easy to read?

Very Good Good Medium Relative Poor Poor

Open-ended Question

Do you have any comments or suggestions on the fulfillment of social responsibility by JSG and this Report?

