

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

1. About This Report

1.1 Basis of Preparation

This report serves as the eighth Environmental, Social, and Governance (hereinafter referred to as “this ESG Report”) released by Tiangong International Company Limited (hereinafter referred to as the “Company”) and its subsidiaries (hereinafter collectively referred to as the “Group”), primarily presenting the Group’s Environmental, Social, and Governance (hereinafter referred to as “ESG”) performance for the year 2023.

The Company prepared this report in accordance with the Environmental, Social, and Governance Reporting Guide (hereinafter referred to as the “ESG Guide”) in Appendix C2 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (hereinafter referred to as the “Listing Rules”) issued by the Stock Exchange. This ESG Report was intended to be read in conjunction with the “Corporate Governance Report” section of the Tiangong International Company Limited Annual Report 2023 (hereinafter referred to as the “2023 Annual Report”) to provide a thorough understanding of the Group’s ESG performance.

1.2 Report Scope

The organizational scope of this ESG Report encompasses the Company and its major subsidiaries.

The scope of this ESG Report aligns with that of the 2023 Annual Report, covering the period from 1 January 2023 to 31 December 2023 (hereinafter referred to as the “reporting period”). In order to enhance the completeness of the report’s narrative, some content exceeds the above scope.

1.3 Report Principles

Materiality Principle

The Group identifies and confirms the material issues applicable to the Group during the reporting period through a materiality issue review, and focuses on disclosing these relevant issues in this ESG Report.

Quantification Principle

To comprehensively assess the Group’s ESG performance during the reporting period, the Group discloses quantitative key performance indicators applicable within the ESG guidelines. It also specifies the standards, methods, assumptions, and references used for the calculation of these quantitative key performance indicators, including the sources of major conversion factors.

Consistency Principle

Unless otherwise stated, this ESG Report adopts the same preparation and data calculation methods as the previous reporting period, allowing readers to make meaningful comparisons of the ESG information in this ESG Report.

Balance Principle

This ESG Report follows the balance principle, objectively presenting the Group’s ESG performance and management status during the reporting period.

1.4 Publication Format

This ESG Report is published in both Traditional Chinese and English. In the event of any discrepancies or inconsistencies between the Traditional Chinese and English versions, the Traditional Chinese version shall prevail. You can obtain the Traditional Chinese and English PDF versions of this ESG Report through the Group's website homepage at <http://www.tggj.cn/> and the Hong Kong Exchanges and Clearing disclosure website at https://www.hkexnews.hk/index_c.htm.

1.5 Report Feedback

If you have any valuable comments or questions regarding the Group's ESG efforts, please contact the Group via email.

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2 Board of Directors' Statement

The Group strongly recognizes the importance of ESG for the long-term stable operation of a business. The Group strictly adheres to all requirements of the ESG guidelines, continuously improving the Group's ESG management system and oversight mechanisms. The Board is the highest responsible, decision-making, and supervisory body for the Group's ESG matters, primarily responsible for ESG-related management work and overseeing and coordinating the Group's ESG-related risk management.

The Group regularly conducts substantive assessments of environmental, social, and governance issues, with the specific assessment process and results detailed in the "Substantive Issue Assessment" section of this report. The Board has assessed the potential impact and opportunities of ESG-related matters on the Group's overall strategy and has reviewed the results of the substantive assessment of ESG issues. The Board is informed about the Group's ESG-related issues and confirms the current ESG-related management policies and ESG management philosophy. Detailed disclosures about the Group in important ESG issue on the environmental and social dimensions has been provided in this report.

The Board continuously strengthens its oversight and involvement in the Group's ESG governance and has completed the review of the progress and outcomes of the ESG-related goals set in the previous year. The Group continuously monitors the progress and achievement of the targets set for greenhouse gas emissions, energy and resource efficiency and waste management, and discloses them in this ESG report.

This report is truthful, accurate, and complete, containing no false records, misleading statements, or significant omissions.

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3 ESG Management

3.1 ESG Governance Structure

The Board is the highest responsible body for the Group's ESG matters, overseeing all ESG-related matters within the Group and responsible for the formulation and review of the Group's ESG development strategy and objectives. The Board leads and participates in the identification, assessment, determination and review of ESG risks and other related matters, establishes a list of potential ESG risks, and ensures that appropriate and effective risk management and internal control initiatives are put in place through well-established risk management and internal control procedures. Guided by the Board, the Group strictly adheres to the laws and regulations of the operating regions during the decision-making process on significant issues. Additionally, in accordance with the actual situation of the Group, internal regulations, policies, and procedures related to ESG matters are established to ensure the standardization and implementation of relevant management work.

Furthermore, to further integrate the ESG concept into corporate governance and comprehensively enhance the Group's ESG management level, an ESG working group has been established under the Board. This group is led by the Group's directors, Chief Financial Officer, and head of the securities investment department, with members appointed from various ESG-related departments of the Group and liaisons from the Company's subsidiaries.

The responsibilities of the ESG group include:

- Assisting the Board in coordinating and supervising the implementation of the Group's ESG policies and the realization of ESG strategies.
- Reviewing and examining the latest developments and trends in ESG sustainability.
- Continuously following the latest developments and trends in industry sustainability.
- Reporting significant ESG matters and potential ESG risks to the Board.
- Regularly collecting ESG-related data and information to assist in the preparation of this ESG report.

3.2 Stakeholder Engagement

The Group established a regular communication mechanism with various stakeholders to fully understand their expectations and requirements on the Group's implementation of sustainable development concepts and ESG management, through questionnaires, surveys, interviews, and other forms. The main issues of concern to stakeholders and the Group's primary methods of communication and response were as follows:

Stakeholder Category	Main Concerns	Communication Response Methods
Shareholders and Investors	Corporate Governance, Investment Returns, Operational Performance, Compliance and Risk Control	Shareholders' meetings, Earnings release conferences, Regular and ad hoc announcements, Investor relations activities
Directors	Corporate Governance, Operational Performance, Compliance and Risk Control	Board meetings, Internal meetings and reports
Senior Management	Corporate Governance, Operational Performance, Compliance and Risk Control, Product Quality, Safe Production, R&D Innovation	Internal meetings and reports, Internal information communication platforms
Employees	Protection of Employee Rights, Employee Development and Training, Diversity and Equality, Employee Welfare and Care, Occupational Health and Safety	Workers' congress, Internal information communication platforms, Internal newsletters, Multimedia (WeChat public accounts and other social platforms)

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Stakeholder Category	Main Concerns	Communication Response Methods
Government and Regulatory Bodies	Compliance and Risk Control, Business Ethics, Lawful Taxation, Social Contributions, Green and Environmental Protection	Government visits, On-site research, Official correspondence, Information disclosure
Customers	R&D Innovation, Green and Low-Carbon Products, Customer Service Experience, Innovation and Smart Manufacturing	Customer satisfaction surveys, Customer hotline, Official media platforms, Customer/User conferences
Suppliers	Fair Trading, Supply Chain ESG Risk Management, Corporate Empowerment Support	Supplier qualification audits, Supplier exchange conferences
Industry Associations	Innovation and Smart Manufacturing, Industry Co-creation and Development, Green and Low-Carbon Products, Product Quality Assurance	Industry associations, Exchange and visitation, Information disclosure, Exhibition activities
Media	Corporate Brand Image, Corporate Strategic Development, Innovation and Smart Manufacturing	Media briefings, Press releases/Announcements, Media exchange activities
Community	Public Welfare and Charity, Community Involvement, Green and Environmental Protection	Social welfare projects, Community volunteer activities, Community engagement

3.3 Materiality Issue Assessment

To fully understand the focus of stakeholders, respond to their expectations and demands, and integrate their suggestions into its ESG management practices, the Group regularly conducts assessment and analysis of ESG materiality issues, and reviews and examines the assessment results.

ESG Materiality Issue Analysis Process:

Issue Identification

- Refer to the ESG Reporting Guide of the Stock Exchange and capital market ratings, benchmark against excellent management practices in the same industry to identify and organize substantive issues covering governance, economic, social, and environmental dimensions, forming its own issue library.

Stakeholder Survey

- Determine the key stakeholder groups and the methods and channels of communication with them.
- Invite key internal and external stakeholders to fill in online or offline survey questionnaires to rank the importance of issues in the ESG issue library based on their impact.

Analysis and Assessment

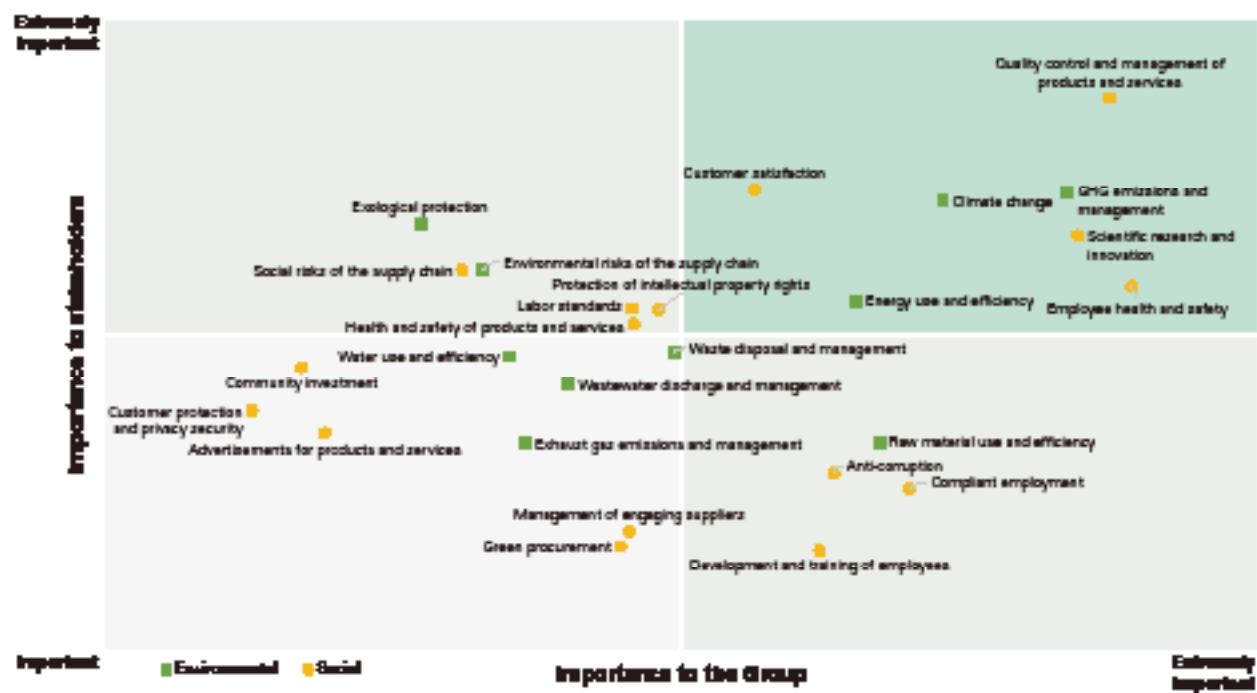
- Organize questionnaire feedback and survey results.
- Combine issue maturity, stakeholder concern, and materiality to the Group for ranking.
- Produce a materiality matrix, from which genuinely materiality issues are identified through matrix analysis.

Review and Confirmation

- Confirm materiality issues in conjunction with expert opinions.
- The Board of Directors reviews and confirms high-impact materiality issues to be prominently disclosed in the annual ESG report.

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During the reporting period, the Group reviewed and updated the results of the previous year’s materiality issues. The following are two materiality issue matrices for environmental and social aspects:



Materiality Matrix of the Group

4 Strengthening Governance Foundation

The Group adhered to the principle of integrity and law-abiding, established a sound compliance and internal control system, continuously improved the ability to identify and cope with risks, enhanced employees' awareness and emphasis on integrity and self-discipline. The Group maintained a zero-tolerance stance towards any illegal or non-compliant actions, so as to build up the compliance foundation for the sustainable development of the Group.

4.1 Enhancing Compliance and Internal Control

The Group established a comprehensive compliance and internal control management mechanism, formulating the Legal Affairs Department Management System, Internal Audit System, and Contract Management System. Through the collaborative management of the operational, legal and internal audit departments, and the continuous optimization of various system norms and management processes, it ensures the smooth progress of corporate compliance and internal control matters, preventing any actions that may harm the interests of the Group and safeguarding the Group's legitimate rights and interests.

The internal audit department mainly audits key matters such as internal control, financial status and trade security, and makes recommendations for improvement. The internal audit department rotates every 3-5 years to maintain the fairness and objectivity of supervision. During the reporting period, the Group completed 15 internal audit tasks, and all relevant rectification recommendations have been fully implemented.

Case: Precision Tools successfully passed customs' Authorized Economic Operator (AEO) advanced certification and business training

During the reporting period, Precision Tools, a subsidiary of the Company, has successfully passed the customs AEO advanced certification. As a "gold medal" and "green pass" for international trade, the customs AEO advanced certification can bring the company higher customs clearance efficiency and more convenient customs clearance services.

During the certification process, the customs certification experts asked questions and made on-site investigation on the financial status, import and export process, information system, internal audit, personnel safety, premises safety, cargo transportation tools safety, business partners management and the work of each department, and gave guidance and improvement opinions on the relevant weak links. Precision Tools ensures that all relevant departments will make improvements to the relevant links in accordance with the experts' guidance.

4.2 Adhering to Business Ethics

The Group adheres to the principle of integrity and maintain a zero-tolerance stance towards any form of illegal acts such as corruption, bribery, extortion, money laundering, and fraud and any other forms of illegal behavior, committing to establishing a fair, transparent and healthy business environment. The Group strictly follows the Criminal Law of the People's Republic of China, Supervision Law of the People's Republic of China, and the Interim Provisions on Prohibiting Commercial Bribery among other relevant laws and regulations. In conjunction with the regulatory requirements of the locations where business operations are conducted, the Group formulated and implemented the Tiangong International Company Limited Code of Business Conducts, the Employee Integrity and Self-discipline Management Regulations and other relevant laws and regulations. These regulations clarify the meaning and requirements of various aspects such as discrimination, harassment, conflict of interest, insider trading, bribery and corruption, fair trading and social responsibility. The Group also signed the Employee Integrity Agreement with all employees to ensure that every employee is clear about their responsibilities, to uphold the mutual interests of the Group and its employees. Furthermore, the Group requires employees in key positions to sign the Employee Integrity and Self-discipline Commitment Letter and the Responsibility Letter for Employees Assigned to Overseas Companies (Branches) to further strengthen their awareness of integrity responsibilities.

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The Group has established a business ethics supervisory organization to regularly review and evaluate business activities, promptly identify possible business ethics risks and problems, make recommendations for improvement and check the status of rectification to ensure that business activities comply with the requirements of the code of conducts. The Group has also established a business conduct reporting mechanism and the Regulations on Complaints, Reporting and Appeal Management to encourage employees and other stakeholders to actively report violations of the code of business ethics. For employees who violate the Code of Business Conducts, the Group will take appropriate internal punitive measures depending on the nature and severity of the violation. In the event that a report is received, the Group will immediately initiate an investigation process and handle the matter in accordance with the law. In addition, the Group protects employees or stakeholders who make complaints and monitors them by the Group's employee representatives and labor unions, and strictly prohibits any retaliation or discriminatory actions such as disciplinary action, punishment or dismissal. During the reporting period, the Group did not receive any reports or complaints of non-compliance (including corruption, harassment, discrimination, etc.) and there were no non-compliance case in relation to anti-corruption-related laws and regulations brought against the Group or its employees.

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To enhance employees' awareness of the importance of integrity and self-discipline and better implement the rules of integrity and self-discipline, the Group holds monthly integrity learning meetings for middle and senior management (including directors, supervisors, financial executives, managers, production line managers, etc.). Additionally, the Group invites external experts to conduct relevant training sessions from time to time.

Case: Special Legal Education and Training on Preventing Occupational Crimes

In May 2023, the Group conducted a special training session titled "Preventing Occupational Crimes, Upholding Bottom Lines — Compliance with Listed Management Standards" aimed at enhancing the legal awareness of key position management personnel, including the Chairman, General Manager, and directors. The training, attended by over four hundred participants, featured a lecture by the Deputy Chief Prosecutor of the People's Procuratorate of Danyang City. Utilizing case studies to illustrate legal principles, the Group disseminated relevant legal knowledge on occupational crimes, their severe consequences, and strategies for prevention. The training aimed to deeply instill in all participants the importance of respecting, learning, and adhering to the law, emphasizing the significance of using authority in compliance with legal and regulatory requirements.



4.3 Ensuring Information Security

The Group strictly adheres to laws and regulations such as the Cybersecurity Law of the People's Republic of China, the Data Security Law of the People's Republic of China, and the Personal Information Protection Law of the People's Republic of China. The Group formulated the Information Security Management System to prevent system data leakage, illegal intrusion, and tampering risks, thereby building a robust information security defense. An Information Security Management Leadership Group was established to oversee information security management, with the leader responsible for the Group's information technology serving as the group leader, and vice presidents and department heads as members to implement relevant tasks. The Data Center is responsible for the daily security management and operation of information systems, assisting in the formulation, revision, and improvement of information security regulations.

The Group implements comprehensive data security measures, including local, off-site, and private cloud backups, restricting external visitor access, and deploying real-time data protection with firewalls and vulnerability scanning. The Group also effectively distinguishes between business networks and internal networks to prevent potential security threats and enhance the reliability of network support for business operations.

Annual information security training is conducted for key staff, covering requirements for secure information system usage and confidentiality regulations. During the reporting period, the Group did not experience any information security-related incidents such as data leaks.



TG Tools Held a Special Training on Information Security

5 Composing the Green Chapter

The Group understands its responsibility to the environment, emphasizing the protection of the ecological environment essential for human survival while advancing business development. Therefore, the Group continuously improves our environmental management system, strengthen internal management, reduce energy consumption and pollution emissions, and prevent environmental pollution accidents. Our subsidiary TG Tools and TG Tech have respectively been awarded the titles of “2022 Municipal Green Factory” and “2023 Municipal Green Factory” by the Zhenjiang Municipal Bureau of Industry and Information Technology.

5.1 Environmental Management System

The Group strictly complies with laws and regulations such as the Environmental Protection Law of the People’s Republic of China and the Law on the Prevention and Control of Air Pollution, and has established management systems such as the Environmental Protection Management System, the Regulations on the Prevention and Control of Wastewater, Waste Gas, and Noise, the Environmental Supervision Management System, the Environmental Monitoring Management System, and the Management System for Environmental Protection Statistics. The Group comprehensively deepens the management of environmental matters, striving to reduce the negative impact of production and operation on the environment. During the reporting period, the Group did not incur any penalties due to environmental violations.

To systematically promote environmental management-related matters and continuously improve the Group’s environmental performance, the Group has established a three-level environmental management system consisting of the Group headquarters, subsidiaries, and subsidiary business units, with environmental responsibilities implemented at all levels. The Safety and Environmental Protection Department of the Group serves as the responsible department, formulating and implementing environmental management systems and operating procedures for environmental equipment and facilities, addressing environmental protection issues and environmental safety hazards. Through monthly meetings, the Safety and Environmental Protection Department reviews and summarizes the focus of environmental work, ensuring the effective improvement of the Group’s environmental compliance and environmental governance level. The general managers of each subsidiary are appointed as the first persons responsible for environmental protection, fully responsible for the subsidiary’s environmental protection work, including formulating environmental protection strategies and supervising related risks and effectiveness. As of the end of 2023, three subsidiaries of the Group has obtained ISO 14001 environmental management system certificate and passed annual audits.



Environmental Management System Certificates of the Group

5.2 Resource Utilization

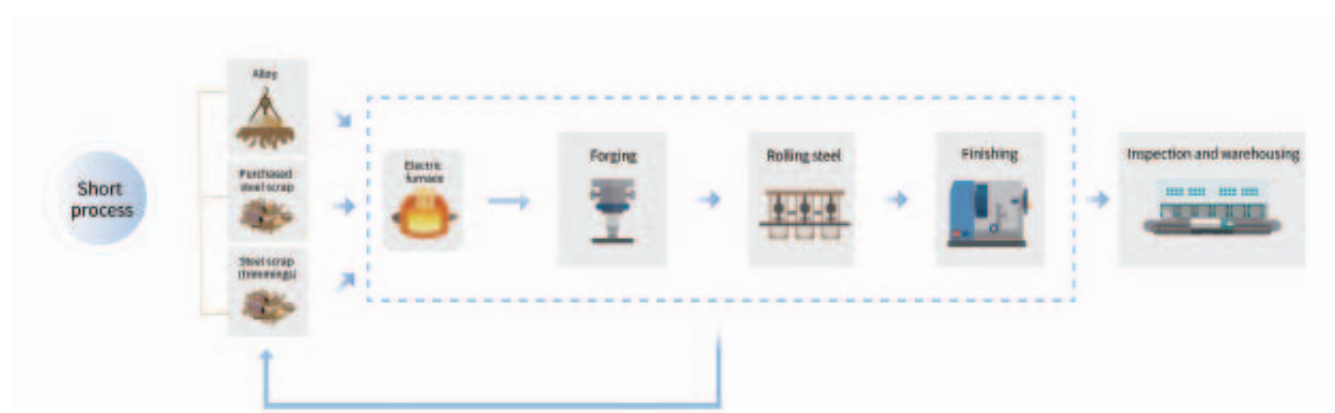
The Group, with efficient utilization and recycling of resources and energy as its core, adheres to the principles of “reduction, reuse, and recycling” to promote resource conservation, efficient utilization, and optimal economic benefits.

➤ *Scrap steel recycling*

The carbon emissions of China’s steel industry account for about 15% of the total carbon emissions in the nation, making it the manufacturing industry with the highest carbon emissions. Effectively utilizing scrap steel resources can reduce dependence on iron ore and reduce carbon emissions, which is one of the important ways to achieve the “Carbon Peak and Carbon Neutral” goal. The main raw materials in the smelting process of the Group are alloys and scrap steel. Among them, scrap steel mainly comes from the scrap steel materials generated during our production and processing process, as well as scrap steel purchased from downstream partners in the value chain. The recycling and reuse of scrap steel materials not only helps us control procurement costs, but also effectively reduces electricity consumption in the production process. In addition, the Group continuously innovates by adopting efficient furnace technology and short process smelting processes, shortening production cycles, and efficiently utilizing alloys and waste materials to produce high-quality materials. This simplified process not only optimizes the production process, but also reduces energy consumption and emissions, greatly improving resource utilization efficiency, reducing material processing losses, waste, and environmental pollution.



Long-process of Special Steel Manufacturing



The Group’s Short-process of Special Steel Manufacturing with recycle mechanism

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During the reporting period, the Group upgraded the smelting equipment used in the titanium alloy smelting process by adding new Electron Beam Melting (EB) furnace. Compared to the existing Vacuum Arc Remelting (VAR) furnace, the EB furnace does not require electrode preparation, can effectively remove impurities introduced by residual materials, and accepts a larger amount of titanium scrap as raw materials, thereby increasing the recycling amount of titanium scrap and achieving the maximization of resource recovery.



The Group’s Titanium Alloy Manufacturing Process with recycle mechanism

➤ *Energy Management*

The Group advances energy management system construction to high standards, establishing regulations such as the “Energy Management Manual” and the “Energy Use Management Measures,” setting annual energy consumption targets to promote overall energy consumption reduction. The Group has established a comprehensive energy management system, enhancing visual management of energy processes, monitoring power and auxiliary equipment, and factory energy consumption data. Through data analysis and forecasting, the Group optimizes energy-saving schemes to further enhance energy management efficiency. The Group plans to achieve reasonable control over total energy consumption by 2025, with industrial value-added energy consumption decreasing by over 10%. In addition, our subsidiaries have responded to the local government’s requirements for energy efficiency management of enterprises in the region and set annual energy efficiency improvement targets for 2023, namely the energy consumption target per unit output value of 0.152 tons of standard coal/10000 yuan for Jiangsu Tiangong Aihe Technology Company Limited (formerly known as Tiangong Aihe Company Limited) (“TG Aihe”) and 0.100 tons of standard coal/10000 yuan for TG Tools.

During the reporting period, the Group successfully passed the annual audit for ISO 50001 Energy Management System certificate.



Energy Management System
Certificate of TG Tools



Rooftop Photovoltaics

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The Group also actively promotes energy-saving renovation projects, achieving significant reductions in energy consumption:

- **Optimal operating conditions for air compressors:** Before the energy-saving transformation, the Group's compressed air energy consumption was 0.1247 kWh/m³, which decreased to 0.0865 kWh/m³ after the transformation.
- **"One-fire production"¹ project in the old continuous rolling workshop:** The traditional slide production method in the old continuous rolling workshop was replaced, eliminating a series of conventional processes such as continuous casting, rough rolling, hot rolling, and related heating and head cutting. Instead, finished products are directly rolled out from ingots in a single process. The successful implementation of the "one-fire production" transformation project significantly shortened the production process for slide products and greatly reduced energy consumption during production, including fuel, water, and electricity consumption.
- **Upgrade project for a 15-ton steam boiler:** The original boiler of the Group was a 15-ton natural gas steam boiler, which had a large coverage area, high energy consumption, and high losses. After the upgrade, the Group adopted three small hot water boilers and four steam generators to meet production and office life needs. In 2023, natural gas consumption decreased by 14.54% compared to the previous year, totaling 23,203,017 cubic meters.
- **Water Resource Management**

The Group prioritizes the conservation of water resources. Our objective is to improve water efficiency in production and operation, and reduce wastage of water resource, in order to achieve the rational use and recycling of water resources.

The Group cherishes and protects water resources, strictly adhering to laws and regulations such as the Water Law of the People's Republic of China and the Water Pollution Prevention and Control Law of the People's Republic of China, strengthening water resource management. All water resources for production and operations come from municipal water sources. To reduce water consumption, precise water meters are installed in all production workshops to accurately measure water usage, with strict control over water consumption during production and operations. The Group refines water-saving performance indicators, with a portion of cost reduction allocated as performance incentives to employees to motivate water-saving initiatives.

The Group actively promotes water recycling to increase the rate of water resource reuse. Through the introduction of professional technical equipment, industrial wastewater is treated at sewage treatment plants to meet reuse standards for recycling in processes such as cooling water; closed cooling tower equipment is used instead of open cooling facilities, with cooling water circulated internally to significantly reduce evaporation; devices such as reclaimed water treatment and rainwater collection are utilized to use treated water for ground flushing and workshop replenishment.

¹ One-fire production: In the process of metal melting and casting, by strictly controlling each link, a certain material or product can achieve the expected quality or state after a single processing or treatment process.

5.3 Pollution Control

The Group continues to strengthen pollution control efforts, aiming to reduce emissions of wastewater, waste gas, and solid waste pollutants.

➤ **Wastewater Management**

The Group established regulations such as the Sewage Treatment Measures and the Water Pollution Prevention and Control Management Regulations, strictly implemented regulatory agency and industry wastewater discharge standards, standardized wastewater treatment processes, and enhanced wastewater treatment facilities and technological upgrades. Through monitoring systems, pollutant emissions, water quality, and other indicators at discharge outlets were dynamically monitored, strengthening prevention of water pollution risks. Industrial wastewater and domestic sewage generated by the Group's production and operation were discharged into sewage treatment plants and discharged after meeting treatment standards. The Group set targets to Chemical Oxygen Demand and Nitrogen Oxides by more than 5% by 2025. During the reporting period, the Group's wastewater discharge met regulatory requirements.

➤ **Waste Gas Management**

The Group strictly adheres to regulations such as the Regulations on the Prevention and Control of Air, Water, and Noise Pollution and the Regulations on the Prevention and Control of Atmospheric Pollution, enforcing requirements such as the Air Pollutant Emission Standards for Steel Rolling and the Air Pollutant Emission Standards for Steelmaking to enhance the management of exhaust emissions. Emissions of nitrogen oxides, sulfur dioxide, particulate matter, and fluorides constitute the primary pollutants discharged by the Group. All smelting workshops are equipped with dust removal devices, ensuring emissions meet regulatory standards after treatment. Relevant emission data is interconnected with environmental protection authorities for real-time monitoring.

Through comprehensive control measures including source substitution, process control, and end-of-pipe treatment, the Group continuously reduce pollutant emissions to effectively prevent pollution incidents:

- Forging and steel rolling workshops have switched to using clean energy natural gas as fuel for heating furnaces, with exhaust gases collected and uniformly discharged.
- Workshop layouts are optimized, with isolation devices installed in dust-prone areas to minimize dust dispersion.
- All arc furnaces in the steelmaking workshop have been replaced with medium-frequency furnaces, significantly reducing exhaust emissions.

➤ **Waste Management**

Adhering to the principle of "reduce, reuse and recycle", our objective is to reduce the generation of waste, enhancing the utilization and recycling of waste, and striving to promote the construction of the "Waste-free City".

The Group strictly complies with local regulations on production and operation, implementing relevant management systems outlined in the "Waste Management Regulations" to rigorously manage waste emissions. Hazardous waste generated during production and maintenance processes such as waste emulsions, used lubricating oil, dust collected from dust collectors, waste dust filter bags, waste lead-acid batteries, oil rags, barium-containing waste, acid pickling sludge, etc., are collected centrally and stored in hazardous waste warehouses, then entrusted to third parties with disposal qualifications for treatment. Additionally, waste acid generated in the pickling workshop is neutralized and treated to meet standards before being reclaimed for circulation in the pickling workshop, reducing secondary pollution from the storage of hazardous waste. Non-hazardous waste such as household garbage and insulation waste are collected centrally and disposed of by qualified third parties.

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➤ **Noise Management**

The Group formulated the Noise Pollution Prevention and Control Management Regulations, opting for low-noise equipment to minimize noise pollution. To address the issue of high noise levels from air compressors in the plant area, the Group employed centralized installation in enclosed rooms, transmitting compressed air to usage points over long distances to reduce noise pollution. Furthermore, the Group upgraded old equipment, procured advanced equipment to replace polluting and inefficient ones, and installed vibration damping pads and shock absorbers on certain equipment to reduce noise pollution.

5.4 Green Operation Practices

The Group standardizes the use of office equipment, turns on lights as needed, sets air conditioning temperatures according to regulations, and actively promotes the concept of green offices to foster a strong atmosphere of green office practices and low-carbon living among all employees.

➤ **Paperless office:** The Group actively promotes paperless office practices, completing the construction of production planning systems, MES systems, and the “Human Resources Management” system during the reporting period, and initiating the “Procurement Cloud” system, achieving comprehensive electronic and paperless business processes.

➤ **Electricity conservation:** The Group uses energy-saving lighting, installs energy storage photovoltaic panels to provide power for nighttime lighting; strictly controls air conditioning temperatures, with the central air conditioning set to 26°C indoors and requiring activation only when the outdoor temperature reaches 32°C in summer and below 5°C in winter; computers are required to be turned off when not in use, and lights in administrative departments, restrooms, stairwells, and other public areas are turned off when not in use.

5.5 Addressing Climate Change

The Group actively responds to the challenges and opportunities brought by climate change, managing and disclosing climate-related information. Considering its business characteristics and development strategy, the Group identifies and analyzes the short-term, medium-term, and long-term climate change risks and opportunities, as well as their potential impacts on the Group’s transmission pathways.

➤ **Climate Change Governance**

The Group attaches great importance to climate risk governance, relying on an ESG governance system led by the board of directors to supervise and manage climate-related risks.

➤ **Climate Change Risks and Opportunities**

Through policy research, benchmarking with peers, and expert opinions, the Group identifies climate change-related risks and opportunities relevant to our operations and assess their impact on our finances. In the future, the Group will further improve the mechanism for managing climate change risks to enhance its adaptability to climate change.

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Type	Risk Category	Risk Description	Potential Financial Impact	Management Measures
Transition Risk	Policy and Legal	ESG Regulation and Guidelines Changes: Changes in current climate-related regulatory requirements, with a trend towards stricter climate policies by the government (e.g., transitioning from energy consumption control to carbon emission control policies). The Group may face stricter requirements for sustainable management.	Increased compliance costs; increased operational costs	Continuously monitor government ESG policies and regulatory trends, and promptly respond to policy changes.
	Technology	Product and Technology Substitution: There are technological barriers to low-carbon technology. If specific low-carbon technologies are not promptly developed, it may bring certain negative risks to the enterprise's operations and business. Research and Development Investment: To meet market demand for low-carbon products and technologies, the Group will increase research and development investment. However, there may be risks of research and development progress falling below expectations.	Decreased operating income Increased operating costs	Increase investment in technology research and development, systematically carry out research on low-carbon technologies. Optimize research and development strategies, strengthen the layout of core technical talents, and enhance research and development capabilities.
	Market	Changes in Customer Demand: With increasing customer emphasis on climate change risks and opportunities, the supply-demand structure of certain products and services may undergo transformation. Increase in Input Costs: To cope with stricter environmental and carbon emission regulations, partners need to undergo adaptive transformation and upgrades, leading to increased costs in the supply of products.	Decreased operating income Increased operating costs	Actively adapt to market changes, develop a diversified product development strategy to meet various consumer demands. Reduce reliance on a single supplier, seek and develop alternative materials.
	Reputation	Brand Image: In the current market environment and with the attention of various stakeholders, if the Group fails to adequately demonstrate its ability to address climate change and showcase its practical achievements, and enhance transparency of climate-related information, it may face the risk of damage to its brand image.	Increased operating costs	Actively promote carbon reduction efforts throughout the product life cycle and supply chain, disclose climate-related information, and enhance brand resilience and reputation.

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Type	Risk Category	Risk Description	Potential Financial Impact	Management Measures
Physical Risk	Acute	Extreme Weather Events and Natural Disasters: Frequent occurrences of extreme weather events such as heavy rain, hailstorms, thunderstorms, etc., with increasingly severe impacts, may endanger the safety of employees and physical assets of the Group. They may also lead to supply chain disruptions and hinder production.	Increased operating costs.	Strengthen climate warning and forecasting, develop contingency plans, enhance the ability to respond to extreme weather events; establish safety stock and gradually develop in-house capabilities for component manufacturing.
	Chronic	Continued Increase in Global Temperatures: Long-term changes in natural patterns such as rising sea levels and persistent high temperatures may affect the Group's normal production.	Increased operating costs	Develop emergency management plans tailored to extreme natural disasters.

Type	Opportunity Description	Potential Financial Impact	Management Measures
Energy Efficiency Improvement	By improving the efficiency of resource and energy utilization (such as minerals and energy), it's possible to achieve energy savings, carbon reduction, and lower operating costs.	Decrease in operating costs	Conduct training and promotion to enhance energy-saving and low-carbon awareness.
Green and Low-Carbon Products	Developing new types of low-carbon emission products can enhance the company's competitive position and benefit from the shift in customer and manufacturer preferences towards low-carbon options.	Increased operating income	Increase investment in technology research and development, systematically carry out research on low-carbon technologies.

➤ **Greenhouse Gas Emission Indicators**

The Group actively explores carbon reduction paths and is committed to improving energy efficiency and reducing greenhouse gas emissions. Please refer to the table below for the greenhouse gas emission data of the Group:

Indicator Name	Unit	2023	2022	2021
Greenhouse Gas Emissions (Scope 1)	Tons of CO ₂ Equivalent	60,614.62	63,111.95	91,041.10
Greenhouse Gas Emissions (Scope 2)	Tons of CO ₂ Equivalent	276,626.93	341,756.66	396,303.89
Total Greenhouse Gas Emissions (Scope 1+Scope 2)	Tons of CO ₂ Equivalent	337,241.55	404,786.32	489,353.74
Greenhouse Gas Emission Intensity (Scope 1+Scope 2)	Tons of CO ₂ Equivalent per RMB10,000 of revenue	0.65	0.80	0.85

6 Promoting Lean Manufacturing

The Group upholds the principles of innovation leadership and quality excellence, and has established a comprehensive mechanism for technological innovation and quality management. In terms of technological innovation, the Group has developed a series of management systems to ensure the transformation and application of internal innovation achievements. Regarding quality management, the Group is market-oriented and has established a strict product quality control system to ensure that every aspect, from raw materials to finished products, meets high-quality standards to meet the increasingly diverse needs of our customers.

6.1 Encouraging Research and Development (R&D) Innovation

The Group is committed to technological innovation and development, establishing a systematic management framework of hierarchical management, evaluation, and rewards. The Group has formulated a series of technological innovation-related systems and management methods to stimulate employees' innovative potential and promote the application and transformation of technological innovation achievements. During the reporting period, the Group invested over RMB300 million in research and development, exceeding 6% of the total annual revenue.

➤ *R&D Innovation Team*

The Group established a comprehensive management committee for technological innovation, including review committees and innovation groups, forming a hierarchical management, evaluation, and rewards framework. Various systems and methods related to technological innovation were developed, such as the Tiangong International Technology Innovation Management Measures, "Tiangong International Research Project Management Regulations, Rationalization Proposal Management System, and Project Achievement Reward Management System. These systems and methods clarified and standardized the process and requirements of technological innovation activities, as well as the submission, review, implementation, and reward mechanisms for related innovative achievements. This facilitated the application and transformation of internal technological innovation achievements and stimulated employees' enthusiasm for innovation.

Case: Held the Annual Summary and Commendation Meeting of Science and Technology Innovation Work

For 16 consecutive years, the Group has held an annual summary and commendation meeting for science and technology innovation work to recognize groups and individuals who have achieved outstanding results and performance in science and technology innovation work, in order to encourage advanced groups and individuals in science and technology innovation and create an atmosphere of innovation for all staff. During the reporting period, the Group selected a total of 67 group and individual innovation projects for the Science and Technology Innovation Award.

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➤ *R&D Innovations*

During the reporting period, the Group made significant progress in new product research and development. The Group successfully developed multiple grades of powder steel wire, high-wear-resistant and corrosion-resistant die steel, and powder stainless steel modules. These products meet international advanced quality standards and have been widely used in high-end molds, aerospace components, and cutting tools. Additionally, the Group accelerated the promotion of titanium alloy products and successfully developed a series of hard alloy cutting tool products, further expanding their application scope in electronic molds, alloy steel, and other cutting processing fields. Our newly developed stainless steel special taps and other products have also successfully entered higher-end application scenarios, indicating that our tap products are gradually transitioning from general to specialized processing.

Case: Development of Large-Scale Automotive Lamp Mold Steel Modules

In response to the initiation of the Group's 7,000-ton fast-forging project and to seek a competitive advantage in the domestic and international large-scale mold steel market, the Group actively developed the TGE11 product, a large-scale mold steel module for automotive lamp use. Representing high-heat-resistant hot work mold steel, this mold steel not only possesses excellent toughness and ductility in all aspects but also boasts outstanding heat resistance, high-temperature toughness, excellent heat fatigue resistance performance, and wear resistance. Its unique performance allows TGE11 to perform stably in high-demand industrial environments. Furthermore, TGE11 mold steel exhibits excellent polishing performance, suitable for high-quality polishing and carving molds, such as automotive lamp molds, thereby presenting broad market prospects.

➤ *School-Enterprise Cooperation*

The Group actively deepens cooperation between industry, academia, and research. The Group has collaborated on technical research with several renowned universities and research institutions, including Shanghai Jiao Tong University, Ocean Equipment Research Institute of Jiangsu University of Science and Technology, and Nanjing Tech University, focusing on the research and innovation of special steels, cutting tools, titanium materials, and other products. During the reporting period, the Group also collaborated with institutions such as the Jiangsu Provincial Engineering Technology Research Center and Jiangsu Provincial Engineering Research Center to establish multiple research platforms, providing strong support and guarantees for technological innovation and product development.

Case: Establishment of "Tiangong Class" to Achieve Industry-Education Integration

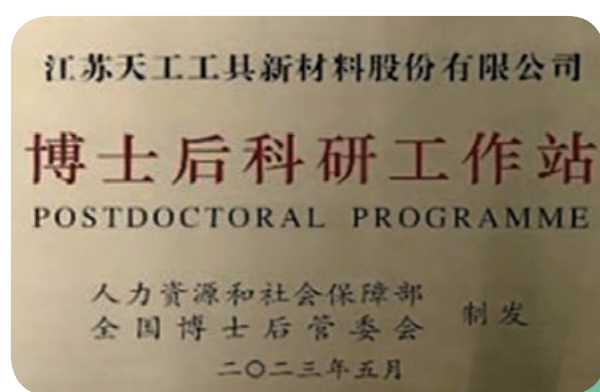
On March 14, 2023, the Group signed a joint training agreement with Jiangsu Agri-Forestry Vocational College to establish the "Tiangong Class." Students enrolled in the "Tiangong Class" are assigned a clear job placement upon graduation, with joint training provided by both the college and the Group. This model fully leverages the strengths of both the educational institution and the enterprise, allowing for the alternation of work and study, and embodies the concept of collaborative construction, sharing, and nurturing in vocational education development.





Signing Ceremony for Project Cooperation Between
The Group and Various Universities

The Group has set up a post-doctoral research station in Jiangsu Province since 2009 and successfully upgraded it to the national level during the reporting period. There are currently two post-doctoral researchers, who are dedicated to the research on topics such as hot work die steel process and integrated die casting die steel.



Postdoctoral Research Station of TG Tools

6.2 Intellectual Property Protection

The Group attaches great importance to intellectual property protection. The Group strictly complies with relevant laws and regulations such as the People's Republic of China Intellectual Property Protection Law and the People's Republic of China Trademark Law. The Group established systems and methods such as the Tiangong International Technology Innovation Management Measures and the Rationalization Proposal Management System, which clarify the management responsibilities of copyrights, trademarks, patents, and property rights, as well as the process for handling related infringement incidents. Additionally, the Group formed a special intellectual property protection working group and engaged professional law firms as permanent legal advisors.

Furthermore, to enhance employees' awareness of intellectual property protection, the Group regularly conducts intellectual property training to ensure strict compliance with relevant laws, regulations, and company policies in employees' business activities, thus avoiding infringement of others' rights. During the reporting period, the Group submitted applications for 69 patents, including 12 invention patents and 57 utility model patents, and obtained authorization for 61 patents. By the end of 2023, the Group had accumulated 263 patents.

6.3 Lean Quality Control

The Group's core mission is to provide customers with excellent quality products and services, focusing on the meticulous crafting of steel and strictly adhering to market standards, and is always committed to improving product quality and service levels. The Group strictly adheres to laws and regulations related to product liability, including the People's Republic of China Product Quality Law. At the same time, the Group has established a series of product quality control systems, including the New Product Development Management Procedure, the In-House Non-Conforming Product Control Procedure, the Enterprise Measurement Management Regulations, the Raw Material Management Methods, the Steel Acceptance Criteria, and the Quality Process Control Plan, to standardize every aspect of product development and production, ensuring comprehensive quality control from raw material entry to product delivery.

To ensure the excellence and stability of product quality, the Group implements a comprehensive quality management system covering the entire lifecycle of products from research and development to after-sales service. The Group strictly follows the requirements of GB/T 19001-2016/ISO 9001:2015 Quality Management System Requirements and has established and implemented rigorous product quality control systems and processes. Additionally, the Group manages product quality according to the standards of GB/T 19022-2003/ISO 10012:2003 Measurement Management System — Requirements for Measurement Processes and Measuring Equipment. During the reporting period, the Group has completed and passed third-party quality management system annual audits.



Quality Management System Certificates of the Group

In addition, the Group is committed to optimizing innovative steelmaking processes and actively investing in advanced quality inspection equipment to ensure product quality meets standards and to avoid potential health and safety hazards. During the reporting period, the Group did not experience any product recalls due to quality and safety issues.

Product Quality Management Measures	
Research and Development of Innovative Steelmaking Processes • Sampling and testing of raw materials • Physical and chemical testing of semi-finished products at each production stage • Specialized quality testing of finished products	Application of Advanced Quality Inspection Equipment • EVO-MA25 Carl Zeiss scanning electron microscope • Infrared carbon and sulfur analyzer • Direct reading spectrometer • Carl Zeiss metallographic microscope • MTS universal material testing machine • Digital Rockwell hardness tester

Case: Protective Sleeve Casting Process Enhances the Quality of Ultra-Premium Steel

As the Group’s various products gradually enter the high-end market, this shift imposes higher requirements on the cleanliness and processing performance of molten steel, especially for ultra-premium steel grades like TGGP13. During the casting process, contact between molten steel and air can lead to secondary oxidation, severely affecting the cleanliness of the molten steel. To significantly improve the toughness and processability of these steel grades, it is imperative to minimize the content of oxygen (O) and nitrogen (N) in the molten steel. To address this issue, our engineering team conducted in-depth research on the working principle of the submerged entry nozzle in continuous casting and creatively introduced the protective sleeve technology. By installing protective sleeves below the nozzle, the Group successfully isolated the contact between molten steel and air, effectively preventing the secondary oxidation of molten steel.



Employee Training on Quality System

implements a comprehensive assessment system, rigorously evaluating production personnel and inspectors in all processes to ensure compliance with quality standards. During the reporting period, the Group was honored with the “Quality Month” Excellence Award from Milwaukee in 2023.

The Group conducts regular quality-related training and assessments, organizing quality training for personnel in the technical department and smelting workshop. This includes detailed explanations of quality issues and inviting third-party quality organizations to provide on-site lectures, aiming to enhance employees’ quality awareness and skills. Additionally, the Group

6.4 Safeguarding Customer Rights

➤ *Customer Feedback Channels*

The Group established long-term and stable cooperative relationships with customers by deeply exploring the market through our sales team, promptly identifying market gaps and customer needs. Leveraging our strong development capabilities, the Group achieved customized development to accurately respond to customer demands.

Case: Tiangong International 2023 Annual Global Customer Conference

During the reporting period, our global customer annual conference attracted nearly 600 participants, including customers, industry experts, and suppliers, from over 30 countries and regions worldwide. Board Chairman Zhu Xiaokun spoke at the annual meeting, reviewing the Group's achievements over the past three years, including the construction of the Thailand factory, the development of digital platforms and breakthroughs in key technologies, and looking forward to future development plans, including product mix improvement, global layout, equipment upgrading, digitalization, technological innovations and the introduction of talents. Furthermore, attendees were invited to visit our production sites, deepening their understanding and trust in our products and brand.

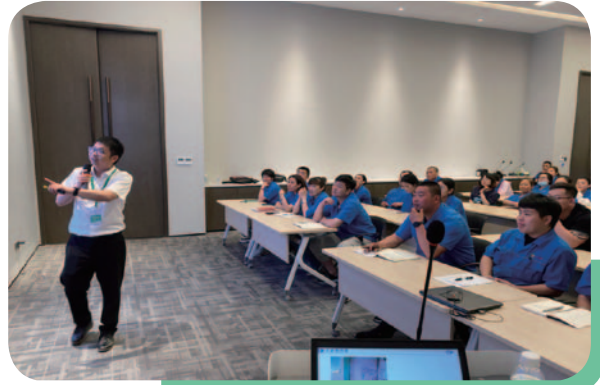


The Group consistently prioritizes customer feedback as a vital reference for continuously improving product quality. The Group strictly adheres to relevant laws and regulations such as the Consumer Rights Protection Law of the People's Republic of China and has established documents like the After-Sales Service Management System to standardize the specific process of handling customer complaints, ensuring their proper resolution.

The Group established a comprehensive online customer service system for efficient data entry and real-time collection of quality feedback. Moreover, through our operational OA customer service platform, customer complaint handling shifted from manual offline follow-up to online approval, significantly reducing processing time. Additionally, the Group conducted annual customer satisfaction surveys to gather opinions and suggestions regarding our products and services. In 2023, customer satisfaction reached 93.1%. Throughout the reporting period, the Group received a total of 69 customer complaints, all of which were appropriately addressed.

➤ *Customer Empowerment and Co-Construction*

Our clients conduct regular audits of the Group's ESG management and performance, covering various dimensions such as human rights and labor management, work safety, climate change, environmental management, etc., and make recommendations for improvement. Through client training and empowerment, the Group's ESG performance has been continuously improved.



Clients Providing ESG Training

➤ *Responsible Marketing*

The Group strictly adheres to the Advertising Law of the People's Republic of China, consistently striving to provide customers with truthful and reliable information while firmly eliminating any fraudulent behavior. To ensure the accuracy of promotional materials and website content, the Group conducts rigorous reviews before external release, ensuring that the products or technologies mentioned do not infringe upon any rights, and actively work to maintain a favorable corporate image and market order.



Clients Explaining Carbon Border Adjustment Mechanism ("CBAM")

7 Upholding Safety Standards

The Group recognizes that ensuring the safety and health of employees is essential for sustainable and robust development. The Group consistently prioritizes production safety and employee health, focusing on both physical and mental well-being. The Group enhances employees' safety awareness and skills, striving to create a safe working environment.

7.1 Responsibility for Safety

The Group always prioritizes production safety and employee health, aiming to create a work and living environment that ensures employee safety. The Group has established a comprehensive safety production management system, clearly defining the safety production responsibilities of leaders at all levels, functional departments, engineering and technical personnel, and operational staff. Under the leadership of the general manager, the Safety and Environmental Protection Department is responsible for the specific management of safety production. They organize and assist relevant departments in formulating or revising safety production regulations and technical operation procedures, propose measures to prevent accidents, and supervise and inspect occupational health management.

The Group strictly adheres to the laws and regulations of the People's Republic of China, such as the Safety Production Law, the Law on Prevention and Control of Occupational Diseases, Interim Provisions on Occupational Health Supervision and Management in the Workplace and Management Measures for Occupational Disease Diagnosis and Identification. The Group has established a series of comprehensive safety production management systems, including the Tiangong International Occupational Health Management System, Special Operation Safety Management System, Employee Work Injury Insurance and Safety Production Responsibility Insurance Management System, and Safety Production Reward and Punishment Management System. These systems detail the requirements and measures for safety production and occupational health management, effectively preventing safety risks and ensuring the life safety and physical health of employees during production.

Several subsidiaries of the Company have obtained the GB/T 45001-2020/ISO 45001:2018 Occupational Health and Safety Management System certificate, and have passed the annual audits during the reporting period.



Occupational Health and Safety Management System Certificate of TG Aihe

7.2 Strengthening Safety Management

To reduce or eliminate potential risks in the production safety process, the Group formulated the Hazard Identification and Hierarchical Control Management System. This system required relevant responsible departments to comprehensively identify, classify, and evaluate health and safety hazard factors in production activities, equipment, raw materials, safety protection, processes, and other activities. It mandated the implementation of corresponding control management and the taking of targeted preventive measures to effectively prevent major production safety accidents. In the past three years, the Group has not experienced any work-related fatalities.

Table: Safety Risk Level Determination Criteria and Control Measures

Risk Level	Actions/Control Measures to be Taken	Implementation Deadline
Level A (Red)	Operations cannot continue until measures have been taken to reduce harm, and improvement measures must be evaluated.	Immediate rectification
Level B (Orange)	Take emergency measures to reduce risk, timely rectify and establish operational control procedures, and conduct regular checks, measurements, and evaluations.	Immediate or timed rectification
Level C (Yellow)	Take measures for timely rectification, strengthen training and communication according to operating procedures.	Rectification by a specified deadline
Level D (Blue)	Consider establishing operating procedures, work instructions, etc., but regular checks and records must be maintained.	Rectification by a specified deadline

In terms of hazard identification and management, the Group implements both regular and irregular inspection systems. The principal responsible persons of each department (workshop) bear full responsibility for the accident investigation and remediation work within their departments. During the inspection process, safety checklists are strictly used, covering all production and business premises, environments, personnel, equipment, and activities. For the hazards identified during inspections, each department (workshop) conducts an analysis and evaluation, determines the hazard level, and registers and files the information. The safety and environmental departments then verify the rectification measures and evaluate their effectiveness to ensure that the hazards are completely eliminated. For accidents caused by ineffective accident investigation and management, the Group strictly holds the responsible persons accountable.

The Group also dedicated safety officers in the production workshops, responsible for conducting safety inspections, supervising and inspecting compliance with safety production requirements such as employee protective measures, and ensuring that production violations are corrected in a timely manner.

Furthermore, the Group conducts a series of safety production inspection activities annually, including quarterly group-level safety inspections, monthly workshop safety meetings, and daily safety briefings and summaries for each team. The Group also hold departmental meetings quarterly to review and discuss safety production and education work during the quarter, continually reviewing and optimizing the Group's safety production environment. During the reporting period, the Group conducted a special safety inspection for fire prevention, comprehensively identifying and rectifying potential safety hazards related to fire.

7.3 Ensuring Occupational Health

The Group strictly adheres to the Occupational Health and Safety Management System and the Technical Specifications for Occupational Health Supervision. The Group organizes annual occupational health examinations for all employees on duty to ensure their occupational health is effectively protected. For newly hired employees or those transferring to positions with occupational hazards (such as exposure to noise, high temperatures, dust, and other risk positions) and employees engaged in jobs with special health requirements, the Group informs them of the related risks in advance. The Group organizes occupational health examinations before these employees start their duties, strictly implement safety protections, and comprehensively safeguard their health and safety. If occupational hazard factors exceeding standard limits are discovered during production or equipment maintenance, the Group shall immediately make rectifications to prevent health risks.

7.4 Creating a Safety Culture

To enhance employees’ safety awareness and skills, the Group conducts comprehensive safety education and training on production safety. The Group established the Safety Education System to provide clear, systematic regulations for safety production training. Additionally, before officially assuming their duties, employees must sign the Safety Production Commitment Letter to ensure every employee understands and is familiar with the Group’s safety management requirements.

For all new employees, the Group implements a strict “three-level” safety education system at the Group, workshop, and team levels. The training covers various aspects, including safety production knowledge, occupational hazard prevention and treatment, and emergency response to accidents. Employees are only allowed to take up their positions after passing an assessment.

Training Level	Training Content
The Group Level	Safety production laws and regulations, safety production rules and regulations, occupational hazard prevention and control, emergency rescue methods, etc.
Workshop Level	Workshop production rules and regulations, introduction to machinery and equipment, accident prevention measures, etc.
Team Level	Safety technical operation procedures for positions, safety production protection facilities, methods for using personal protective equipment, accident cases, etc.



Three-level Safety Education Training for New Employees

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Every year, the Group organizes all employees to participate in a refresher course on safety production. The training covers new laws, regulations, standards, and norms related to safety production, as well as the safety technical requirements of new materials, new technologies, new processes, and new equipment, along with the analysis and discussion of typical accident cases. Additionally, the Group holds safety technology classes, utilizing various forms such as exhibitions, propaganda paintings, safety columns, newspapers and magazines, and special knowledge lectures to create a corporate environment conducive to safety production.



The Group Collaborates with Zhenjiang City First People's Hospital to Conduct the "Emergency First Aid" Activity



Emergency Evacuation Drill for Fire Accidents in the Round Steel Finishing Workshop

To ensure employee safety, the Group developed an emergency response plan for production safety accidents and regularly conducted emergency drills for unexpected incidents, summarizing and evaluating the effectiveness of these drills to ensure a rapid and effective response when incidents occurred. During the reporting period, the Group organized employees from the round steel finishing workshop and the 1300T workshop to participate in fire accident evacuation and emergency rescue drills, continuously enhancing the fire safety awareness and self-rescue skills of our employees.

Case: Specialized Training on Employee Safety Production

In October 2023, the Group held its monthly safety production meeting. It emphasized measures related to the prevention of electrical fires and electrocution accidents and designated fire safety and electrical safety as key inspection items in safety production. Issues identified during the comprehensive safety inspection conducted before the holiday were rectified one by one to form a closed-loop management. The meeting also included safety responsibility and skill training for new employees, followed by on-site assessments.



8 Building an Exceptional Team

The Group firmly believes that the achievements in corporate development are inseparable from every employee's hard work and selfless dedication. Adhering to a people-oriented corporate culture, The Group is committed to attracting and retaining outstanding talents in the industry, aiming to build an exceptional team.

8.1 Compliant and Equal Employment

The Group strictly implements 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 Regulations Prohibiting the Use of Child Labor, establishing and improving human resource management systems like the Employment Management and Employee Rights Protection Regulations, the Recruitment Procedures, the Employee Resignation Management Methods, and the Anti-Discrimination, Abuse, and Harassment Management Regulations. These ensure the standardization and transparency of recruitment, resignation, and dismissal processes, fully protecting employee rights. The Group adheres to the principles of "openness, equality, competition, merit-based selection, and voluntariness," practicing an equal and inclusive employment policy. The Group ensures that employees enjoy rights such as freedom of association and are committed to creating a diverse and inclusive work environment. The Group firmly opposes employment discrimination based on race, nationality, age, or gender, ensuring that every applicant, regardless of their background, has equal employment opportunities.

To prevent the misuse of child labor and minors, the Group has specifically formulated the Child Labor and Minor Worker Management Regulations, strictly verifying the age information of applicants. All employees have to provide valid identification before joining to ensure that there is no child labor or employment of minors. If a minor is mistakenly hired, the Group will immediately terminate the employment relationship and pursue related responsibilities. The Group is staunchly against any form of forced labor, having established the Prevention of Involuntary Labor Management Regulations to ensure applicants joined voluntarily. Furthermore, the Group pays close attention to employee working hours; the labor contract specifies that the daily working hours should not exceed eight hours, and the average weekly working hours should not exceed forty hours. Overtime work requires prior application to superiors. During the reporting period, there were no instances of child labor or forced labor in the Group.

8.2 Enhancing Compensation and Benefits

The Group has developed a series of compensation management systems, including the Administrative Management Position Compensation Management Regulations, the Technical and Management Position Compensation Management Regulations, and the Regulations on Standards and Management of Subsidies for Education and Professional Titles, establishing an attractive compensation and benefits system. The Group bases our evaluation on individual actual ability and work performance, conducting annual comprehensive assessments of employees from three dimensions: self-assessment, peer review, and supervisor evaluation. The results serve as an important basis for employee salary adjustments. Additionally, the Group has formulated the Management Measures for Comprehensive Improvement of Material Yield, closely linking employee wages with the assessment results of the finished product yield rate, moving away from the past practice of paying solely based on quantity, thereby stimulating employee enthusiasm for work.

The Group strictly complies with national legal requirements to pay various types of social insurance for employees, including basic pension insurance, basic medical insurance, maternity insurance, work-related injury insurance, unemployment insurance, and housing provident fund, and ensure that every employee can enjoy legally stipulated statutory and other paid leave.

8.3 Facilitating Career Development

➤ *Clarifying Promotion Channels*

The Group plans clear career development paths for employees, ensuring fair, just, and transparent promotion opportunities to motivate employees to continuously improve their overall quality, fully realize their potential, and achieve mutual growth of both the enterprise and employees.

In terms of employee development and promotion, the Group has formulated and implemented the Promotion Management Regulations, promoting a diversified career development path covering all positions, attracting and motivating talents from different fields to realize their personal value. The Group is committed to discovering and cultivating outstanding talents from the junior level. After new employees join, the Group allocates positions scientifically and rationally based on their personal interests and professional backgrounds. For management and technical positions, the Group has clear and specific promotion channels. Employees working at the production front could gradually be promoted to factory manager through continuous effort and experience accumulation; meanwhile, management position employees could start from basic management positions and, through systematic training and practical work, gradually be promoted to general manager level. Additionally, the Group implements a job rotation system aimed at developing elite talents with comprehensive management skills through training in different positions, thereby providing employees with broader career development opportunities.

➤ *Uncovering Employee Potential*

The Group places a high value on employee training and education, having established the Training Management Procedure aimed at continuously enhancing employees' comprehensive qualities and personal abilities through diverse training offerings. At the beginning of each year, the Group formulates an annual employee training plan, arranging different training content and related assessments according to the various job responsibilities. After joining, new employees are required to undergo three levels of training: group, department, and team, to fully understand the Group's corporate culture, regulations, social responsibilities, fire safety, occupational health, and other knowledge areas. They are also provided with specialized skill training and assessments according to the specific nature of their positions, ensuring they truly understand and master the training content. Moreover, the Group continuously improves the standards for academic and professional title subsidies, motivating all employees to further their education and obtain professional titles relevant to their positions.

Additionally, the Group has formulated the Provisional Measures for Mentorship, implementing a "one-to-one" mentorship system to cultivate talent for key technical positions. Experienced employees serve as "mentors," imparting work experience and methods to new employees, or "mentees," through a system of teaching, helping, and guiding. The Provisional Measures for Mentorship also specify the qualifications for mentors, the establishment of mentor-mentee relationships, and the responsibilities of both parties. The system includes a reward mechanism, recognizing and commending outstanding mentors and new employees, encouraging active participation.

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8.4 Building a Warm Workplace

➤ *Democratic Communication*

To ensure employees' needs are met with timely and effective responses, the Group utilizes a variety of communication channels, including regular meetings, employee suggestion boxes, emails, and the annual Workers' Representative Conference. The Group required all production and administrative units to hold monthly employee meetings to listen to employees' suggestions, exchange information on work situations, and share feedback. The Group conducts annual employee satisfaction surveys. During the reporting period, the Group's employee satisfaction was 93%.

Case: The Third Workers' Representative Conference of Tiangong International

In April 2023, the Group held the Third Workers' Representative Conference. Mr. Wu Suojun, the General Manager of TG Tools delivered a detailed work report, and Mr. Yan Ronghua, the Chairman of Labor Union made a report on the work of the labor union, which was considered and adopted by the delegates of the plenary session. All the delegates of the meeting put forward suggestions and opinions on the company's development, staff salary reform, management capacity enhancement, cost reduction, technological innovation and people's livelihood.



➤ *Caring for Employees*

The Group provides employees with a variety of additional benefits, including work meals, regular health check-ups, purchasing extra "critical illness insurance" commercial insurance, special reward funds for children of employees who are admitted to prestigious schools, holiday benefits, Spring Festival travel subsidies, and travel benefits. On International Women's Day, the Group arranges a half-day paid leave and welfare allowance for female employees to show respect and care. On their birthdays, each employee receives a birthday cake, bringing warmth amidst their busy schedules. For nursing female employees, the Group offers 1 hour of paid rest daily, and male employees also enjoy paid leave during paternity leave. In the hot summer, the Group effectively mitigates the risk of heatstroke in the production workshop, and prepare "heatstroke prevention gift packs" for the frontline staff.

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The Mother and Baby Unit
of the Group



“Cool off in Summer” Activity

The Group’s union also has a support mechanism, serving as a strong backing for employees, always focusing on and helping to address the needs of employees in difficulty. The Group has established a Serious Illness Employee Aid Foundation, providing basic wage subsidies to employees with illnesses and special subsidies to those with serious illnesses. During the reporting period, the fund assisted 11 people in total, with a cumulative assistance amount of RMB78,000.

Additionally, the Group also has a staff canteen. The canteen staffs have regular physical examinations and all hold health certificates to work. The main ingredients of the canteen are produced by the Group itself, and the tableware is disinfected every meal to ensure food safety and hygiene. The dishes are comprehensive and rich, which fully guarantees the nutrition and health of employees.



Special Reward Ceremony for Employees’ Children Admitted to Prestigious Schools

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➤ *Diverse Activities*

The Group is committed to enhancing the work atmosphere and team culture through a variety of cultural and sports activities, enriching employees’ leisure lives while increasing their sense of happiness and belonging. The Group regularly holds staff games every two years, and organizes competitions, including basketball, calligraphy, badminton, etc., every year in order to promote teamwork and collaboration among our staffs. Additionally, the Group encourages employees to organize clubs and regularly hold various cultural activities to strengthen connections and communication among employees.



The 11th Staff Games of the Group



The First “Youth Cup” Men’s Basketball Game of the Group



Young Talent Mid-Autumn Festival Networking Event 2023



The Year-End Closing Conference

9 Practicing Responsible Procurement

For the Group, the supply chain is not only about the quality and stable supply of raw materials but also about establishing long-term stable relationships with high-quality suppliers. Therefore, the Group is committed to ensuring the robustness, efficiency, and sustainability of our supply chain through strict supplier management regulations and ESG risk control measures.

9.1 Supply Chain Compliance Management

The Group strictly adheres to laws and regulations such as the Tendering and Bidding Law of the People's Republic of China and the Contract Law of the People's Republic of China, and has formulated the Supplier Management Regulations, the Regulations on Standardizing the Procurement and Price Accounting of Supplies, the Tender Work Management Regulations, the Procurement Management Regulations and Implementation Details (Trial Version), and other management systems to strengthen the supervision and management of procurement work, ensuring the fairness, justice, and transparency of tendering and procurement activities.

The Group established a comprehensive qualified supplier mechanism, setting clear requirements for the service qualifications and capabilities of all raw and auxiliary material and equipment suppliers, ensuring the quality and stability of raw material supply. The Group evaluates suppliers annually according to plan during the contract period, assessing product quality, service efficiency, after-sales support, management level, environmental management, and social performance, and strictly screens for major violations. Suppliers failing the evaluation will have their cooperation temporarily suspended and are required to rectify until they pass the evaluation. For suppliers that do not meet the evaluation criteria, the Group actively takes corrective guidance measures, help suppliers develop corrective action plans, and monitor and evaluate the effectiveness of these measures in real time, striving to prevent similar issues from reoccurring. During the reporting period, the Group had a total of 183 strategic suppliers, including 260 A-category suppliers and 42 B-category suppliers².



Training on Trade and Supply Chain Security

² Strategic suppliers: Suppliers that provide key materials, including raw materials and large-quantity auxiliary materials; A-category suppliers: Suppliers that provide secondary materials, including small-quantity auxiliary materials and parts; B-category suppliers: Suppliers that provide auxiliary materials, parts with small purchasing volumes, and low-frequency accessories.

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9.2 Supply Chain ESG Risk Management

The Group's Supply Chain Management System likewise specifies the requirements for suppliers' environmental management and premises safety in the supplier evaluation process. In advocating for green procurement, the Group gives priority to local suppliers to reduce waste emissions during the supply chain transportation process. In promoting transparent procurement, the Group requires all suppliers to sign the Supplier Integrity and Honesty Commitment, ensuring that during the cooperation process, suppliers strictly adhere to principles of integrity and honesty, jointly creating an atmosphere of sincere cooperation. Regarding conflict mineral management, the Group verifies the origin certificates of raw materials annually. During the reporting period, the Group did not purchase raw materials from conflict mineral regions. Additionally, the Group strictly manages human rights risks in the supply chain; if a supplier is found to be engaging in illegal activities such as employing child labor or forced labor, the Group will immediately terminate the cooperation.

10 Giving Back to Society and Improving Livelihoods

The Group is committed to leveraging its resources and industry advantages to foster positive community relations and support public welfare and rural revitalization. Over the years, the Group has continuously contributed to rural education assistance and support for the disadvantaged. During reporting period, the Group was awarded the title of "Most Caring Charitable Donation Enterprise" by the People's Government of Zhenjiang City, Jiangsu Province.

10.1 Supporting Rural Revitalization

Based on regional characteristics and market demands, the Group guides resources for the long-term development of rural areas. The Group increased villagers' income through consumer assistance and donations to farmers, effectively addressing the actual problems of rural areas and contributing to the modernization of villages.

Case: Targeted Procurement to Support Farmers

In Jinshan Village, Jurong City, Zhenjiang, Jiangsu Province, where there is a significant number of impoverished and disabled individuals, life is relatively difficult. To assist the local villagers, the Group specifically purchased peanuts grown by the villagers and provided guidance on crafting wooden boxes and paper cartons for packaging, which the Group repurchased as finished products. With the help of the Group, Jinshan Village established a production and sales linkage, enabling a continuous and stable increase in the villagers' income.

10.2 Engaging in Public Welfare and Charity

The Group has also maintained close communication with numerous universities, colleges, and schools, continuously focusing on and supporting the development of educational teaching activities.

- In 2007, the Group established the "Tiangong Development Scholarship" at Nanjing Normal University.
- In 2020, the Group set up the "Nanjing University Tiangong International Scholarship and Aid Fund" at Nanjing University.

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- In 2022, the Group donated 1 million RMB to the Danyang Charity Federation, marking the largest single corporate donation the Charity Federation received in nearly three years.
- In 2022, the Group donated 5 milling and grinding machines and 200 sets of practice training uniforms to Zhongbei College.
- In 2023, the Group donated a total of 3 million RMB to society, including scholarships, contributions to the Charity Federation, and support for the underprivileged.

Case: Donating Computer Equipment to Support Educational Development

Danbei Experimental Junior High School is a newly established junior high school. However, the school's computer equipment could not keep up with the rapid education development and teaching needs, which posed difficulties for teaching activities. In 2023, the Group donated 60 computers to Danbei Experimental Junior High School to help improve teaching conditions and enhance the teaching quality.



Case: Sponsoring Hong Kong Charitable Football Match

The Group sponsored a friendly football match in Hong Kong, giving the elderly the opportunity to watch the games of retired Hong Kong football stars for free.



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ESG Key Performance Indicators³

Environmental⁴

Indicator Name	Unit	2023	2022
Pollutant Emissions			
Exhaust Gas⁵			
Sulfur oxide emissions	tonnes	1.23	0.45
Nitrogen oxide emissions	tonnes	27.95	46.23
Particulate matter emissions	tonnes	13.04	/
Wastewater⁶			
Total wastewater discharge	tonnes	93,880.00	258,058.00
Chemical oxygen demand (COD) emissions	tonnes	507.99	/
Ammonia Nitrogen (NH ₃ -N) Emissions	tonnes	2.37	/
Waste			
Total amount of waste	tonnes	45,630.98	56,090.16
Total amount of non-hazardous waste	tonnes	33,688.10	29,831.00
Melting slag	tonnes	33,600.00	29,700.00
Other	tonnes	88.10	131.00
Non-hazardous waste discharge intensity	tonnes/RMB10,000 of revenue	0.07	0.06
Total amount of hazardous waste	tonnes	11,942.88	26,259.16
Waste acid solution	tonnes	10,692.57	23,942.91
Other hazardous waste	tonnes	1,250.31	2,316.25
Hazardous waste discharge intensity	tonnes/RMB10,000 of revenue	0.02	0.05
Greenhouse Gas Emissions⁷			
Scope 1: Direct emissions	tonnes of CO ₂ e	60,614.62	63,111.94
Scope 2: Indirect emissions	tonnes of CO ₂ e	276,626.93	341,756.66
Total GHG emissions	tonnes of CO ₂ e	337,241.55	404,786.32
Total GHG emissions intensity	tonnes of CO ₂ e/RMB10,000 of revenue	0.65	0.80

³ During the reporting period, the Group further improved and enriched its ESG indicator system for the purpose of consolidating and refining ESG management, and therefore new indicators are disclosed in this ESG KPI table.

⁴ As the environmental impact of the Group's office operations is relatively small, the scope of the Group's environmental data statistics covers the energy and resources consumed and emissions generated in the production of mold steel, high-speed steel, cutting tools and titanium alloy products.

⁵ The Group strictly adheres to national and local laws and regulations, and sets targets for compliant emissions of exhaust gas, wastewater, and waste. During the reporting period, the Group's emissions complied with regulatory requirements.

⁶ The total amount of wastewater discharged includes the amount of wastewater generated from the recycling water of the smelting plant.

⁷ The calculation of GHG emissions from natural gas and diesel in the Group shall refer to the Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions of Chinese Steel Production Enterprises (Trial); the calculation of GHG emissions from gasoline shall refer to the Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions of Land Transport Enterprises (Trial); the calculation method and relevant coefficients of GHG emissions generated by the use of electricity refer to the notice issued by the Ministry of Ecology and Environment on the management of GHG emission reports for enterprises in the power generation industry from 2023 to 2025, which specifies a national average emission factor of 0.5703 tons of carbon dioxide per megawatt hour for the power grid.

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Indicator Name	Unit	2023	2022
Energy Use			
Diesel consumption	litres	181,548	150,396
Natural gas consumption	cubic metres	25,681,600	29,109,300
Direct energy consumption	MWh	277,812.76	316,692.71
Purchased electricity	MWh	485,055.11	599,993.60
Photovoltaic electricity generation ⁸	MWh	6,814.52	5,860.40
Indirect energy consumption (Electricity consumption)	MWh	491,869.63	605,854.00
Total energy consumption	MWh	769,682.40	922,546.71
Energy consumption intensity	MWh/RMB10,000 of revenue	1.49	1.82
Water Resources			
Water consumption ⁹	cubic meters	550,727	411,158
— Municipal water	cubic meters	265,841	411,158
— Surface water ⁹	cubic meters	284,886	/
Water consumption intensity	cubic meters/RMB10,000 of revenue	1.07	0.81
Packaging Material			
Packaging material consumption	tonnes	3,435.40	3,731.57
Paper	tonnes	505.25	/
Metal	tonnes	1,778.80	/
Plastic	tonnes	182.55	/
Wood	tonnes	968.80	/
Packaging material intensity	tonnes/RMB10,000 of revenue	0.007	0.007
Green Logistics			
Rail transport product ratio	%	0.50	/
Waterway transport product ratio	%	32.70	/
Air transport product ratio	%	0.40	/

⁸ The photovoltaic power generation is included in the total energy consumption data during the reporting period.

⁹ During the reporting period, the Group has improved the Water Resource Use indicators, and included the amount of water collected from surface water as a new component for water consumption in 2023. As a result, the data of 2023 is not comparable to which disclosed in 2022.

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Social

Indicator Name	Unit	2023	2022
Employee Basic Information¹⁰			
Number of employees (as at the end of the Reporting Period)	no. of employees	3,517	3,203
New jobs created during Reporting Period	no. of employees	559	/
Graduates employed during Reporting Period	no. of employees	65	/
By gender			
Male	no. of employees	2,357	2,298
Female	no. of employees	1,160	905
By employment type			
Full-time	no. of employees	3,517	3,203
Part-time	no. of employees	0	0
By age group			
Under 30 years old	no. of employees	517	600
30–50 years old	no. of employees	1,950	1,923
Above 50 years old	no. of employees	1,050	680
By geographical region			
Mainland China	no. of employees	3,431	3,117
Hong Kong, Macau and Taiwan	no. of employees	1	1
Overseas	no. of employees	85	85
Employee Turnover Rate¹¹			
Annual employee turnover rate	%	6.51	8.12
By gender			
Male	%	6.91	9.00
Female	%	5.69	6.00
By age group			
Under 31 years old	%	15.52	5.00
31–50 years old	%	2.45	9.00
Above 50 years old	%	8.77	9.00
By geographical region			
Mainland China	%	6.66	8.00
Hong Kong, Macau and Taiwan	%	0.00	0.00
Overseas	%	0.00	3.00

¹⁰ The coverage of employee data disclosed by the Group is consistent with the disclosure scope of the 2023 annual report.

¹¹ The calculation for employee turnover rate for each employment types is the number of employees turnover of the category/(the number of employees of the category at the end of the period + the number of employees turnover of the category during the reporting period) * 100%.

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Indicator Name	Unit	2023	2022
Training and Development¹²			
Employee training coverage rate	%	100.00	100.00
Average training hours completed per employee ¹³	hours	30	10
Employee training hours by gender¹⁴			
Male	hours	32	10
Female	hours	25	10
Employee training coverage rate by gender¹⁵			
Male	%	67.02	71.75
Female	%	32.98	28.25
Employee training coverage rate by employee category			
Senior management	%	1.71	5.00
Middle management	%	14.13	12.00
General employees	%	84.16	83.00
Percentage of employees receiving regular performance and career development reviews	%	100.00	/
Supplier Management			
Number of suppliers	no. of suppliers	485	550
By geographical region			
Mainland China	no. of suppliers	480	550
Hong Kong, Macau and Taiwan	no. of suppliers	2	0
Overseas	no. of suppliers	3	0
Number of suppliers by class			
Core suppliers	no. of suppliers	183	/
Non-core suppliers	no. of suppliers	302	/
Percentage of suppliers certified by ISO 9001	%	75.50	/
Percentage of suppliers certified by ISO 14001	%	45.60	/
Percentage of suppliers certified by ISO 45001	%	12.50	/
Percentage of suppliers certified by IATF 16949	%	8.80	/

¹² The calculation for the percentage of trained employees is the number of trained employees/total number of employees * 100%.

¹³ The calculation for the average training hours of employees is the total training hours of employees/total number of employees.

¹⁴ The calculation for the average training hours of employees for each employment type is the total training hours of employees in that employment type divided by the total number of employees in that employment type.

¹⁵ The calculation for the percentage of trained employees for each employment type is the number of trained employees in that category/total number of trained employees * 100%.

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Indicator Name	Unit	2023	2022
Products and Services			
Annual customer satisfaction rate	%	93.14	/
Number of products and service-related complaints received	cases	69	50
Rate of products and service-related complaints resolved	%	100.00	100.00
Health and Safety			
Work-related injury and fatalities			
Number of work-related fatalities	person	0	0
Rate of work-related fatalities	%	0.00	0.00
Lost days due to work injury	days	0	0
Safety production training			
Safety production training sessions	sessions	87	/
Participants in safety production training	person	2,798	/
Total hours of safety production training	hours	174	/
Safety production training coverage rate	%	100.00	/