



**中国煤炭科工集团**  
北京天玛智控科技股份有限公司  
CCTEG BEIJING TIANMA INTELLIGENT CONTROL TECHNOLOGY CO.,LTD.



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CCTEG BEIJING TIANMA INTELLIGENT CONTROL TECHNOLOGY CO.,LTD.



# 2024

**BEIJING TIANMA INTELLIGENT CONTROL TECHNOLOGY CO.,LTD**  
ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

**Beijing Tianma Intelligent Control Technology Co., Ltd.**

Website: <http://www.tmic.com.cn>

Office Address: 27 Linhe South Street, Shunyi District, Beijing (Science and Technology Innovation Functional Zone)

Postal Code: 101399

IR Contact Number: 010-84261737

IR Contact Email: [ir@tdmarco.com](mailto:ir@tdmarco.com)



# About This Report

## Introduction

This document is the 2024 Environmental, Social, and Governance (ESG) Report of Beijing Tianma Intelligent Control Technology Co., Ltd. ("TMIC" or "the Company"). Adhering to principles of objectivity, standardization, transparency, and comprehensiveness, this Report systematically discloses TMIC's philosophies and policies in environmental protection, social responsibility, and corporate governance, alongside efforts implemented and outcomes achieved in 2024.

## Reporting Period

This annual report covers the period from January 1, 2024, to December 31, 2024, with certain sections incorporating retrospective analysis or forward-looking projections where relevant.

## Reporting Scope

Unless otherwise specified, all information and data presented in this report pertain to TMIC and its wholly-owned subsidiaries, aligning consistently with the disclosure scope of the 2024 Annual Report of Beijing Tianma Intelligent Control Technology Co., Ltd.

## Basis of Preparation

This Report was prepared in accordance with the following guidelines: Guidelines No. 4 for Self-Regulation of Listed Companies -- Sustainability Report (Trial) and Guide No.13 for Self-Regulatory Supervision on Listed Companies of the SSE STAR Market -- Compilation of Sustainable Development Reports (Shanghai Stock Exchange); Research on ESG Special Report Preparation for Central SOE-Controlled Listed Companies (SASAC); Sustainability Reporting Guidelines (Global Reporting Initiative); and SDG Compass: The Guide for Business Action on the SDGs (United Nations).

## Data Sources

All information and data cited in this Report originate from the Company's official documents, statistical reports, financial statements, publicly available records, and internally audited ESG-related materials. Unless explicitly stated, monetary values are denominated in Renminbi (RMB).

## Report Access

The electronic version of this Report is accessible for viewing and download on the website of Shanghai Stock Exchange ([www.sse.com.cn](http://www.sse.com.cn)). For a printed copy or to submit feedback, please contact us at:  
Address: No. 27 Linhe South Street, Shunyi District, Beijing (Science and Technology Innovation Functional Zone)  
Tel: 010-84261737 (Board of Directors Office)  
Fax: 010-84264690



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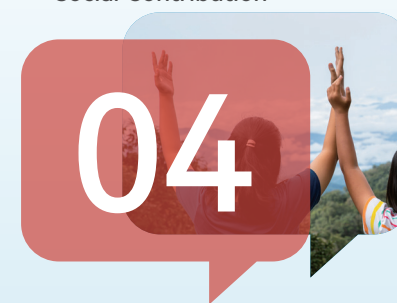
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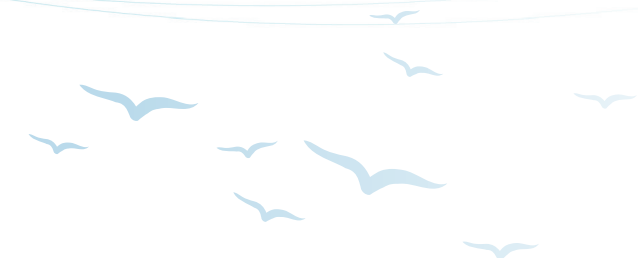
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## Chairman's Statement

The year 2024 marked a critical juncture for deepening the study and implementation of the guiding principles from the 20th National Congress of the Communist Party of China and the second and third plenary sessions of its 20th Central Committee. It served as a pivotal year for achieving the objectives outlined in the 14th Five-Year Plan, a determined period to solidify value creation foundations, and an ambitious phase to advance the efficacy of ESG management. In unwavering adherence to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, TMIC has integrated ESG principles into its corporate development strategy, established a scientifically robust ESG organizational framework, issued the "TMIC ESG Management Measures", and systematically refined its ESG governance mechanisms. We have rigorously executed specialized initiatives to enhance ESG management, effectively aligning ESG practices with operational and production activities. This integration enables us to achieve high-quality, synergistic development across environmental, social,

governance, and economic performance.

During this year, we enthusiastically heeded the national call for "Carbon Peaking & Carbon Neutrality (Dual Carbon)" by comprehensively implementing environmental compliance management, intensifying energy-conservation and emission-reduction endeavors, optimizing production processes, enhancing the efficiency of energy and resource utilization, and reducing greenhouse gas emissions across our manufacturing facilities, thereby positioning the company as a green benchmark within the industry. Collaborative partnerships were fostered to explore sustainable solutions, thus collectively contributing to a more ecologically sustainable future.

This year also underscored our commitment to innovation-driven excellence and quality primacy. Our technological innovation system and intellectual property management framework were further refined, with sustained increases in R&D investments yielding breakthroughs in core technologies. Holding steadfast to a customer-centric approach, we reinforced supply chain resilience, safety protocols, and quality control standards, and continued to uphold an industry-leading position through best-in-class products and services.

This year, upholding the principle of "talent is the foremost resource" and prioritizing a people-centric approach, we successfully delivered on the "Ten Practical Initiatives" for employees, continuously refined the employee rights protection system, and enhanced workforce satisfaction and fulfillment. Actively aligning with the national "Rural Revitalization" strategy, we organized consumer assistance campaigns, remained steadfast in philanthropic engagements, and conducted educational support programs to empower underprivileged

students.

This year also witnessed the ongoing refinement of corporate governance mechanisms. We deepened reforms across three institutional pillars, cultivated a highly efficient and agile process-driven organizational structure, accelerated digital transformation across all operations, and effectively strengthened risk management capabilities. Committed to transparency and regulatory compliance, we elevated the quality of information disclosure, fostered constructive investor engagement through multifaceted measures, and earned trust and recognition in capital markets through high-standard governance practices and compliant operations.

Confronted with evolving landscapes, emerging opportunities, and fresh challenges, TMIC will remain resolutely anchored in the new missions and responsibilities of central state-owned enterprises in the new era. We will persistently enhance our ESG management framework, integrate sustainable development principles more deeply into production and operational activities, and uphold a long-term orientation. By working closely with all societal stakeholders, TMIC will advance with unwavering determination toward a sustainable future, contributing its strength to realize harmonious coexistence between humanity and nature, as well as high-quality economic and social development.

LIU Zhiguo  
Party Secretary and Chairman  
Beijing Tianma Intelligent Control Technology Co., Ltd.



# Walking into TMIC

## Company Profile

Beijing Tianma Intelligent Control Technology Co., Ltd. ("TMIC") was established in July 2001 under the holding of Tiandi Science & Technology Co., Ltd., a subsidiary of China Coal Technology & Engineering Group (CCTEG). Headquartered at No. 27 Linhe South Street, Shunyi District, Beijing (Science and Technology Innovation Functional Zone), TMIC was listed on the Shanghai Stock Exchange's STAR Market in June 2023 (Stock Code: 688570). Adhering to the CCTEG's "1245" overarching development strategy, TMIC embraces the mission of "Pioneering intelligent mining technologies for coal mines and advance safe, efficient, and green mining practices" and aspires to become "a world-class integrated innovator of intelligent technologies, equipment, and services." Specializing in the R&D, production, sales, and servicing of unmanned intelligent mining control technologies and equipment, TMIC enhances coal mining safety and productivity through exceptional products and precision services. It strives to liberate miners from hazardous underground environments, transform coal mining into a safe and efficient profession, and deliver greater value to coal enterprises.

TMIC holds multiple national and municipal distinctions, including: National High-Tech Enterprise; National Technology Innovation Demonstration Enterprise; SASAC-designated World-Class Professional Leader Demonstration Enterprise; Benchmark Enterprise in the State-Owned Key Enterprise Management Excellence Initiative; National Manufacturing Single-Champion Enterprise; National Pilot Demonstration Unit for Integrated Development of New-Generation IT and Manufacturing; SASAC-designated Pilot Demonstration Unit for Digital Transformation; Smart Manufacturing Capability Maturity (CMMM) Level 4 Certification; Beijing's "Hidden Champion" Enterprise; and Beijing Integrity Brand Enterprise. The Company operates a state-certified Enterprise Technology Center and hosts a National Key Field Innovation Team ("Coal Intelligent Unmanned Mining Innovation Team"). It has been selected into China's first cohort of Excellence-Level Smart Factories and recognized as a National Green Factory, in addition to securing approval for establishing the National Key Laboratory of Digital-Intelligent Technologies for Unmanned Coal Mining and the Key Laboratory of Intelligent Coal Mine Safety Technology and Equipment under the Ministry of Emergency Management. Additionally, the Company participates as a co-building entity in developing the National Key Laboratory for Intelligent Coal Mining and Strata Control.

SASAC-designated  
World-Class Professional  
Leader Demonstration  
Enterprise

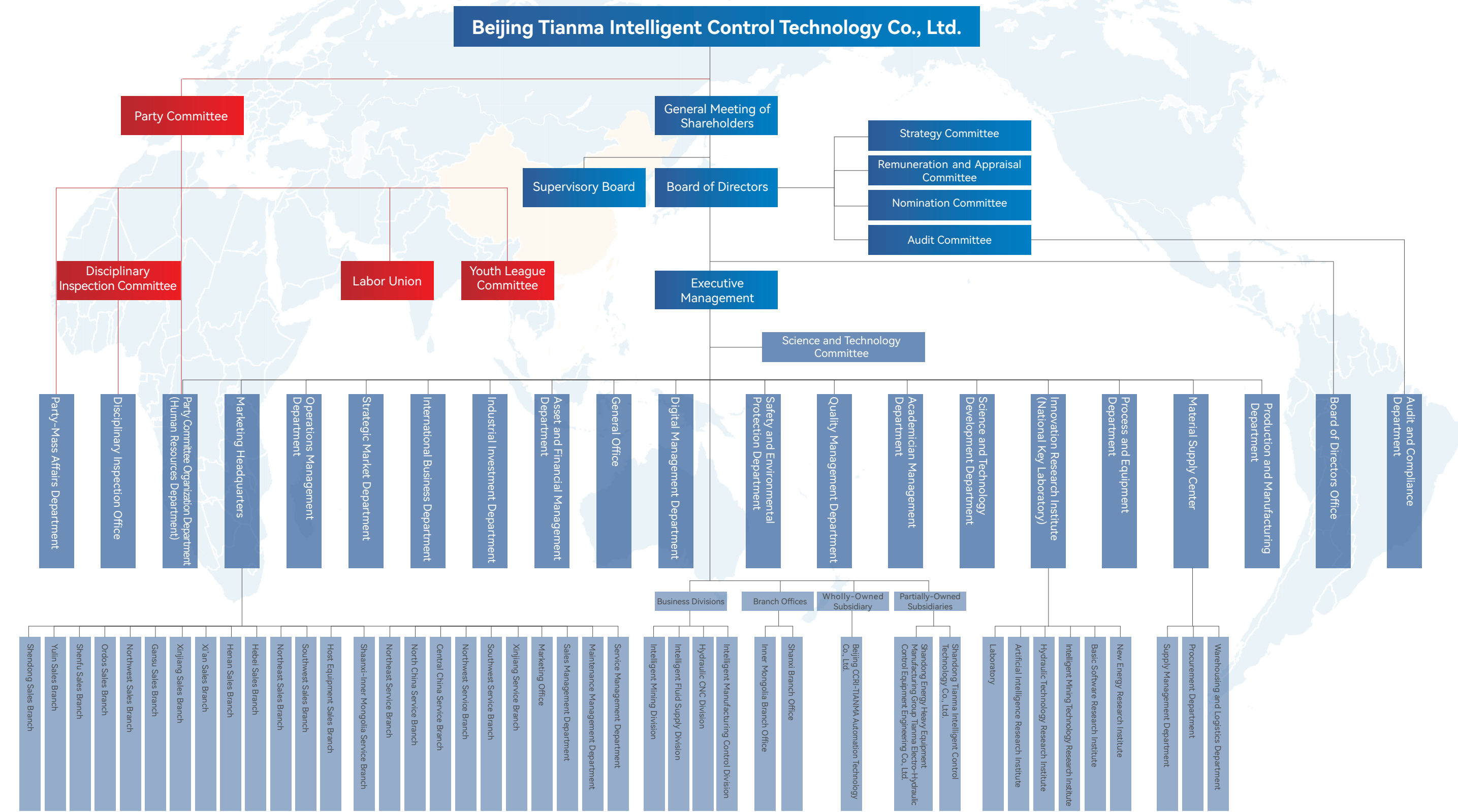
National First Cohort  
"Excellence-Level"  
Smart Factory and  
National Green  
Factory

National Key Laboratory of Digital-Intelligent  
Technologies for Unmanned Coal Mining  
National Key Laboratory for Intelligent Coal  
Mining and Strata Control

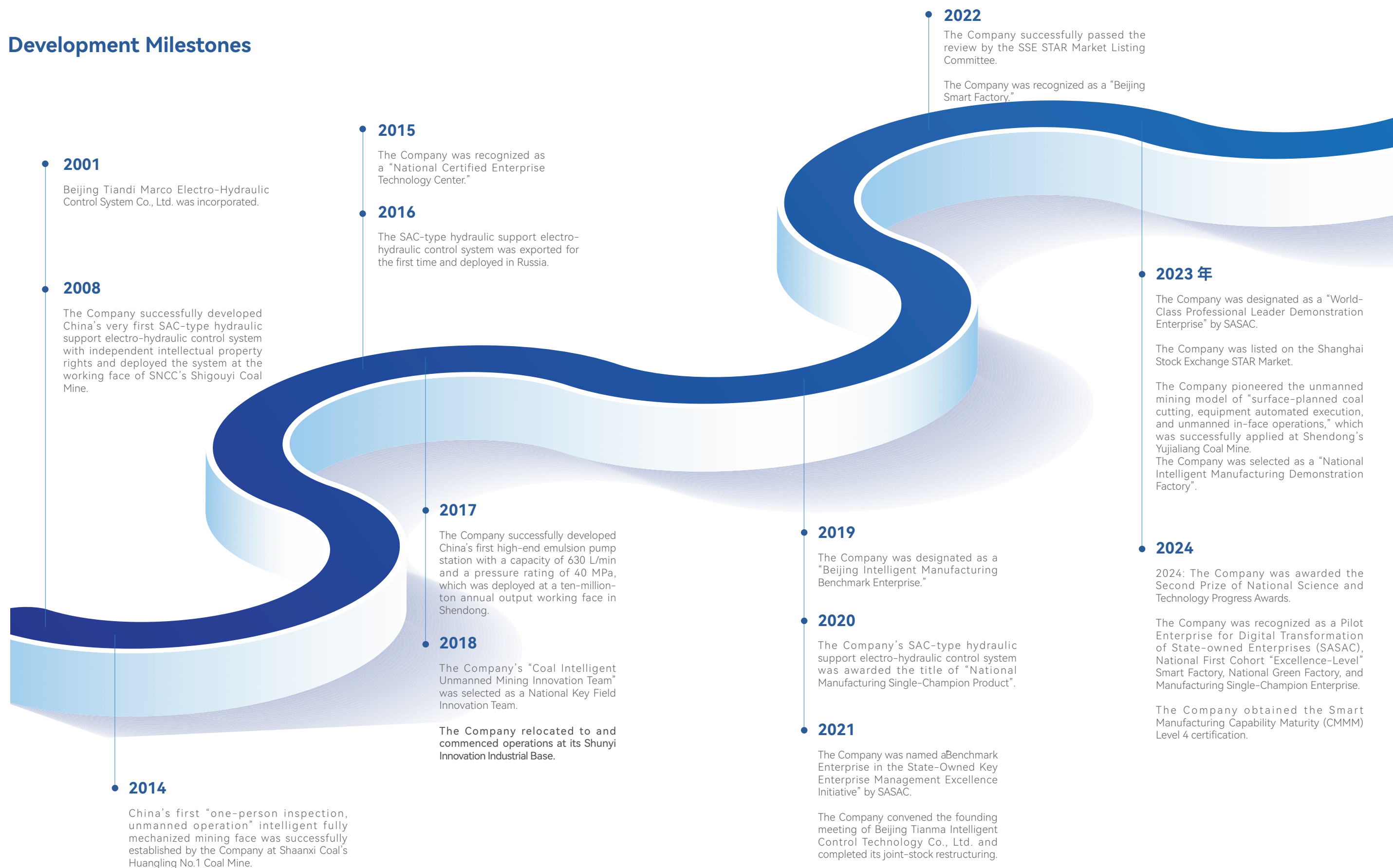




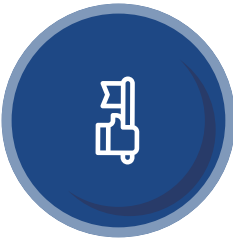
Organizational Structure



## Development Milestones



Corporate Culture



Our Mission

Pioneer intelligent mining technologies for coal mines and advance safe, efficient, and green mining practices



Our Vision

To become a world-class innovation-driven conglomerate integrating intelligent technologies, equipment, and services.



Core Values

Talent Focus, Customer Priority, Patriotic Commitment, and Pursuit of Excellence



Corporate Spirit

Pragmatism, Innovation, Diligence, and Excellence.



Work Ethos

Emancipating the Mind, Daring to Innovate, Practicing Pragmatism, and Acting Promptly.

Honors Received in 2024



April 2024

Manufacturing Single-Champion Enterprise

Ministry of Industry and Information Technology



June 2024

Second Prize of National Science and Technology Progress Awards

The State Council



November 2024

Smart Manufacturing Capability Maturity (CMMM) Level 4 Certification

Assessment agency authorized by the CMMM Assessment Committee



December 2024

National First Cohort "Excellence-Level" Smart Factory

Ministry of Industry and Information Technology



January 2025

National Green Factory

Ministry of Industry and Information Technology.



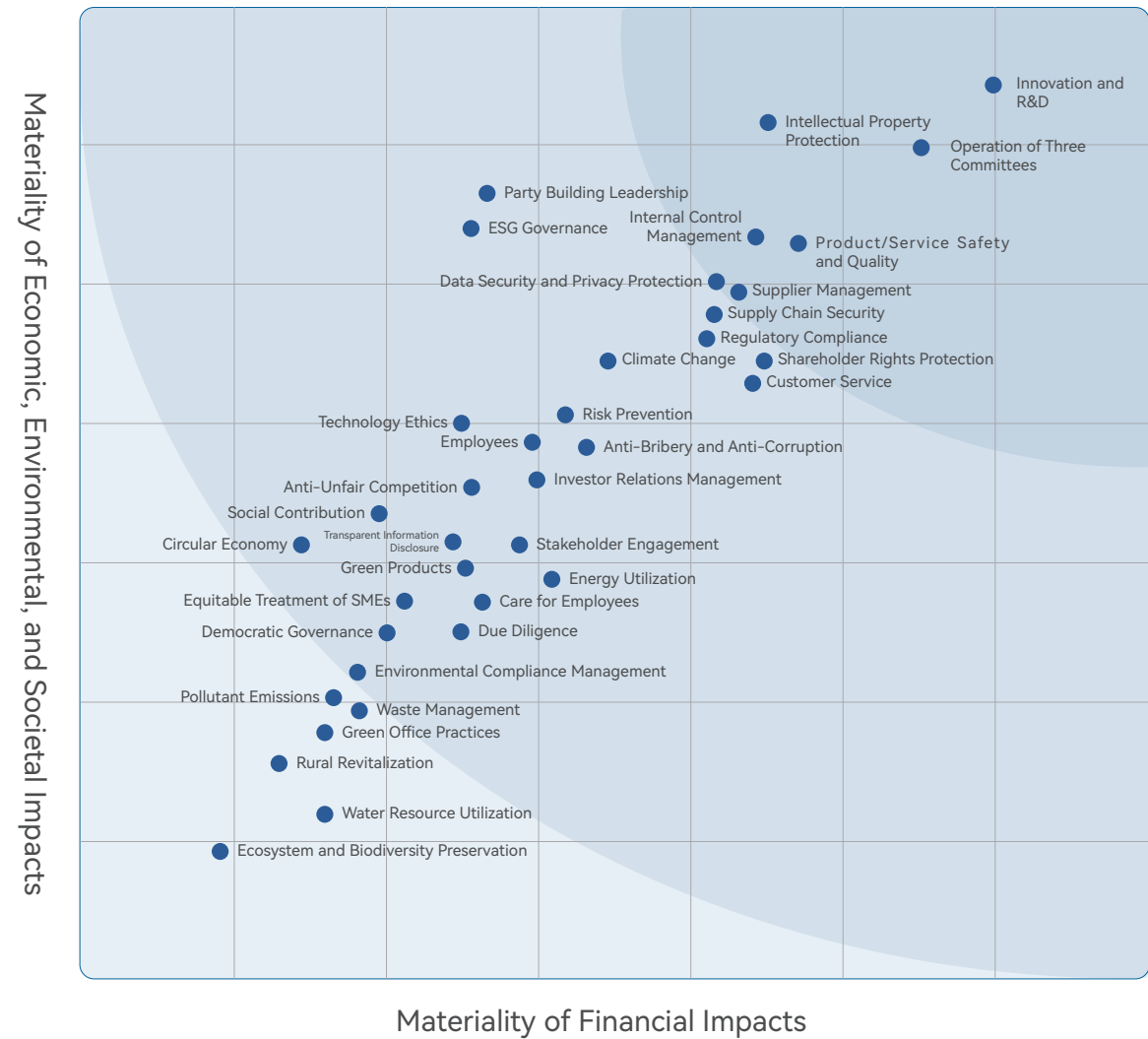
# Materiality Assessment

## Materiality Analysis

The Company, based on the 21 topics outlined in Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies -- Sustainability Report (Trial), comprehensively considers environmental, social, and governance (ESG) factors. Upon benchmarking against the United Nations Sustainable Development Goals (SDGs) and the Global Reporting Initiative (GRI) Standards, and after assessing the materiality of relevant topics based on their impact on corporate growth, as well as their financial, economic, environmental, and societal impacts, the Company has identified and prioritized 37 material topics. These topics have been established as the central focus areas for the Company's ESG management and disclosure practices.



## Materiality Analysis Outcomes

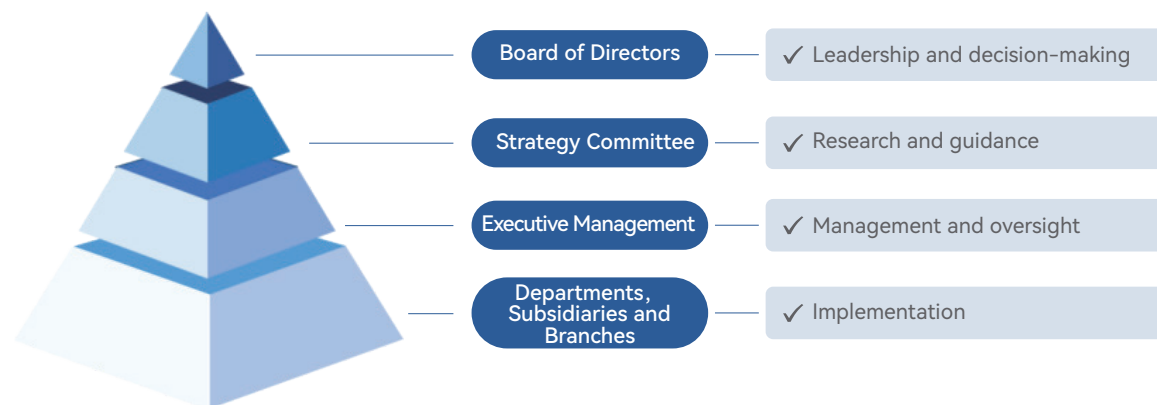




# ESG Governance

## ESG Governance Structure

The Company has established a comprehensive, hierarchical, and well-defined ESG governance framework with clear responsibilities and efficient operational mechanisms across all levels and departments, providing organizational assurance for ESG implementation.



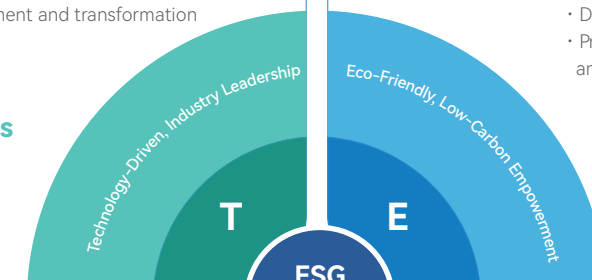
## ESG Philosophy

The Company has developed a unique "ESG Philosophy" underlain by its corporate vision, mission, and core values. This philosophy encompasses multiple dimensions, including environmental, social, and governance-related topics, providing a comprehensive representation of our ESG ethos.

### ESG Strategic Objectives

- Continuously boost investments in R&D and innovation;
- Stimulate the vitality of technological innovation and enhance innovation capabilities;
- Accumulate a wealth of innovative achievements;
- Promote the application of cutting-edge technologies and the commercialization of innovation outcomes;
- Drive technological advancement and transformation across the industry.

### Corresponding SDGs



### ESG Strategic Objectives

- Enhance environmental protection management;
- Proactively identify and address climate risks;
- Implement green operations to achieve sustainable development;
- Develop green products and solutions;
- Promote industry-wide green transformation and upgrading.

### Corresponding SDGs



### ESG Strategic Objectives

- Align with national strategies;
- Actively fulfill social responsibilities;
- Build a sustainable supply chain;
- Foster long-term partnerships with clients and suppliers;
- Protect employee rights and support career development;
- Ensure healthy and safe working environments.

### Corresponding SDGs



### ESG Strategic Objectives

- Strengthen product safety and quality management;
- Empower customer development with digital intelligence and deliver high-quality services;
- Build a robust corporate governance system;
- Enhance internal control and compliance management;
- Foster an incorruptible and fair corporate environment.

### Corresponding SDGs



## ESG Working Mechanism

The Company has formulated and issued the "ESG Management Measures," establishing a scientifically efficient ESG organizational framework. This institutionalizes ESG governance protocols to progressively elevate ESG stewardship and enhance the quality of ESG disclosure practices.

An ESG indicator system has been established with clearly defined responsibilities for indicator management. The system operates on an annual cycle, with flexibility for adjustments based on practical operational requirements. The ESG Steering Committee coordinates annual reviews, updates, and refinements to the ESG indicator system across

all departments, branch offices, and subsidiaries, taking into account regulatory requirements, the current state of ESG management, and business practices to produce an annual ESG indicator system. Through an "establish-operate-update" management model, the Company is cultivating a vibrant and sustainable long-term ESG management mechanism.

The ESG Steering Committee coordinates with relevant departments, subsidiaries, and branch offices to compile the ESG report in accordance with the annual ESG indicator system, and implements initiatives for ESG management improvement. In 2024, all 15 specific measures for enhancing ESG management were successfully executed.





# Environmental Topics

TMIC steadfastly pursues a path of green and low-carbon development in close alignment with China's "Dual Carbon" strategy. Through production process optimization, equipment efficiency enhancement, energy structure improvement, management measures upgrading, resource recycling, and awareness campaign reinforcement, we persistently strengthen climate change resilience and advance green operational paradigms to demonstrate our sense of responsibility and commitment to "Dual Carbon".

Contributing to SDGs

12 负责任  
消费和生产

13 气候行动

14 水下生物



# Addressing Climate Change

## Greenhouse Gas Emissions

### Climate Change Management

Prioritizing climate change management, we have put climate change management at the core of our corporate development strategy. We not only comprehensively implement energy conservation and emission reduction measures, but also adopt advanced production processes to reduce greenhouse gas emissions during manufacturing. Concurrently, we actively explore renewable energy applications through the construction of distributed photovoltaic power stations, thus increasing the proportion of green electricity in our energy portfolio.

### The “Dual Carbon” Strategy

Amidst the era of "Dual Carbon" strategic imperatives, we have embedded this agenda into our operational DNA. We intensify energy-saving technological upgrades across energy management, production manufacturing, and product R&D. Active participation in local government-led carbon reduction exchanges enables knowledge transfer from industry leaders in dual-carbon practices. In the years ahead, we will deepen strategic "Dual Carbon" initiatives, leveraging technological innovation to contribute globally to climate change mitigation.

### Greenhouse Gas Sources & Types

Our greenhouse gas emissions primarily derive from process exhaust emissions, fuel combustion processes, and indirect emissions from electricity consumption. Process emissions mainly consist of minimal non-methane hydrocarbons from encapsulation operations. Fuel combustion emissions originate from CO<sub>2</sub> and other GHGs directly emitted through gasoline consumption of company vehicles and natural gas usage in kitchens.

### Greenhouse Gas Emissions Management

The Company places high emphasis on greenhouse gas emissions management by establishing the "Energy Conservation and Emission Reduction Management Measures" and forming a dedicated leadership team to oversee this initiative. Clear responsibilities for energy conservation and emission reduction have been assigned to each department, thereby enhancing the relevant management mechanisms. Furthermore, in 2024, the Company engaged a third-party professional agency to conduct an annual carbon inventory in accordance with the "Guidelines for Greenhouse Gas Emission Accounting and Reporting for Mechanical Equipment Manufacturing Enterprises (Trial)." This assessment provided an accurate calculation of Scope 1 and Scope 2 carbon dioxide emissions, laying a solid foundation for the development of future energy-saving and carbon-reduction measures.

## Emission Reduction

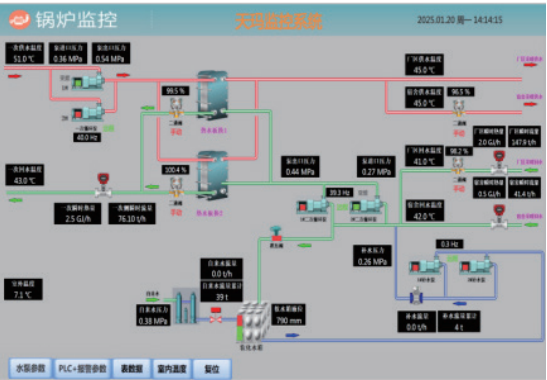
### Greenhouse Gas Emission Reduction Management

The Company has implemented various measures to reduce Scope 1 greenhouse gas emissions, such as providing commuter shuttle services and encouraging employees to use public transportation for eco-friendly commuting. To address Scope 2 emissions, the Company has installed smart lighting systems in office areas, constructed distributed photovoltaic power stations on available rooftop spaces, implemented energy-saving modifications to solar water heating systems, and launched company-wide green office initiatives to promote environmentally conscious practices. Through these comprehensive measures, the Company achieved a reduction of 815 tons of carbon dioxide emissions throughout the year.


Case Study

Upgrade of Solar Water Heating System and Heat Exchange Station

This year, the Company enhanced its solar water heating system and heat exchange stations by replacing all fixed-frequency motors with variable-frequency motors in equipment rooms, thereby reducing electricity consumption. An intelligent heat exchange information system was implemented, transitioning from the traditional standalone operation mode to a remote, smart monitoring operation mode. This system displays and records crucial data, including water temperature, energy consumption, and electricity usage, facilitating analysis of energy consumption and conservation. It automatically adjusts water temperature in response to changes in the external environmental temperature, thereby enhancing energy efficiency. System data indicates that the solar-powered water heating system saved approximately 1.1 million kWh of electricity throughout the year, equivalent to a reduction of approximately 585 tons of carbon dioxide emissions.




Heat Exchange Information System



110

million kWh

Electricity Savings



585

tons

Carbon Dioxide Emission Reduction

## Environmental Management

## Pollutant Emissions

## Waste Gas

## Waste Gas Emission Compliance

The Company's primary waste gas emissions consist of volatile organic compounds (VOCs). An advanced waste gas treatment system has been put in place, and regular testing is conducted by third-party institutions with CMA certification. The non-methane hydrocarbon emission concentration is 3.52 mg/m<sup>3</sup>, significantly lower than Beijing's emission standard of 50 mg/m<sup>3</sup>.



## Waste Gas Management and Reduction Measures

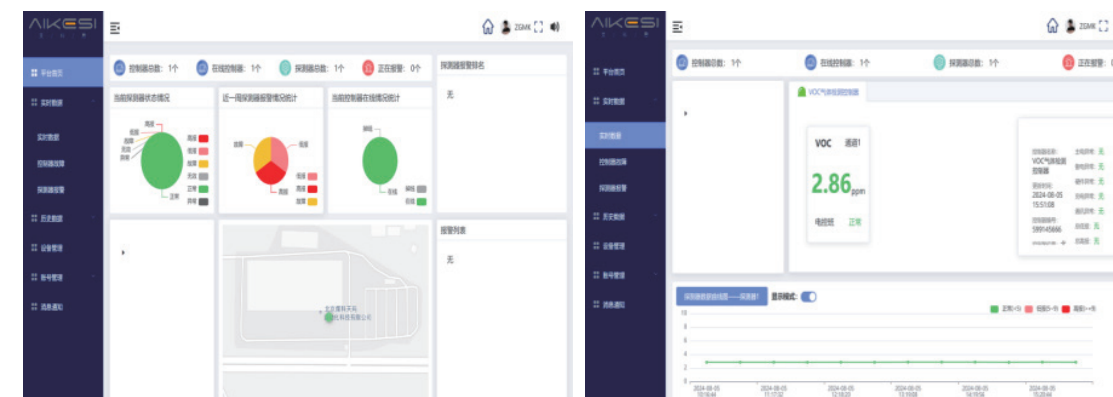
In accordance with the "Integrated Emission Standard of Air Pollutants," the Company manages production waste gases through two primary approaches: First, by establishing a waste gas treatment system that utilizes a "pre-treatment + activated carbon adsorption + plasma + composite photocatalysis" purification process; and second, by installing VOCs gas detection alarms and deploying a monitoring system. This system enables precise monitoring of VOCs concentration during encapsulation operations and provides over-limit alerts, along with historical data review capabilities for emission analysis and tracking.



## Annual Highlights of Waste Gas Management

## Case Study Implementation of VOCs Concentration Alarm Monitoring System

This year, the Company successfully implemented a VOCs concentration alarm monitoring system to monitor VOCs gas concentrations emitted from encapsulation operations and provide alerts in case of excessive levels. The system presents daily trends in gas concentrations and allows for the review of historical alarm data. Throughout the year, the Company consistently maintained low VOCs gas concentration levels.



## Wastewater

## Wastewater Emission Compliance

The Company has installed wastewater treatment facilities to process and fully recycle all industrial wastewater, resulting in zero industrial wastewater discharge. Regular testing of domestic wastewater is carried out by third-party agencies holding CMA certification, ensuring a 100% compliance rate for domestic wastewater discharge.



0 Domestic Wastewater Compliance Rate



**100%**  
Industrial Wastewater Zero Discharge





## Wastewater Management and Reduction Measures

The Company regularly engages CMA-certified third-party agencies to conduct manual sampling and testing of domestic wastewater, thus guaranteeing the accuracy and reliability of discharge data. Furthermore, the Company operates industrial wastewater treatment facilities that produce reclaimed water conforming to national standard of "The Reuse of Urban Recycling Water -- Water Quality Standard for Urban Miscellaneous Use". Such reclaimed water is utilized for workshop operations, toilet flushing, road cleaning, and landscape irrigation, facilitating water resource circulation and reducing fresh water consumption.

### Case Study Industrial Wastewater Treatment System

This year, the Company continued to refine its industrial wastewater recycling management. Utilizing the established MVR wastewater recycling treatment facility, 550 tons of industrial wastewater were processed, yielding 440 tons of reusable water that meets urban reuse standards. Of this, over 360 tons were used as industrial recycled water, while fresh industrial water consumption was limited to 33 tons, achieving an industrial water recycling rate exceeding 90%.



**550** tons  
Industrial Wastewater  
Processed

**440+** tons  
Reusable Water



**360+** tons  
Industrial Recycled  
Water

**90%**  
Water Recycling  
Rate

## Waste Management

### Hazardous Waste Management

The Company has implemented comprehensive hazardous waste management policies and record-keeping procedures. Dedicated temporary storage facilities that comply with hazardous waste storage requirements have been installed, and designated personnel have been assigned for inventory management. Annual disposal and transfer plans are formulated based on actual production conditions, and all disposals are reported to local environmental authorities through the national solid waste management platform, ensuring full regulatory compliance.

## Cleaner Production

In recent years, the Company has advanced cleaner production through equipment performance upgrades, introduction of green processes, and enhanced site management. Equipment improvements include the installation of oil mist collectors on large machining equipment. Green process initiatives encompass the banning of dichloromethane and other nationally prohibited chemicals, as well as the use of higher-quality epoxy resins to reduce VOCs emissions. Site management enhancements include stricter inspections, rigorous accountability, and prompt resolution of equipment leakage issues.



Oil Mist Collectors

### Case Study Annual Waste Management Highlights

The Company's hazardous waste management accomplishments are twofold: Firstly, enhancing management at facilities outside Beijing by investing approximately RMB 100,000 in hazardous waste storage containers to prevent leakage and the spread of contamination; Secondly, continuing to improve industrial wastewater recycling management to further reduce the generation of hazardous waste, resulting in a 2% year-on-year decrease in hazardous waste disposal at the Shunyi facility.



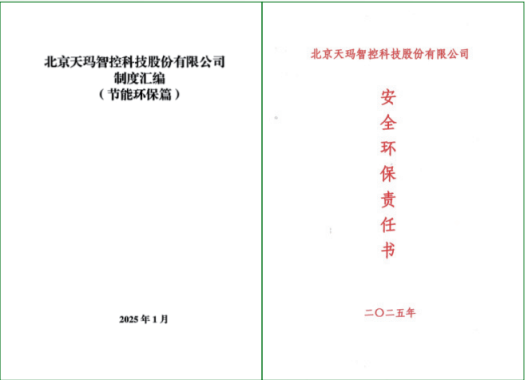
Hazardous Waste Storage Facility outside Beijing



# Environmental Compliance Management

## Environmental Compliance Management

In carrying out environmental protection management, TMIC strictly adheres to pertinent laws and regulations, including the Environmental Protection Law of the People's Republic of China, Water Pollution Prevention and Control Law of the People's Republic of China, and Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution. Six energy conservation and environmental management policies have been established and put into implementation, including “TMIC Environmental Protection Management Measures”, “TMIC Emergency Response Plan for Environmental Incidents”, and “TMIC Environmental Monitoring Implementation Rules”. A leadership group for environmental protection—chaired by the top executive—and a dedicated department for environmental management have been instituted to clarify responsibilities across all governance levels. At the beginning of each year, all employees sign a “Safety and Environmental Responsibility Agreement” to decompose environmental protection obligations into every functional role.



## Emergency Response Plan for Environmental Incidents

TMIC has formulated and published an “Emergency Response Plan for Environmental Incidents”, which underwent expert review and was filed with local authorities. The plan encompasses eight components: General Provisions, Overview, Environmental Risk Source Identification, Risk Assessment, Organizational Structure and Responsibilities, Emergency Response Measures, Post-incident Management, and Safeguard Mechanisms. Following its issuance, specialized emergency drills focusing on hazardous waste leakage are conducted once every year.



Specialized Emergency Drill for Hazardous Waste Leakage

## Environmental Regulatory Violations



No instances of environmental regulatory violations were recorded

## Environmental Risk Management

TMIC has carried out comprehensive environmental risk assessments across all operational departments and implemented appropriate control measures. Monthly environmental inspections are implemented to document identified issues, followed by prompt corrective actions coordinated with relevant departments.

重要影响环境因素评价表											
序号	环境因素名称	评价标准	环境影响						评价结果	控制措施	评价日期
			大气	水	土壤	噪声	固体废物	能源资源			
1	生产过程中产生的废气	GB 16161-2015	●						中等	加强废气治理设施运行维护，确保达标排放	2024-03-01
2	生产过程中产生的废水	GB 8961-2013		●					中等	加强废水处理设施运行维护，确保达标排放	2024-03-01
3	生产过程中产生的固体废物	GB 18483-2020				●			中等	加强固体废物分类、贮存、处置管理	2024-03-01
4	生产过程中产生的噪声	GB 12348-2008				●			中等	加强噪声治理设施运行维护，确保达标排放	2024-03-01
5	生产过程中产生的能源资源消耗	GB 18655-2019						●	中等	加强能源资源节约利用，降低消耗	2024-03-01
6	生产过程中产生的温室气体排放	GB 18655-2019						●	中等	加强温室气体排放控制，降低排放	2024-03-01
7	生产过程中产生的挥发性有机物排放	GB 18655-2019						●	中等	加强挥发性有机物排放控制，降低排放	2024-03-01
8	生产过程中产生的危险废物	GB 18483-2020					●		中等	加强危险废物分类、贮存、处置管理	2024-03-01
9	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
10	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
11	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
12	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
13	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
14	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01
15	生产过程中产生的其他污染物排放	GB 18655-2019						●	中等	加强其他污染物排放控制，降低排放	2024-03-01

序号	环境因素	评价标准	评价结果	控制措施	评价日期
1	生产过程中产生的废气	GB 16161-2015	中等	加强废气治理设施运行维护，确保达标排放	2024-03-01
2	生产过程中产生的废水	GB 8961-2013	中等	加强废水处理设施运行维护，确保达标排放	2024-03-01
3	生产过程中产生的固体废物	GB 18483-2020	中等	加强固体废物分类、贮存、处置管理	2024-03-01
4	生产过程中产生的噪声	GB 12348-2008	中等	加强噪声治理设施运行维护，确保达标排放	2024-03-01
5	生产过程中产生的能源资源消耗	GB 18655-2019	中等	加强能源资源节约利用，降低消耗	2024-03-01
6	生产过程中产生的温室气体排放	GB 18655-2019	中等	加强温室气体排放控制，降低排放	2024-03-01
7	生产过程中产生的挥发性有机物排放	GB 18655-2019	中等	加强挥发性有机物排放控制，降低排放	2024-03-01
8	生产过程中产生的危险废物	GB 18483-2020	中等	加强危险废物分类、贮存、处置管理	2024-03-01
9	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
10	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
11	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
12	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
13	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
14	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01
15	生产过程中产生的其他污染物排放	GB 18655-2019	中等	加强其他污染物排放控制，降低排放	2024-03-01

## Environmental Management System Certification

A GB/T 24001-compliant environmental management system has been operationalized and secured formal accreditation following internal audits, management reviews, and third-party certification.



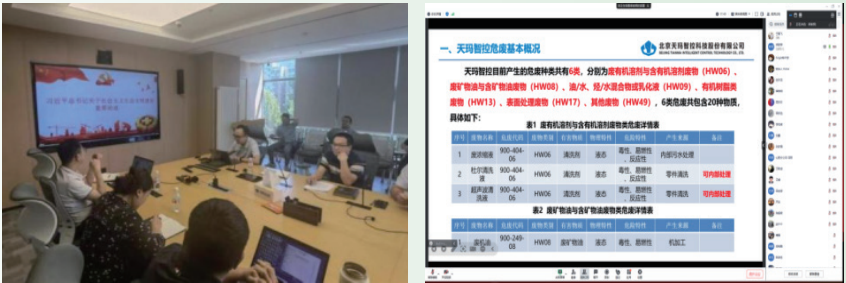


Environmental Protection Training

Four specialized training sessions on energy conservation and environmental stewardship were conducted in 2024, covering: critical environmental directives from President Xi Jinping; green factory development principles; hazardous waste management protocols; and energy efficiency optimization strategies. These sessions engaged over 200 participants, substantially enhancing workforce competencies in environmental management and ecological awareness.

4  
environmental protection training sessions conducted

200+  
participants trained



Energy Utilization

Energy Conservation Management

TMIC has progressively enhanced its energy management framework by formulating and implementing the "TMIC Energy Conservation & Emission Reduction Management Measures" and "TMIC Energy Conservation and Environmental Protection Performance Evaluation and Environmental Liability Accountability Measures." Our certification under the GB/T23331-2020/ISO50001:2018 Energy Management Systems Standard has substantively sharpened our organizational capabilities in energy governance.



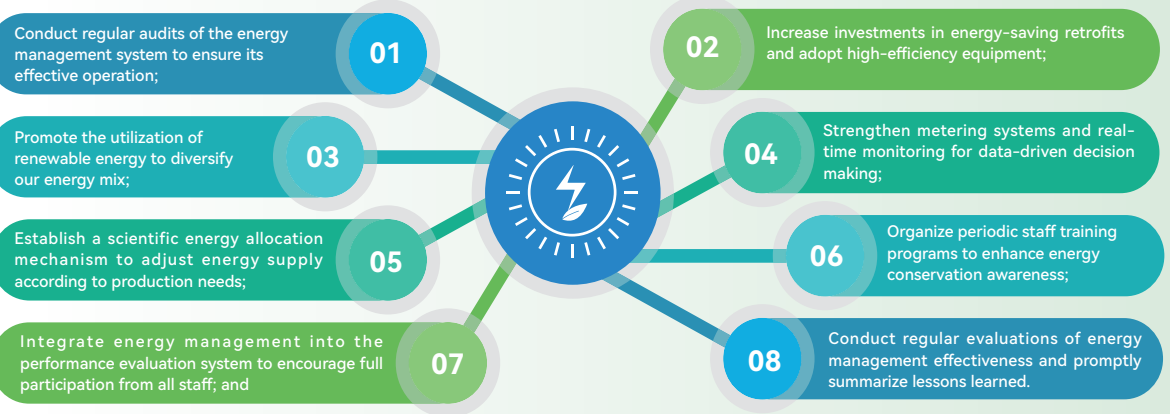
Environmental Advocacy Initiatives

This year, in response to National Energy Conservation Week with the theme "Green Transformation, Energy Conservation Drive" and National Low-Carbon Day with the theme "Green and Low-Carbon, Building a Beautiful China," TMIC organized promotional activities and partook in energy-saving and carbon-reduction training hosted by the Beijing Green Industry Development Promotion Association. At our production sites, energy-saving slogans and promotional videos were continuously displayed on LED screens and team display boards. Over 400 employees watched a series of educational videos on energy-saving and carbon-reduction, including "Green Transformation, Energy Conservation Drive," "Understanding Carbon Peaking and Carbon Neutrality," and "Shunyi District Energy Conservation Video – Ten Energy-Saving Tips."



Energy Management Strategy

To further carry through the "Dual Carbon" strategy while achieving corporate energy management objectives, TMIC have established an eight-pillar strategic framework to comprehensively advance energy management efforts, ensuring efficient and sustainable energy use:





### Case Study **Rooftop Distributed Photovoltaic Power Station**

In accordance with the principle of "local construction, local grid connection, and local consumption," TMIC has established a distributed photovoltaic power station on the rooftop of the joint factory in the Shunyi Innovation Industrial Base, achieving efficient allocation and utilization of space resources while effectively promoting land conservation and clean energy adoption. The distributed photovoltaic power station is intelligently interconnected with the power grid, converting solar energy into electricity to supplement our distribution network, with an expected annual generation of 720,000 kWh upon integration, significantly reducing greenhouse gas emissions.



### Case Study **Deployment of Hydrogen Fuel Cell Shuttle Bus**

This year, TMIC introduced a new shuttle bus route and deployed a hydrogen fuel cell bus. In contrast to traditional fossil fuel buses, the new bus uses hydrogen as fuel, emitting only water during operation, thus achieving zero pollutant emissions, reducing environmental pollution, and improving urban air quality. By encouraging employees to use the shuttle and reduce private car usage, the Company decreased carbon dioxide emissions by 230 tons throughout the year.



## Water Resource Utilization

### Water Resource Management

TMIC strictly complies with national laws and regulations such as the Water Law of the People's Republic of China and the Regulations of Beijing Municipality on Water Conservation, ensuring the legality and compliance of its water resource utilization. Based on operational needs, the Company sets realistic water usage targets and enhances water efficiency through optimized production processes and workflows. Recognized as a "Beijing Water-Saving Enterprise," TMIC has implemented a water resource management information system and intensified water-saving technological upgrades, investing over RMB 2,000,000 in an internal circulation treatment device for production wastewater, effectively reducing industrial freshwater consumption.



## Ecosystem Conservation and Biodiversity Protection

In strict compliance with environmental impact assessment laws and regulations, TMIC has engaged a professional agency to evaluate the environmental impact of its Shunyi Innovation Industrial Base construction project and pertinent investment projects. The resulting environmental impact assessment report has been approved by the local environmental protection authorities.

### Case Study **"Every Plant Awaits Spring, Together We Protect the Green" Tree Planting Festival Volunteer Service Activity**

TMIC took an active part in the Tree Planting Festival Promotion Week themed activity organized by Beijing Communist Youth Forest Farm on March 12, 2024. The Company arranged for young employees to visit the Communist Youth Riverside Forest Park in Shunyi District to partake in the "Lei Feng Spirit Lives On - Green Space Cleanup" themed volunteer event, practicing eco-conscious principles through concrete actions.





# Circular Economy

## Green Technology Upgrades and Recycling

In 2024, TMIC replaced fixed-frequency motors in heat exchange stations with variable-frequency motors and upgraded all air conditioners in office areas from Grade 5 to Grade 1 energy efficiency to reduce electricity consumption. Ongoing enhancements to the production wastewater treatment and recycling system further decreased industrial freshwater intake. Lightweight design principles were adopted to reduce product weight and energy consumption.



## Green Design

TMIC holistically addresses environmental impacts across product design, production, transportation, and recycling, establishing documentation to implement eco-design practices that align with green development principles throughout the product lifecycle.

In product design, TMIC embraces lightweight precision design principles to reduce product weight. A variety of molding techniques are employed to minimize material waste, shorten production time, and ensure greener manufacturing processes.

## Green Office Practices and Operations

11  
green office  
initiatives

RMB  
300,000+  
saved in  
electricity costs

Green office practices and operations are integral to TMIC's commitment to sustainable development. This year, we launched a comprehensive green office initiative across the organization, promoting environmentally friendly practices in 11 key areas, such as conserving electricity for lighting, optimizing air conditioning usage, minimizing paper consumption in offices, and embracing green procurement strategies. On top of these, we have proactively undertaken energy-efficient and eco-friendly renovations in our office spaces, including the installation of energy-saving light fixtures and water-conserving faucets. Furthermore, we have implemented a smart lighting system that intelligently adjusts lighting based on different scenarios and occupancy, effectively eliminating unnecessary "always-on" lights. These efforts have resulted in annual electricity cost savings topping RMB 300,000. We have also introduced automated office supply dispensing cabinets, which streamline the distribution process and enhance the efficient management of office supplies.



Case Study

National Green Factory Certification

As part of our commitment to sustainability, we embarked on the journey to establish a green factory this year. A dedicated leading group, chaired by TMIC's top executive, was formed to spearhead this initiative. Our efforts were recognized with the prestigious Beijing Green Factory (Four-Star) award in July 2024, followed by the National Green Factory certification in January 2025.

Beijing Green Factory (Four-Star)  
awarded in July 2024

National Green Factory  
awarded in January 2025

## Packaging Materials

Aligned with our "Packaging Management Measures" and the objectives of enhancing product quality while reducing waste, we have undertaken a multifaceted approach to optimize and recycle packaging materials. In the realm of product transportation, we have strived to minimize the use of outer packaging, thereby decreasing energy consumption and mitigating environmental impact during transit. Notably, our packaging usage in 2024 amounted to

**747.82** tons, reflecting a significant **14.9%** reduction from the previous year's 878.58 tons.





# Social Topics

TMIC embraces its corporate mission of “pioneering intelligent mining technologies for coal mines and advance safe, efficient, and green mining practices.” Upholding the principles of innovation-driven development and safety in production, we consistently increase investment in research and development, accelerating the pace of product upgrades and technological innovation.

We are deeply committed to the philosophy that “talent is the primary resource.” By fostering harmonious and stable labor relations and continuously refining our rights protection system, we ensure that talent development and corporate growth progress hand in hand.

Moreover, we actively engage in philanthropic endeavors to give back to society, rendering unremitting support to rural revitalization and volunteer services. These efforts, while contributing to social harmony and stability, are representative of our commitment as a state-owned enterprise.

## Contributing to SDGs

1

No Poverty

2

Zero Hunger

3

Good Health and Well-being

4

Quality Education

5

Gender Equality

8

Decent Work and Economic Growth

10

Reduced Inequalities

12

Responsible Consumption and Production

17

Partnerships for the Goals



# Employee Rights

## Employee Recruitment

TMIC is resolute in safeguarding the legitimate rights and interests of its employees. We strictly adhere to laws and regulations such as the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Anti-Employment Discrimination Law of the People's Republic of China, and the Employment Promotion Law of the People's Republic of China. We have established comprehensive policies to provide a conducive workplace environment, ensuring the full protection of employees' rights and fostering a healthy, harmonious, and equitable workplace.

### Recruitment Policies and Implementation

TMIC has formulated key policies and standards including the "Recruitment Management Measures," "Employee Handbook," and "Position and Rank Management Measures." We uphold the principle of fair employment, valuing merit above all. Throughout the talent recruitment and selection process, we maintain transparency, justice, and fairness, treating all candidates with equality and respect while firmly opposing any form of recruitment discrimination.

### Diversity and Equal Opportunity

Upholding its core values of "talent-oriented, customer first, patriotism, and pursuit of excellence," TMIC vigorously promotes socialist core values and a culture of diversity and inclusion. We treat employees from diverse regions, ethnicities, genders, religions, and cultural backgrounds with fairness and justice, and have established a dual-channel, four-sequence career development path to ensure equal growth opportunities for all employees.

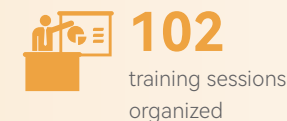
### Measures Taken for Labor Standard Violations

The Company has not observed any violations of labor standards or its recruitment policies. We have implemented a labor dispute early warning mechanism, effectively managing potential conflicts through timely communication, mediation, and arbitration while ensuring proper resolution of any related disputes.

### Avoiding Child Labor and Forced Labor

TMIC steadfastly respects and protects human rights, strictly adhering to the Universal Declaration of Human Rights, the Constitution of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors, the Law of the People's Republic of China on the Protection of Women's Rights and Interests, and the Law of the People's Republic of China on the Protection of Disabled Persons. We prohibit the recruitment and use of child labor, safeguard the rights of female employees, and oppose all forms of employment discrimination.

## Employee Development and Training



### Vocational Training System

In 2024, TMIC conducted 102 training sessions covering all employees. We crafted and issued the "TMIC Medium and Long-term Talent Development Project", offering strategic direction for talent development efforts over the next three years. We persistently advanced the development of our three key talent initiatives—"Leading Geese", "Kunpeng", and "Young Eagles"—implementing tailored training programs for newly promoted managers, product managers, project managers, client managers, and other talent groups, with these efforts recognized as exemplary cases in Beijing's digital talent cultivation.

### Case Study

#### Building a Pool of Project Management Professionals

TMIC initiated a project management training program following the talent development framework of "Kunpeng" initiative. Through a "training-practice integrated" approach, the program supported the Company in meeting business objectives while fostering project management expertise.

15 project management professionals were certified through this program, which equipped participants with proficiency in project management tools, effective oversight of critical project domains, and the ability to ensure timely project delivery aligned with milestone schedules.



### Employee Incentive and Promotion Policy

TMIC has formulated the "Position and Rank Management Measures" to establish a clear and smooth career development pathway. Horizontally, it is divided into four sequences: management, technical, operational, and business. Vertically, there are six levels: junior, intermediate, senior, advanced, expert, and chief expert. For employees recruited externally, their rank is determined based on their educational background and years of work experience. Fresh graduates with bachelor's or master's degrees are provided with a two-year performance protection period upon joining the Company, during which they are promoted automatically. Employees earn promotion qualifications by accumulating performance points, and the Company organizes a unified rank review every year from July to September. Additionally, an internal transfer system is in place.

The Company links rank with salary, clearly defining the relationship between rank adjustment and salary adjustment in the "Compensation Management Measures," thereby providing motivation for each employee's rank promotion.



**53**  
employees participated  
in job rotations

**19**  
employees in  
external rotations

**34**  
employees in  
internal rotations

### Employee Career Planning and Position Change Support

To support employees' diversified career development, TMIC implements a systematic job rotation plan, providing employees with more opportunities to gain experience and make career choices. This initiative helps employees continuously enhance their core competencies. In 2024, the Company arranged job rotations for 53 employees, including 19 external rotations and 34 internal rotations. These rotations involved employees from various departments, including administration, R&D, production, process engineering, quality control, procurement, warehousing & logistics, and marketing.

## Democratic Governance

TMIC implements democratic governance in compliance with legal requirements, refining open disclosure mechanism for factory operations. Through employee congresses, intranet communications, and the installation of informational display boards and bulletin boards, the Company communicates policies and shares critical updates with employees, ensuring timely information dissemination. In 2024, two employee congresses were convened to review incentive and disciplinary policies impacting employee welfare, elect new employee representatives to the Board of Directors and the Supervisory Board, and establish a platform for democratic decision-making. Member representatives participated in major decision-making processes through discussions and voting, ensuring broad inclusivity and democratic nature of the decisions.



## Employee Satisfaction

**98.3%**  
Employee  
satisfaction

### Employee Satisfaction Survey (Employee Sentiment Survey)

TMIC conducts satisfaction surveys covering all employees on aspects such as training programs and workplace conditions. We vigorously incorporate employee feedback to enhance workplace experiences, which has led to an impressive employee satisfaction rate of 98.3%.

### Performance Feedback and Appeals

TMIC maintains transparent channels for performance feedback and appeals. Managers are required to conduct performance counseling and face-to-face meetings with employees to ensure that they clearly understand their performance appraisal outcomes. Employees can review and appeal against their performance appraisal results via the performance appraisal system. Through these institutional measures, the Company provides developmental guidance to employees and safeguards their rights to information and appeal.

### Labor Disputes

TMIC strictly adheres to laws and regulations such as the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, and the Trade Union Law of the People's Republic of China. We are committed to fostering harmonious labor relations, improving labor employment practices in compliance with laws and regulations, and promoting the reasonable and orderly mobility of employees. Additionally, the Company has established an early warning mechanism for labor disputes, with an aim to resolve any labor disputes and conflicts at their inception.

## Employee Benefits

### Working Hours and Time-Off Policies

Our "Attendance Management Policy" clearly outlines requirements related to attendance management, including formalities pertaining to business trips, local errands, and leave requests, as well as the associated approval authorities. For employees in research and development, the Company provides a flexible clock-in system that allows them to tailor their clock-in times based on personal routines and proximity to their workplace. A compensatory time-off policy is in place to ensure maximal care for employees' physical and mental well-being. In parallel with our strict adherence to the employee leave and compensatory time-off policies, the Company also upholds the legitimate rights and interests of employees during maternity and paternity leave.

### Case Study

In response to employees' needs for enhanced leave benefits, TMIC has implemented a comprehensive set of leave policy improvements. These include the introduction of paid sick leave, parental leave, and reverse family visit leave, as well as an extension of the validity period for paid annual leave. Additionally, we have established policies reimbursing round-trip transportation costs for family visits during compensatory time-off and exempting additional clock-ins for underground work shifts. These initiatives have significantly contributed to increased job satisfaction among our employees.



Employee Benefit Policies

TMIC has developed a rational and comprehensive compensation and benefits framework, offering competitive salaries and establishing performance-based and incentive bonuses to ignite employees' passion for their work. Furthermore, TMIC contributes to the statutory five social insurances and the housing provident fund for all employees, along with contributions to supplementary medical insurance, accident insurance, and enterprise annuity, thereby enriching the overall benefits package.

In 2024, TMIC successfully executed ten key initiatives designed to enhance employees' sense of happiness and fulfillment, thereby cultivating a harmonious and supportive workplace atmosphere. These initiatives encompassed a range of welfare activities for employees and their families, including holiday greetings, family open days, and seasonal support programs such as “Heart-warming Winter” and “Refreshing Summer.” Moreover, TMIC extended its care to frontline workers, model employees, and those coping with serious illnesses, conducting nearly 2,000 welfare engagements over the course of the year.

Case Study Ten Practical Initiatives for Employees

Focusing on the most pressing concerns of our workforce, we have launched ten practical initiatives: introducing specialized leave benefits, establishing happiness cafeterias, creating designated break zones, establishing baby care rooms in women's activity centers, setting up health stations, providing physical/mental wellness services, enhancing and expanding commuter routes, arranging recuperation programs for model workers, offering childcare support classes, and facilitating expedited medical care access. These measures have notably heightened employees' sense of happiness and fulfillment, cultivating a harmonious and welcoming workplace atmosphere.



We regularly invite traditional Chinese medicine specialists and psychological counselors to our premises to offer on-site consultations for our employees. We also host mental health lectures to share health insights, impart techniques for health management and self-regulation, encourage the adoption of sound health perspectives, promote healthy lifestyle habits, and enable employees to perceive our genuine care and support.



Case Study Ten Practical Initiatives for Employees

Dedicated break zones have been created to reimagine traditional break formats. Designed with ergonomic and psychological needs in mind, these spaces feature comfortable seating, greenery for ambiance enhancement, and distinct functional areas for reading, relaxation, and discussions, delivering an elevated break experience for employees.



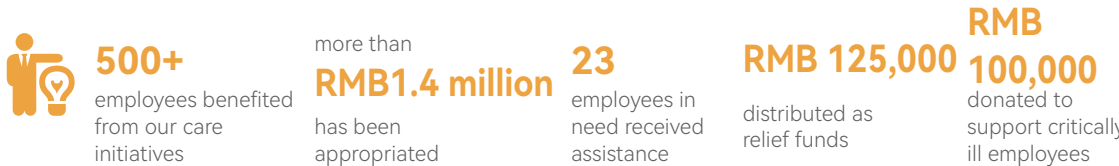
We have designed and established baby care rooms equipped with professional baby changing table, comfortable nursing chair, water dispenser, and storage lockers, fully addressing mothers' needs for breastfeeding, diaper changing, and resting. This initiative creates a “Happy Home” and “Cozy Home” for our employees.



We have also established “Health Stations” to provide employees with health monitoring services, including height, weight, body fat, temperature, blood pressure, blood oxygen saturation, electrocardiogram (ECG), and TCM constitution analysis. The facility promotes health awareness, encourages improved quality of life, and fosters a collaborative effort to build a healthy and harmonious workplace environment.

Case Study Employee Care Mechanism

TMIC organizes annual care initiatives including “Heart-warming Winter” and “Refreshing Summer” campaigns, as well as support for employees during weddings, childbirth, hospitalizations, and financial hardships. In 2024, these programs covered over 500 employees with a cumulative appropriation exceeding RMB 1.4 million, including assistance to 23 employees in need (RMB 125,000 distributed), and donations exceeding RMB 100,000 for children of critically ill employees.





## Employee Activities

TMIC hosts a broad spectrum of cultural and recreational events, including staff recreational games, as well as badminton, table tennis, and basketball tournaments. Skill-enhancement programs such as tea ceremony workshops, photography classes, and calligraphy/painting exchanges are conducted to improve physical health, cultural literacy, and team cohesion.



Staff Badminton Tournament



Staff Basketball Tournament



Staff Soccer Tournament



Tea Ceremony Workshop



Calligraphy and Painting Exchange



Photography Class

## Occupational Health

### Occupational Health Policies

TMIC has obtained Occupational Health and Safety Management System (OHSMS) certification. In compliance with the Regulations on Occupational Health Management in Workplaces and work safety standardization requirements, the Company has issued internal policies such as the "TMIC Occupational Health and Safety Management Measures". Third-party agencies were commissioned to conduct occupational hazard factor assessments, with rectification measures actively implemented for areas exceeding hazard thresholds. All employees in roles exposed to occupational hazards underwent mandatory health examinations and signed Occupational Hazard Disclosure Agreements, ensuring comprehensive safeguards for workplace health.

### Occupational Health Management Goal and Strategy

TMIC has set the goal of achieving "zero cases of occupational disease liability." Our strategic initiatives in occupational disease prevention include granular goal decomposition and the formulation of a dedicated prevention plan. This plan encompasses eight strategic pillars, including institutional framework development, occupational disease prevention training, hazard factor monitoring, worksite inspections, production environment optimization, etc.

### Occupational Disease Prevention Measures

Six occupational health managers and 34 employees exposed to occupational hazards partook in external competency enhancement training and passed qualification assessments.



6

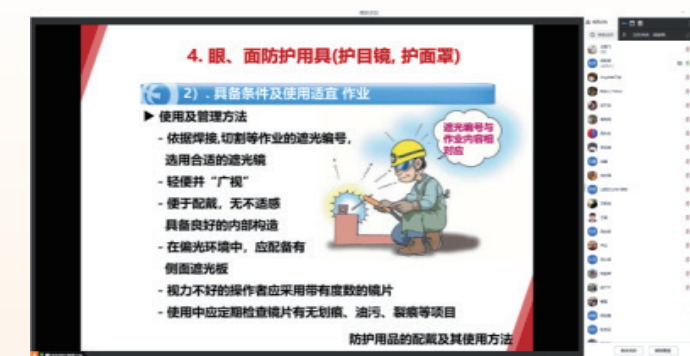
occupational health managers



34

employees exposed to occupational hazards completed external training and passed qualification assessments

TMIC regularly organize training sessions covering the Law on Prevention and Control of Occupational Diseases, essential knowledge on occupational disease prevention, and labor protection protocols, with a total participation exceeding 200 employees.



200+

employees participated in occupational health knowledge training

TMIC hosted an awareness week dedicated to the Law on Prevention and Control of Occupational Diseases, which featured digital banners, informational exhibits, consultation booths, distribution of educational materials, company-wide training sessions, and quizzes with incentives, to impart essential prevention knowledge. The event attracted over 600 participants.



**600+**

employees took part in awareness week dedicated to the Law on Prevention and Control of Occupational Diseases



TMIC identifies occupational health and safety risks and formulates appropriate control measures tailored to the specific conditions of each risk point. We regularly monitor occupational disease hazard factors to ensure that all such risks are effectively managed and kept under control.

Effective ventilation facilities are provided to ensure air circulation in the workplace and the timely removal of harmful gases, dust, and other pollutants. Additionally, air purification devices are installed to treat the exhaust gases, thereby preventing environmental pollution.

TMIC provides occupation-specific personal protective equipment (PPE) — including anti-dust masks, respirators, earplugs, and safety goggles — tailored to workplace hazards. Mandatory PPE usage protocols are enforced, with periodic inspections to ensure proper wear and timely replacement of damaged or expired gear.

TMIC has executed technical retrofits to resolve chronic noise exceedance in cleaning areas, reducing 8-hour equivalent sound levels from 99.2 dB(A) to 72.1 dB(A), thereby achieving source-level noise reduction and minimizing occupational health risks.

## Product/Service Safety and Quality Assurance

### Safety Management

#### Safety Management System

TMIC steadfastly adheres to the safety policy of "Safety First, Prevention Foremost, and Comprehensive Governance." We have bolstered our safety management team and refined our safety management policies to uphold this commitment. By solidifying safety responsibilities and intensifying risk control measures, the Company adopts a proactive approach to safeguarding its operations. Regular inspections are conducted to identify potential hazards, while substantial emphasis is placed on safety education and training to heighten employees' awareness and capabilities. Additionally, the Company routinely organizes emergency drills and promotes universal participation in safety management, cultivating an environment where collective responsibility for safety prevails. These concerted efforts are devoted to ensuring the Company's safe and stable development.

北京天玛智控科技股份有限公司  
制度汇编  
(安全监督篇)

2025年1月

### Safety Management Objectives

This year, TMIC achieved four "Zero" targets and four "100% Completion" goals:

**100%** completion rate for hazard rectification

Zero incidents of minor injuries or more severe work safety accidents

**100%** completion rate for safety education and training programs

Zero cases of occupational diseases

Zero cases of environmental liability

**100%** completion rate for emergency rescue drill plans

Zero fire-related incidents and accidents

**100%** completion rate for specialized safety campaigns

### Work Safety Management

Guided by the "TMIC Work Safety Management Policy," we have established a robust and enduring safety management framework. This framework clearly defines the responsible parties, ensures accountability at every hierarchical level, encourages employee involvement, and is overseen by the Safety Management Department. We have organized the signing of safety and environmental protection responsibility agreements across the entire workforce. This initiative reinforces a tiered accountability system where each level is responsible to the one above it, thereby ensuring the effective implementation of safety and environmental responsibilities and fortifying our safety accountability defenses.

### Emergency Response Preparedness



**19**

emergency drills conducted

TMIC's capability to handle emergencies and contingencies has been significantly bolstered. In 2024, we conducted a total of 19 emergency drills. We rigorously adhere to protocols that require leading cadres to be on duty, ensure 24-hour staffing for critical positions, and maintain a zero-incident reporting policy for accidents. These measures have effectively safeguarded the Company's safety and stability in production throughout the year.



Employee Emergency Response Capacity Building



Measures for Handling Safety Accidents and Work-Related Injuries

 **1300**  
safety inspections

 **100%**  
hazard  
rectification  
rate

TMIC has maintained an impeccable record with no work safety accidents over the past three years. We have instituted a meticulous management system to address safety accidents and work-related injuries. Our approach to hazard identification and rectification encompasses a variety of methods, including routine inspections, targeted inspections, and expert-led evaluations. Throughout the year, we conducted over 1300 safety inspections, achieving a 100% rectification rate for all identified hazards. In terms of accountability for safety incidents, we have established protocols such as the "Measures for Accountability in Work Safety Accidents." We strictly adhere to the "four no's" principle in conducting accident investigations and enforce a tiered accountability system based on the severity of the incident.



TMIC has successfully attained certifications across a spectrum of management systems, including ISO9000 for quality management, ISO14001 for environmental management, ISO45001 for occupational health and safety, the integration of informatization and industrialization, energy management, and intellectual property management. The Company has been honored with the prestigious title of "National Green Factory." Furthermore, it holds the distinction of being the inaugural entity within the coal industry to obtain the Smart Manufacturing Capability Maturity (CMMM) Level 4 certification, underscoring its preeminent status in intelligent manufacturing capabilities. TMIC rigorously complies with both international and domestic standards governing the production of explosion-proof electrical equipment. Specifically, for explosion-proof electrical products designated for use in coal mines, the Company has secured IECEx international certification, explosion-proof certification, safety mark certification for mining products, and the mandatory CCC certification from national authorities. Additionally, TMIC has instituted a robust mechanism for managing quality and safety risks associated with its products.



TMIC is committed to the continuous refinement of its corporate management systems, perpetually enhancing its capabilities in quality management and improvement. The Company has developed a comprehensive control framework that encompasses every facet of its operations. It proactively engages in initiatives aimed at elevating quality across the entire lifecycle of its products, thereby fortifying the quality standards and management proficiency of its offerings and services. TMIC stringently adheres to quality benchmarks, ensuring that both product quality and customer satisfaction are consistently augmented.



Employee Quality Capability Enhancement Activities Conducted in 2024



Quality Training QC Team Activities

Quality Management

TMIC steadfastly upholds its quality policy, encapsulated in the motto: "Technology Leads, Creating Intelligent Control Masterpieces; Value Creation, Establishing a World-Class Brand." Through the implementation of comprehensive quality management practices, the Company consistently elevates quality consciousness across its workforce, and stays committed to perpetual technological innovation and quality enhancement, in a drive to sustain its technological leadership within the industry. TMIC remains dedicated to delivering superior products and services, thereby augmenting customer satisfaction.



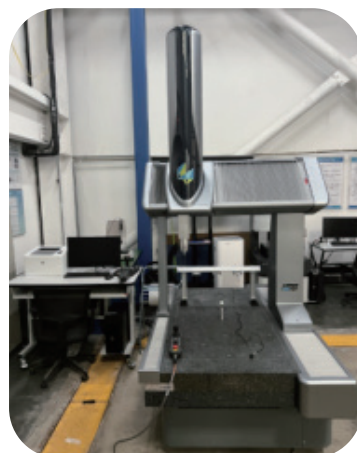


Building of Quality-Trustworthy Teams



Employee skills competition

TMIC places paramount importance on product quality, ensuring that all items destined for the market undergo stringent quality inspections. By embracing advanced production management methodologies and utilizing sophisticated information systems such as MES, APS, and ERP, TMIC has established comprehensive traceability across the entire product lifecycle. Critical production stages are equipped with automated testing technologies, effectively eliminating the risks of erroneous or missed inspections, thereby significantly reducing the influence of human variables on product quality.



## Customer Complaints and Handling

TMIC steadfastly upholds a “customer-centric” service philosophy, positioning the strengthening of client relationships as a fundamental priority while relentlessly pursuing enhancements in service quality and customer satisfaction. To support this commitment, the Company has instituted a suite of management protocols, including the “Detailed Rules for Project O&M Material Management” and the “Training Management Rules for After-Sales Service Engineers”. These measures fortify the training framework for after-sales personnel, fostering a steady elevation of their professional competencies.

TMIC conducts regular customer satisfaction surveys, leveraging the insights gained to refine and optimize its quality management policies and objectives. This process has markedly improved both the operational efficacy of projects and the caliber of service delivered. Furthermore, TMIC has established robust channels for on-site service and quality issue feedback, ensuring swift responses to customer concerns. Upon receiving feedback or complaints, the Company promptly devises tailored solutions to address client needs effectively, thereby enhancing the overall customer experience. Every customer opinion and complaint is meticulously documented to form a systematic ledger that serves as a foundation for ongoing service refinement and issue traceability.

In 2024, TMIC recorded an exemplary performance, receiving no customer complaints throughout the year. The Company accumulated eight instances of customer feedback, all of which were addressed with a 100% resolution rate.

8 份  
customer feedback  
opinions received

100%  
resolution rate

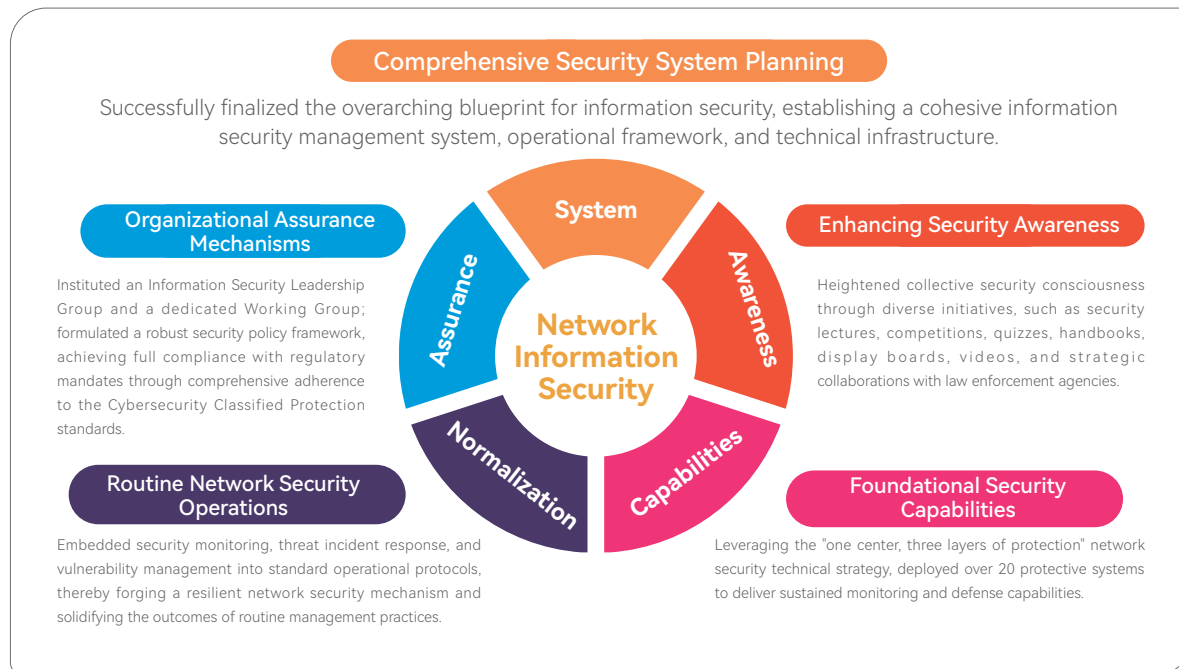
## Data Security and Customer Privacy Protection

### Data and Information Security

TMIC places significant emphasis on the development of information security, considering it a fundamental pillar of business growth. In compliance with laws such as the Cybersecurity Law, Data Security Law, and Personal Information Protection Law, and in alignment with the Data Management Capability Maturity Assessment Model (DCMM) and Cybersecurity Classified Protection standards, TMIC has developed and implemented the “Data Security Management Measures” and “Network Security Management Measures” to provide a solid basis for the Company's information security management practices. TMIC has been certified at the “Stable Level” in DCMM, demonstrating the establishment of a robust and standardized data security management framework. By conducting classified protection certification for information systems and implementing comprehensive security measures such as situational awareness and industrial control firewalls, TMIC has substantially enhanced its data security capabilities, guaranteeing effective management and control of data security. Throughout the year, there were no reported cybersecurity incidents, and the core business systems operated stably.



Centered around “one core and five pillars,” TMIC is committed to strengthening its information security management, operational, and technical frameworks. This approach continuously enhances our monitoring and defense capabilities while institutionalizing routine network security management. Following the strategic framework of “ten zones, three levels, and two networks,” TMIC has implemented a partitioned and domain-based approach to achieve network security isolation and authorized access across different areas, in addition to establishing redundant backups for network equipment and dual-link transmission for communications to ensure the integrity of data transmission. This setup enables intelligent network management and ongoing reinforcement of information security.



In 2024, TMIC pursued a multifaceted strategy to advance network security awareness, such as organizing network security lectures, hosting on-site security quiz competitions, facilitating online security assessments, and intensifying foundational information security training for new employees. These measures were designed to comprehensively elevate network security awareness across all personnel, while enhancing individual proficiencies in network security protection.



## Digital Transformation Initiatives

In alignment with the digital transformation mandates articulated by the State-owned Assets Supervision and Administration Commission (SASAC) and the CCTEG, TMIC has proactively embraced digital transformation as a pivotal driver of its high-quality development. To this end, the Company has instituted a dedicated digital transformation leadership team and working group, collaborating with Huawei to craft a meticulous digital transformation plan that delineates the overarching direction and precise pathways for TMIC’s digital evolution over the next five years.

TMIC is diligently advancing the establishment of an Integrated Product Development (IPD) management system to cultivate innovative research and development capabilities. The Company has meticulously constructed a Lead to Cash (LTC) process, spanning from initial leads to payment collection, ensuring a customer-centric approach and enabling rapid responsiveness to market dynamics and client expectations. TMIC has successfully deployed over 20 sophisticated information systems that encompass the entirety of its business operations—from product development and manufacturing to marketing and services—achieving 100% network connectivity for digital production equipment and substantially enhancing production and operational synergy. Furthermore, the Company has formulated a comprehensive data strategy plan and established a state-of-the-art big data center to bolster its business management and analytical capabilities.



**20+**  
information systems



**99.64%**  
product qualification ratio



**100%**  
network connectivity for digital production equipment

In 2024, TMIC earned the prestigious designation of “Pilot Enterprise for Digital Transformation of State-owned Enterprises” by SASAC. The Company was further distinguished as an “Exemplary Case of Manufacturing Digital Transformation” by the Ministry of Industry and Information Technology and as an “Exemplary Case of Digital Transformation for Beijing’s Specialized, Sophisticated, Distinctive, and Innovative Small and Medium-sized Enterprises.” Additionally, TMIC successfully passed the national smart manufacturing demonstration factory assessment, becoming the first in the coal industry to secure the CMMM Level 4 certification. The Company was also inducted into the Ministry of Industry and Information Technology’s roster of “Excellence-Level” smart factories, markedly amplifying its impact as a digital transformation trailblazer.

## Customer Information and Privacy Protection

TMIC places paramount importance on safeguarding the data security of customer information, fortifying its management and monitoring frameworks to mitigate data risks. For on-site project data, the Company employs a localized deployment approach to ensure that data remains confined to the local environment, thereby significantly reducing the potential for breaches. Moreover, a rigorous security classification management policy is implemented during the stamping and archiving of sales contracts, providing an all-encompassing shield to protect customers’ data assets.



# Innovation-Driven Development

Guided by its mission to "pioneer intelligent mining technologies for coal mines and advance safe, efficient, and green mining practices," TMIC steadfastly regards technological innovation as the cornerstone of its business growth. The Company champions independent innovation, consistently bolsters its investment in research and development, nurtures its R&D workforce, fosters external partnerships for innovation, employs a multifaceted approach to safeguard intellectual property, and invigorates its organizational culture of innovation.

## Furthering the Development of Technological Innovation System

### Establishing a Novel Architecture for the Technological Innovation System

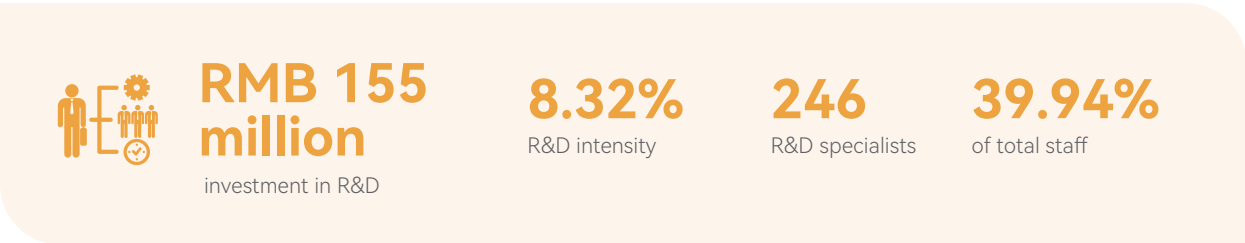
Embracing an "integrated two wings" strategy for technological innovation in both coal and non-coal operations, TMIC has scientifically defined a new foundational paradigm for research. The Company has systematically outlined its principles for technological innovation: upholding the primacy of science, adhering to the "four orientations", prioritizing tangible results, and ensuring holistic coordination. To this end, TMIC is pioneering a new R&D organizational structure that synergizes business divisions with an innovation research institute. Additionally, the Company has introduced an innovative approach to scientific and technological reform, placing intellectual property at the core, leveraging IPD system as a platform, and utilizing scientific research projects as vehicles for implementation, thereby comprehensively erecting a new framework for its technological innovation system.

### Strengthening Technological Innovation Policies

During the reporting period, TMIC established the "Technological Innovation Management Policy", which serves as the cornerstone of our innovation strategy. Concurrently, we refined the "Technological Projects Management Measures" and the "Technological Awards Management Measures". These refinements have introduced a structured, tiered approach to project management and bolstered the incentives that drive our innovation agenda.

### Maintaining High-Intensity R&D Investment and Cultivating a High-Quality Talent Team

Throughout the reporting period, the Company allocated RMB 155 million to research and development, reflecting an R&D intensity of 8.32% relative to our total revenue. Our commitment to innovation is further underscored by our team of 246 R&D specialists, who make up 39.94% of our total staff. This robust investment and the expertise of our personnel have been pivotal in ensuring the seamless execution of our research initiatives and in elevating our prowess in technological innovation.



14  
S&T awards received in the reporting period

## Reaping Multiple Research Results and Important Awards

Throughout the reporting period, the Company's dedication to scientific excellence was recognized through 14 prestigious awards, highlighted by a "Second Prize of National Science and Technology Progress Awards" and a "Grand Prize of Scientific and Technological Achievement Awards" from China National Coal Association. In our role as a standard-setter, we spearheaded or contributed to the development of one national standard, two industry standards, and six social organization standards. Moreover, we initiated the proposal for establishing the National Standardization Technical Committee for Intelligent Technology and Equipment in Coal Mines. Our scholarly output was equally impressive, with 75 published papers, including 15 that met the highest standards of academic rigor.

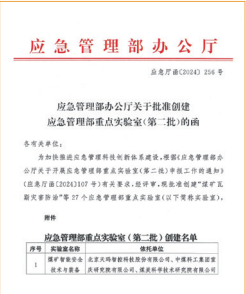


## Continuously Strengthening the Foundation of Technological Innovation

During the reporting period, TMIC successfully attained certifications for CNAS and CMMI Level 4 standards. It spearheaded the establishment of the "Key Laboratory of Intelligent Coal Mine Safety Technology and Equipment under the Ministry of Emergency Management" and contributed to the collaborative development of the "National Key Laboratory of Digital-Intelligent Technologies for Unmanned Coal Mining," both of which were officially approved.

In partnership with Tsinghua University, TMIC established the Joint Research Center for Intelligent Mining Control Technology. Additionally, it formalized a strategic cooperation framework agreement with Huawei and Yunding Tech, thereby reinforcing its collaborative innovation ecosystem across industry, academia, and research domains.

The Company also secured formal membership in the IEEE Standards Association (IEEE-SA) and played a pivotal role in drafting the international standard of "Recommended Practice for Digital Mine Construction," significantly enhancing its capabilities in standardization.

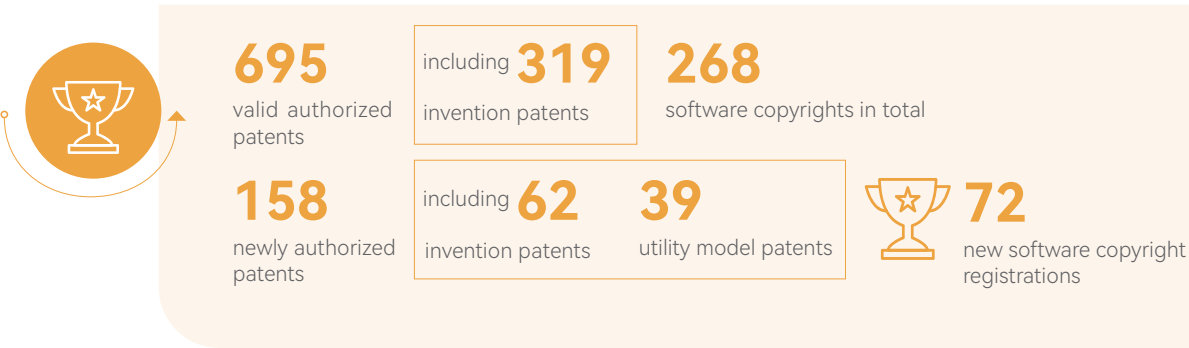




## Persistently Enhancing the Intellectual Property System

### Intellectual Property Management

As of the end of 2024, the Company has been granted 695 valid patents, including 319 invention patents (including 14 overseas patents), and a total of 268 software copyrights. During the Reporting Period, the Company was granted 158 new patents, including 62 invention patents (including 7 overseas patents), 39 utility model patents and 72 new software copyright registrations.



### Organizational Structure

TMIC has instituted a robust intellectual property compliance management system seamlessly integrating all operational facets, such as R&D, production, marketing, and administrative functions. The Technology Development Department serves as the centralized authority for intellectual property management, staffed with one Intellectual Property Director and one Intellectual Property Supervisor.

### Policy Documents

TMIC has established a comprehensive intellectual property management system and has issued several key documents, including the "Intellectual Property Management Measures," "Patent Management Rules," "Proprietary Technology Management Rules," "Intellectual Property Compliance Management System: Operational Manual and Procedures," and "Intellectual Property Capitalization Management Rules."

### Management Initiatives

The Company has established the IPMS (Intellectual Property Management System) platform to coordinate and manage the protection and control of its intellectual property.

#### R&D

- The Company conducts patent mapping based on its R&D projects, followed by a comprehensive IP portfolio strategy tailored to the technical scope of each initiative. This systematic approach provides actionable insights for cultivating high-value patents while enhancing the strategic alignment, scientific rigor, and systemic coherence of intellectual property applications.
- The Company implements intellectual property monitoring and management throughout the entire lifecycle of R&D projects, generating reports on intellectual property achievements and risk assessments, and conducts risk screening for international intellectual property related to its key products in Australia and Russia.
- The Company ensures comprehensive intellectual property review before any information release to maintain the confidentiality and control of achievements prior to applying for intellectual property rights.

#### Procurement and Sales

The Company ensures that all procurement contracts include comprehensive intellectual property clauses and conducts thorough intellectual property background investigations to effectively mitigate the risk of intellectual property infringement. Additionally, the Company performs preliminary intellectual property reviews for products and services throughout the entire sales process and develops the corresponding risk prevention and response plans.

#### Internal Control

The Company has established an internal response mechanism for intellectual property violations and launched an intellectual property compliance feedback email address, encouraging all employees to partake in rights protection investigations and evidence collection, thereby effectively keeping infringement behaviors at bay.

### Intellectual Property Qualifications and Honors

TMIC vigorously engages in the application for intellectual property honors and has taken home the China Patent Excellence Award twice. It is recognized as a "Model Unit for Intellectual Property in Beijing" and serves as a training base for patent examination and services. Additionally, the Company has been awarded the honor of "Benchmark Project in Management" by China Coal Technology & Engineering Group (CCTEG). During the reporting period, three of its products were certified as national patent-intensive products.



## Technology Ethics

### Implementing Technology Ethics Reviews

Before initiating any research projects, TMIC conducts a comprehensive assessment of research objectives, methods, processes, and potential ethical issues of pertinent projects to ensure that all research activities comply with ethical standards.



## Strengthening Technology Ethics Education

TMIC actively integrates technology ethics education into academic training sessions, lectures, and symposiums, guiding scientists and engineers to adopt sound ethical principles while elevating their moral awareness and professional integrity.

## Conducting Regular Technology Ethics Supervision

TMIC enforces full-cycle oversight of research activities to ensure legal and regulatory compliance. In AI development and deployment, the Company strictly adheres to legal statutes and ethical guidelines, while implementing stringent security protocols and confidentiality safeguards for research projects involving sensitive data or critical information to prevent breaches and misuse.

# Supply Chain Security

## Supplier Management

In 2024, TMIC undertook revisions to 15 supply chain-related policies, including "Procurement Management Measures", "Bidding Management Measures", and "Supplier Evaluation Management Rules".

In December 2024, TMIC convened a conference aimed at fostering supplier adherence to ESG and supply chain management standards. This event saw participation from 351 suppliers and featured ESG training sessions totaling 350 hours.



351

suppliers engaged in ESG-related training

TMIC executed Supplier Code of Conduct Agreements with 260 suppliers, further standardizing operational conduct of suppliers.

## Supplier ESG Evaluation and Due Diligence

TMIC has integrated ESG considerations into its annual supplier evaluation framework, introducing quantitative metrics for assessment and refining evaluation mechanisms. Additionally, a new supplier information update form has been implemented, incorporating ESG-related criteria. This form facilitates the collection of pertinent data during on-site visits by the supplier management team for audits, support initiatives, or technical collaborations, with particular emphasis on documenting suppliers' environmental stewardship, employee social security provisions, and labor rights protection measures.

## Supply Chain Security and Emergency Preparedness

The Company employs a dual-supplier (A/B) procurement strategy for critical materials, partnering with a minimum of two suppliers to ensure supply diversity and continuity. This practice safeguards against potential disruptions stemming from reliance on a solitary supplier, thereby preserving the seamless continuity of our operations.

Through executive engagements and on-site visits by its employees, TMIC immerses itself in the operational realities of its suppliers' production environments, gaining a comprehensive understanding of their capabilities. Harnessing its professional expertise, the Company proactively discerns potential vulnerabilities in quality assurance and delivery efficiency. In response to these risks, the Company collaborates closely with suppliers to devise tailored solutions, extending technical guidance and managerial counsel to elevate their performance. By refining the supply chain ecosystem, the Company bolsters the stability and dependability of its supply chain, significantly reducing the likelihood of interruptions and laying a solid groundwork for sustainable progress.

Throughout the year, TMIC maintained an exemplary record of zero supply disruptions.



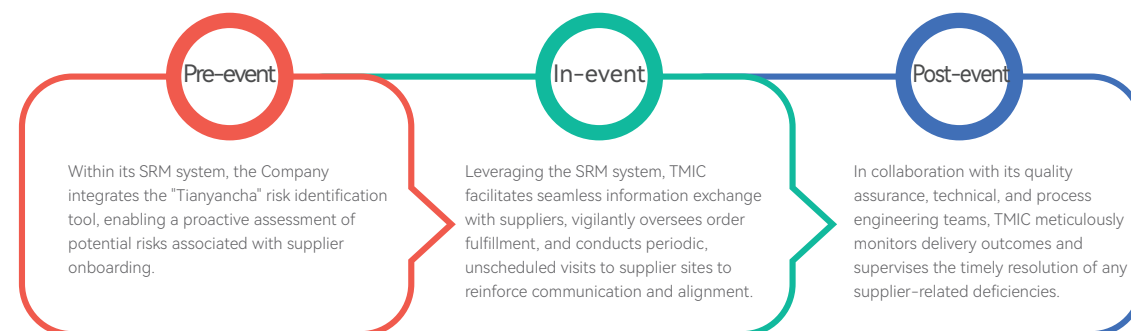


## Supply Chain Risk Identification

In 2024, TMIC undertook a thorough revision of its "Supplier Dishonest Behavior Management Measures," meticulously delineating the specific responsibilities of its management and supervisory units to strengthen oversight. This update precisely defines a range of supplier misconduct within the supply chain, encompassing legal transgressions, social risks—such as wage arrears and adverse public incidents—ethical breaches, and failures to uphold contractual obligations. Additionally, the Company has established a well-defined, tiered framework of punitive measures to address such violations.

## Handling Major Supply Chain Risks and Impact Events

To mitigate supply chain risks, enhance response mechanisms, and ensure the efficacy of its strategies, TMIC has instituted a sophisticated, segmented approach to supplier management, encompassing three distinct phases: pre-event, in-event, and post-event.



### Case Study

#### Annual Highlights in Supply Chain Security and Management

In December 2024, TMIC successfully hosted a Supplier ESG and Collaboration Conference, which centered on key topics such as ESG, delivery, and quality. The event featured extensive communication and training sessions, with participation from 12 internal departments and 351 suppliers. This initiative effectively addressed previous communication challenges and laid a solid groundwork for fostering efficient and stable supply chain partnerships.



## Equal Treatment of Small and Medium-sized Enterprises

TMIC maintains a policy of equal treatment in both supplier selection and payment processes. As of the end of the reporting period, the balance of accounts payable, inclusive of notes payable, accounted for less than 50% of the total assets.

## Rural Revitalization

TMIC has established a sustainable assistance mechanism, which includes the procurement of agricultural products from poverty-stricken counties during festivals such as the Spring Festival, Dragon Boat Festival, and Mid-Autumn Festival, as well as the National Day. Additionally, the Company vigorously partakes in the Central Enterprise Poverty Alleviation Week by concentrating purchases of poverty alleviation products, thereby contributing to rural revitalization efforts. Furthermore, the Company has set up branch offices and constructed production bases in Shanxi and Inner Mongolia, well enhancing local automation capabilities.

## Social Contribution

TMIC's party committee has been steadfast in its commitment to charitable educational assistance initiatives. It has mobilized party members and employees to contribute to two schools in Leibo County, Sichuan. During the reporting period, the Company raised over RMB 43,000 to establish the TMIC scholarship, which provided targeted support to 13 underprivileged primary and junior high school students. Notably, three of these junior high students achieved outstanding academic results and were admitted to Leibo Sanxia Middle School. Through these actions, the Company exemplifies the social responsibility and commitment expected of a central SOE.





Case Study

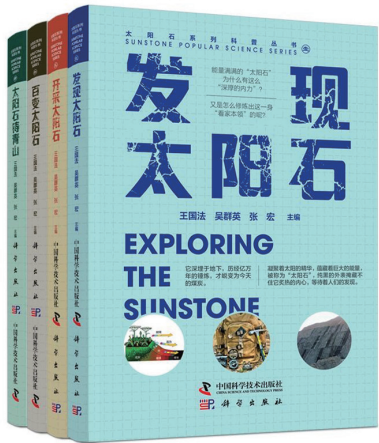
Illuminating Campuses with "Sun Stone"

A distinguished team of coal experts, led by Academician Wang Guofa of the Chinese Academy of Engineering (CAE), authored the "Sun Stone" popular science series. This collection disseminates knowledge of energy and mining science and technology, unveiling the enigma of the "Sun Stone"—a term symbolizing coal's vital role. The series has garnered widespread acclaim among coal industry professionals, university educators and students, and teachers and pupils in primary and secondary schools alike.

To champion the scientific spirit, broaden access to scientific understanding, and commemorate the 75th anniversary of the founding of the People's Republic of China, Academician Wang Guofa spearheaded a dedicated science outreach team to deliver a series of lectures across numerous schools nationwide and orchestrate the "Sun Stone" campus outreach program, which included book donations, educational support, and scholarship awards. Recognized as an exemplary initiative during National Science Popularization Day, the program spanned over 10 provinces and municipalities, reaching universities, primary, and secondary schools on more than 20 occasions, delivering over 20 science presentations, and distributing upwards of 50,000 copies of the "Sun Stone" books. These efforts have significantly advanced public awareness of the coal industry, fostering a deeper appreciation and understanding of coal's significance among diverse societal groups. The initiative has been prominently featured in leading media outlets, including Guangming Online and People's Daily Online.



"Sun Stone" Campus Science Outreach Activity



"Sun Stone" Popular Science Series Books



"Sun Stone" Campus Science Outreach Activity





# Governance Topics

TMIC has diligently aligned its operations with the stipulations of pertinent laws and regulations, including the Company Law, the Securities Law, the Code of Corporate Governance for Listed Companies, and the Rules Governing the Listing of Stocks on the STAR Market of the Shanghai Stock Exchange. Through these efforts, TMIC has established and refined a robust governance framework, consistently enhancing its corporate governance mechanisms and elevating its standards of operational integrity.

## Contributing to SDGs

16

Peace, Justice and Strong Institutions



17

Partnerships for the Goals







# Corporate Governance

TMIC steadfastly complies with the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Code of Corporate Governance for Listed Companies, and the Rules Governing the Listing of Stocks on the STAR Market of the Shanghai Stock Exchange, alongside other pertinent laws, regulations, and stipulations. The Company has established a robust governance system centered on the "Articles of Association", fortified by supporting frameworks including the "Rules of Procedure for Shareholders' Meetings", the "Rules of Procedure for Board of Directors Meetings", the "Rules of Procedure for Supervisory Board Meetings", and the "Management Measures for Implementing the 'Three Importance and One Greatness' Decision-Making Policy". This structure ensures that major corporate matters are addressed with prudence and scientific precision in decision-making.

## Operation of Three Meetings

TMIC remains resolute in harmonizing the strengthening of Party leadership with the refinement of corporate governance, actively fostering a governance architecture encompassing the Party Committee Meeting, Shareholders' Meeting, Board of Directors Meeting, Employee Congress, Supervisory Board Meeting, and Executive Management—collectively termed the "Five Meetings and One Management" framework. The Company continually enhances a corporate governance mechanism wherein powers and responsibilities are statutorily defined, transparent, seamlessly coordinated, and effectively counterbalanced.

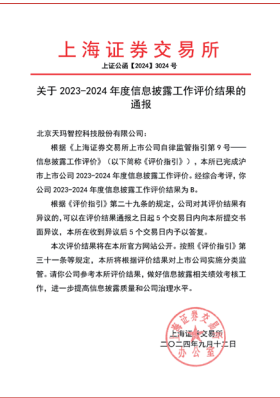


Board of Directors: comprising 8 directors, including 3 independent directors.

Supervisory Board: comprising 3 supervisors, including 1 employee supervisor.

# Shareholder Rights

## Information Disclosure



TMIC has established a comprehensive information disclosure framework encompassing specialized regulations such as the "Information Disclosure Affairs Management Policy," "Material Information Internal Reporting Policy," "Annual Report Information Disclosure Material Error Accountability Policy," and "Insider Information Insider Management Policy." The Company has designated the official website of Shanghai Stock Exchange, along with newspapers including Shanghai Securities News, China Securities Journal, Securities Daily, and Securities Times, as official channels for information dissemination, proactively disclosing its developmental and operational progress while continuously enhancing transparency to ensure that all disclosed information remains true, accurate, complete, timely, and equitable. The language of disclosure is crafted to be clear and accessible, consistently improving the readability of the information to safeguard the equitable right of all shareholders to access such information.

In 2024, TMIC issued a total of 61 announcements, comprising 4 periodic reports and 57 interim disclosures. The Company received a B-level evaluation from the Shanghai Stock Exchange for its information disclosure efforts during the 2023-2024 period.

## Investor Relations Management

TMIC places paramount importance on fostering communication and engagement with investors, instituting regulations such as the "Investor Relations Management Policy" to persistently enhance investor relations. Through diverse avenues—including performance briefings, institutional research activities, the Shanghai Stock Exchange's e-interaction platform, investor emails, and dedicated hotlines—the Company cultivates constructive interactions with investors, attentively heeding their opinions and suggestions, promptly addressing their concerns, and aiding their deeper understanding of the Company, thereby bolstering their confidence in its growth trajectory and amplifying market recognition and value realization. The Company diligently adheres to pertinent regulatory mandates and the stipulations of its Articles of Association, rigorously enforcing mechanisms such as separate vote counting for small and medium investors on significant matters, thereby robustly safeguarding the rights and interests of these stakeholders.

# Operational Compliance

## Internal Control Management

50 policies were established or revised

## Development of Internal Control Policies

In accordance with the Basic Norms of Enterprise Internal Control and the regulatory requirements governing listed companies, TMIC has established and persistently enhanced its internal control system. During the reporting period, several pivotal documents were issued, including the Internal Control Management Measures, the Compliance Management System Effectiveness Evaluation Management Measures, and the Contract Management Compliance Guidelines. Additionally, over 50 policies were revised throughout the year, culminating in the complete establishment of the "1+2+N" institutional management system model.





### Evaluation of Internal Control

TMIC conducts annual evaluations of its internal control system and publishes an Annual Internal Control Evaluation Report. Additionally, an external third-party audit firm is engaged to produce an Internal Control Audit Report. The assessment identified no major or significant deficiencies, thereby affirming the efficacy of the Company's internal control system throughout the reporting period.

### Annual Risk Assessment

Following the procedures stipulated in the Comprehensive Risk Management Measures, TMIC arranges for various business and functional departments to collect risk-related data. Designated risk management departments then analyze and deliberate on these risks, formulating tailored strategies and solutions. This process results in the issuance of the Annual Major Risk Assessment Report. Based on this report, the Company establishes a supervisory mechanism for risk response measures, maintains a comprehensive risk management progress ledger, and continuously strengthens the effectiveness of its risk prevention and control initiatives.

### Routine Risk Assessment

TMIC rigorously enforces a 100% legal compliance review process encompassing all economic contracts, internal regulations, and critical decisions. A robust working mechanism has been instituted for the general counsel and chief compliance officer. All major decision-making matters and significant operational issues, as defined under the "Three Importance and One Greatness" framework, must undergo legal compliance reviews prior to being presented at meetings. In the event of a risk incident, legal personnel provide timely reminders at each relevant stage to ensure proactive mitigation.

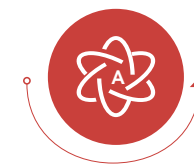
**100%**

of decisions underwent legal compliance reviews

## Compliance Management

TMIC has developed and issued a series of compliance management policies, including the "Compliance Management Measures", "Management Measures for Evaluating the Effectiveness of Compliance Management System", "Guidelines for Contract Management Compliance", "Guidelines for Bidding Compliance", "Special Guidelines for Enterprise Criminal Compliance", and "Special Guidelines for Anti-Commercial Bribery Compliance". These efforts have led to the establishment of a compliance management system meticulously tailored to the Company's operational and managerial frameworks. Notably, in 2024, TMIC was recognized as an "Enterprise of Excellence" in the CCTEG's self-assessment of compliance management effectiveness.

### Tax Management



**A-level** enterprise certification in tax credit rating

TMIC places paramount importance on tax management, adhering strictly to national tax laws and regulations to ensure the accuracy and timeliness of tax declarations and payments. The Company has instituted the "TMIC Tax Management Measures," providing a robust institutional foundation for the continuous improvement and strengthening of its tax compliance management system. Through enhanced internal controls and supervision, TMIC effectively manages tax-related risks while fulfilling its corporate tax obligations with diligence. The Company actively monitors evolving tax policies, discloses tax information in accordance with legal requirements, and advances the integration of industry, finance, and taxation. This steadfast commitment is evidenced by TMIC's consistent achievement of an A-level enterprise certification in tax credit rating over the past five years.

## Anti-Commercial Bribery and Anti-Corruption

TMIC steadfastly regards integrity as a fundamental pillar of its corporate governance. The management team takes a proactive and comprehensive lead in advancing initiatives related to Party conduct, integrity, and anti-corruption efforts. By strengthening oversight departments, refining oversight mechanisms, conducting targeted supervisory activities, promoting disciplinary education, and cultivating a culture of integrity, the Company diligently fosters a transparent and ethical business environment.

### Strengthening Integrity-Driven Organizational Governance

The Secretary of the Disciplinary Inspection Committee actively participates in or attends critical meetings, including those of the Party Committee, Board of Directors, Chairman's Special Sessions, and General Manager's Office, diligently fulfilling supervisory responsibilities. Dedicated departments for disciplinary work and audit compliance have been independently established to reinforce oversight and management. At the grassroots level, Party organizations are equipped with disciplinary commissioners, while departments are assigned special supervisors for Party conduct and integrity, ensuring comprehensive supervisory coverage. Throughout the year, TMIC convened two coordination meetings on Party conduct and integrity to address integrity risk prevention and control. Additionally, a routine communication mechanism among oversight departments has been implemented, creating a powerful supervisory synergy that effectively addresses and mitigates integrity risks.



Meeting of the Party Conduct and Integrity Coordination Group

### Reinforcing the Dissemination of Integrity Responsibilities

Throughout the year, the Company's leadership convened two meetings to evaluate and strategize the annual agenda for Party conduct and integrity enhancement, while a meticulously crafted work plan for comprehensive disciplinary development was explicitly established. Additionally, TMIC organized extensive conferences addressing Party conduct, integrity, and anti-corruption initiatives, engaging all management personnel and individuals in critical roles. These efforts were complemented by integrity education assemblies designed to heighten vigilance.

The Company has executed Party Conduct and Integrity Responsibility Agreements with mid-level executives and Professional Integrity Pledges with key personnel in critical roles, alongside mandatory declarations of personal matters.



Integrity Education Assembly



Party Conduct and Integrity Responsibility Agreement Signing Ceremony

The management team routinely engages in integrity-focused dialogues with department heads and newly-appointed executives. These interactions are designed to direct executives in learning, comprehending, and strictly adhering to established rules.





## Enhancing the Impact of Disciplinary Education

Throughout the year, TMIC conducted three thematic study sessions on Party discipline learning and education, attracting participation from over 200 individuals. Additionally, more than 20 integrity education seminars were delivered across various organizational levels, collectively fortifying the disciplinary resolve, moral integrity, and anti-corruption capabilities of both management personnel and employees.

A notable achievement was the establishment of the Integrity Culture Education Center, which welcomed over 20 groups of internal visitors, totaling more than 300 participants, for educational sessions. Additionally, key employees were organized to visit distinguished institutions such as the China Court Museum and the Dongcheng District Integrity Education Base.



TMIC has advanced its integrity culture framework through the compilation and dissemination of the "Qingfeng TMIC - Integrity Culture Handbook". A series of integrity-themed cultural initiatives were also implemented, fostering an atmosphere where integrity permeates the organization.

Throughout the year, TMIC leveraged its WeChat official account to post over 70 reminders on laws and disciplines. In tandem, more than 20 standardized integrity training modules were developed to ensure consistent and impactful education.

**3**  
thematic study sessions on Party discipline learning and education

**200+**  
participants

**20**  
sessions of integrity education

**70+**  
reminders on laws and disciplines

**20+**  
integrity training modules

## Enhancing Supervisory Functions

TMIC maintains accessible employee reporting channels by operating a dedicated ethics email address (jiwei@tdmarco.com) and physical complaint boxes. Specialized personnel are tasked with receiving and addressing grievances and tip-offs, with safeguards in place for whistleblower confidentiality. This framework guarantees that all submissions are handled promptly, accurately, and with due diligence.

## Anti-Unfair Competition Measures

TMIC has formulated and disseminated the "Anti-Commercial Bribery Compliance Guidelines" and the "Compliance Manual", which include provisions for anti-commercial bribery, anti-corruption, and anti-monopoly and fair competition compliance management. During the reporting period, the Company faced no litigation or significant administrative penalties resulting from unfair competition practices.

In 2024, the Company conducted training sessions on Anti-Unfair Competition Law tailored for its marketing staff, with participation exceeding 30 individuals. This initiative significantly enhanced the compliance awareness among the marketing personnel.





# ESG Performance Data Sheet and Notes

Indicator	Unit	2024
Total Water Consumption	ton	36137.09
Water Resource Consumption Intensity	ton/RMB 10,000	0.196
Recycled Water Consumption	ton	360
Percentage of Recycled Water Consumption	%	91.6
Total Material Consumption	ton	11649.39
Consumption of Toxic & Hazardous Materials	ton	33
Material Consumption Intensity	ton/RMB 10,000	6.26
Fossil Energy Consumption		
Gasoline	tce	0.0165
Natural Gas	tce	0.0027
Purchased Electricity	kWh	7,583,900
Total Energy Consumption	tce	1921.93
Energy Consumption Intensity	tce/RMB 10,000	0.01
Packaging Material Usage	ton	747.82
Total Wastewater Discharge	ton	10620
Industrial Wastewater Discharge	ton	0
Domestic Wastewater Discharge	ton	10620
Wastewater Pollutant Emissions		
Chemical Oxygen Demand (COD) Emissions	ton	1.7
Ammonia Nitrogen Emissions	ton	0.25
Wastewater Pollutant Emission Concentration		
COD Emission Concentration	mg/L	161
Ammonia Nitrogen Emission Concentration	mg/L	23.6
Waste Gas Pollutant Emissions		
Non-methane Total Hydrocarbons (NMTHC) Emissions	kg	22

Indicator	Unit	2024
Tin and Tin Compound Emissions	kg	0.0112
Particulate Matter Emissions	kg	4
Waste Gas Pollutant Emission Concentration		
NMTHC Emission Concentration	mg/m³	3.52
Tin and Tin Compound Emission Concentration	mg/m³	< 0.002
Particulate Matter Emission Concentration	mg/m³	< 0.7
General Industrial Solid Waste Generation	ton	549.36
General Industrial Solid Waste Utilization	ton	302.81
General Industrial Solid Waste Utilization Rate	%	55
Total Hazardous Waste Generation	ton	83.8
Total Hazardous Waste Disposal	ton	83.8
Total Greenhouse Gas (GHG) Emissions	ton CO <sub>2</sub> e	7015.29
Scope 1 Emissions	ton CO <sub>2</sub> e	371.97
Scope 2 Emissions	ton CO <sub>2</sub> e	6643.32
GHG Emission Intensity	ton CO <sub>2</sub> e/RMB 1 million	3.77
Environmental Protection Investment	RMB 10,000	216.15
Percentage of Environmental Protection Investment in Revenue	%	0.12
Work Safety Investment	RMB 1 million	335.21
Percentage of Work Safety Investment in Operating Income	%	1.68
Number of Safety Training Participants	person-times	4880
Number of Employees Covered by Safety Training	person	246
Work Safety Training Coverage Rate	%	100
Total Duration of Work Safety Training	hour	57600
Per Capita Duration of Work Safety Training	hour	12.22
Number of Employee Fatalities at Work	person	0
Work-Related Fatalities per RMB 100 Million Revenue	person	0
Work Injury Rate	%	0
Work Hours Lost Due to Injuries	hour	0



Indicator	Unit	2024
Work Days Lost Due to Injuries per RMB 1 Million Revenue	day	0
Lost Time Injury Frequency Rate (LTIFR) per Million Hours	person	0
Number of Safety Emergency Plans	plan	12
Number of Safety Inspections	time	1300
Number of Safety Incidents	case	0
Number of Contractor Safety Incidents	case	0
Number of Employees Covered by Occupational Health Examinations and Records	person	34
Total Employees Required to Participate in Occupational Health Examinations and Records	person	34
Occupational Health Examinations and Records Coverage Rate	%	100
Work Injury Insurance Investment for Employees	RMB 10,000	149.37
Number of Employees Covered by Work Injury Insurance	person	615
Total Employees Required to Be Covered by Work Injury Insurance	person	615
Work Injury Insurance Coverage Rate	%	100
Number of Employees with Occupational Diseases	plan	0
Occupational Disease Incidence Rate	%	0
Number of Employees Participating in Occupational Disease Examinations	person	34
Total Employees Required to Participate in Occupational Disease Examinations	person	34
Occupational Disease Examination Coverage Rate	%	100
Total Number of Employees	person	616
Percentage of Male Employees	%	88.96
Percentage of Female Employees	%	11.04
By Department (Human Resource Structure)		
Number of Production Employees	person	165
Number of Sales Employees	person	104
Number of Technical Employees	person	246
Number of Financial Employees	person	13
Number of Administrative Employees	person	88

Indicator	Unit	2024
Educational Background of Employees		
Doctoral Degree	person	26
Master's Degree	person	242
Bachelor's Degree or Below	person	348
Number of Full-Time Employees	person	616
Number of New Hires (Social Recruitment)	person	25
Number of Departing Employees	person	19
Employee Turnover Rate	%	3.08
Paid Leave per Employee	day	7.78
Employee Social Insurance Coverage Rate	%	100
Employee Participation Frequency	time	2
Employee Participation (Person-Times)	person-times	93
Number of Labor Dispute Cases	patent	1
Investment in Supporting Employees in Difficulty	RMB 10,000	12.5
Number of Employees Supported in Difficulty	person	23
Number of Employee Training Sessions	session	102
Annual Training Expenditure	RMB 10,000	283
Total Annual Training Hours	hour	22444
Employee Training Coverage Rate	%	100
Average Training Hours per Employee	hour	36.43
Total R&D Investment	RMB 100 million	1.55
R&D Investment as Percentage of Revenue from Main Operations	%	8.32
Number of R&D Personnel	person	246
Percentage of R&D Personnel	%	39.94
Number of Invention Patents	patent	62
Valid Patents per RMB 1 Million Revenue	patent	0.0296



Indicator	Unit	2024
Number of Utility Model Patents	patent	39
Number of Software Copyright Registrations	registration	72
Software Copyright Registrations per RMB 1 Million Revenue	registration	0.039
Percentage of Product Recalls/Withdrawals	/	0
Number of Customer Complaints	complaint	0
Number of Resolved Customer Complaints	complaint	0
Total Number of Suppliers	supplier	1189
Number of Mainland China Suppliers	supplier	1185
Number of Suppliers from Hong Kong, Macao, Taiwan, and Overseas	supplier	4
Number of Audited Suppliers	supplier	525
Number of Suppliers Terminated Due to Non-Compliance	supplier	4
Number of Potential Suppliers Rejected Due to Non-Compliance	supplier	26
Number of Suppliers with ISO 9000 Certification	supplier	347
Number of Suppliers with ISO 14000 Certification	supplier	175
Number of Suppliers with ISO 45001 Certification	supplier	164
Number of Suppliers Bound by Integrity Agreements	supplier	450
Number of Major Supply Chain Risk/Impact Incidents	case	0
Number of Cybersecurity and Information System Breaches	case	0
Number of Cybersecurity Incidents and Major Anomalies	case	0
Total Taxes and Fees Paid	RMB 10,000	16145.17
Rural Revitalization Investment	RMB 10,000	36.61
Number of Party Committee Meetings	meeting	32
Number of Party Branches	branch	9
Number of Party Members	person	265
Number of Board Members	person	8
Percentage of Male Board Members	%	100
Percentage of Female Board Members	%	0

Indicator	Unit	2024
Percentage of Independent Directors	%	37.5
Strategy Committee	%	33.3
Remuneration and Appraisal Committee	%	66.7
Nomination Committee	%	66.7
Audit Committee	%	100
Number of Board Meetings Held	meeting	11
Percentage of External Directors	%	62.5
Number of Supervisory Board Meetings Held	meeting	8
Number of Strategy Committee Meetings Held	meeting	4
Number of Remuneration and Appraisal Committee Meetings Held	meeting	5
Number of Nomination Committee Meetings Held	meeting	4
Number of Audit Committee Meetings Held	meeting	9
Percentage of External Supervisors	%	66.7
Number of Senior Executives	person	6
Percentage of Male Executives	%	100
Percentage of Female Executives	%	0
Number of Directors Attending <75% of Meetings	person	0
Percentage of Independent Directors Serving >6 Years	%	0
Age Standard Deviation of Directors, Supervisors, and Executives	year	7.98
Number of Major/Significant Internal Control Weaknesses	instance	0
Total Duration of Anti-Corruption Training	hour	2213
Number of Anti-Corruption Training Participants	person-times	1456
Number of Investor Communication Sessions	session	35
Cumulative Number of Investors Engaged	person-times	394
Number of Shareholders' Meetings Held	meeting	5
Director Attendance Rate at Shareholders' Meetings	%	100
Shareholding Ratio of Senior Executives	%	1.82



Indicator	Unit	2024
Stock Pledge Ratio	%	0
Preparation and Disclosure of Periodic Reports	report	4
Release of Interim Announcements	announcement	57
Major Litigations and Arbitration Cases	case	0
Number of Party Committee Meetings	meeting	32
Number of Party Branches	branch	9

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