

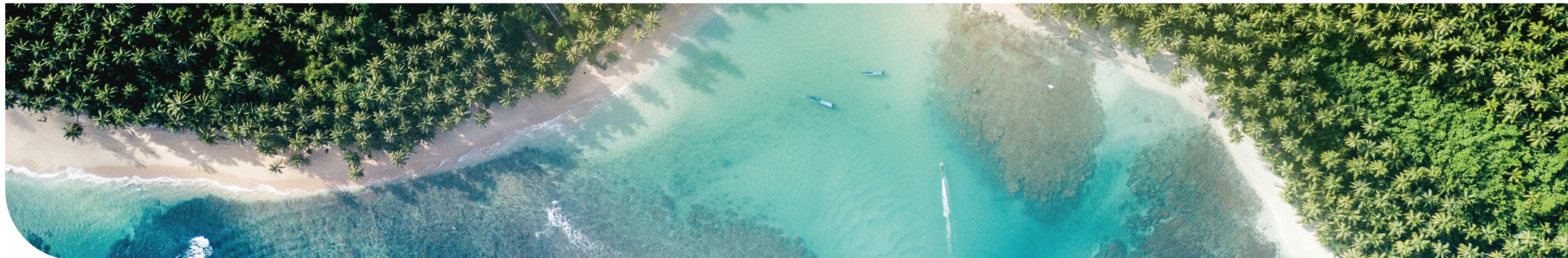


Xiamen Tungsten Co., Ltd.

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2024 Sustainability Report

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About This Report

This is the 2024 Sustainability Report ("this report") released by Xiamen Tungsten Co., Ltd. (hereinafter referred to as "XTC" or "We"). This report aims to inform stakeholders of the impact of sustainability risks and transition opportunities on corporate value, as well as the company's environmental and social impacts in 2024. It also outlines the company's initiatives and achievements towards advancing the United Nations Sustainable Development Goals.

Reference Guidelines

This report is prepared in accordance with the Corporate Sustainability Disclosure Standards - General Requirements (Trial), jointly formulated by the Ministry of Finance of the People's Republic of China, the Ministry of Foreign Affairs, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Ecology and Environment, the Ministry of Commerce, the People's Bank of China, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), the National Financial Regulatory Administration, and the China Securities Regulatory Commission. It also follows the Guidelines No. 1 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Standardized Operation, Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Sustainability Report (Trial), and the Guide No.4 for Self-Regulatory Supervision on Listed Companies of the SSE - Compilation of Sustainable Development Reports issued by the Shanghai Stock Exchange, the Sustainability Accounting Standards Board (SASB) Standards, the Reference of ESG Indicators System for ESG Reports of Listed Chinese Central State-Owned Enterprises issued by the SASAC Research Center, the European Sustainability Reporting Standards (ESRS) released by the European Commission, the two IFRS Sustainability Disclosure Standards (ISDS) issued by the International Sustainability Standards Board (ISSB), and Global Reporting Initiative Standards (GRI Standards). Additionally, this report incorporates disclosure requirements aligned with the United Nations Sustainable Development Goals (SDGs).

Reporting Scope

The reporting period is between January 1, 2024, and December 31, 2024, and some parts of the report may be beyond the aforementioned scope. Unless otherwise specified, the environmental data disclosed in this report covers our main manufacturing enterprises, and the economic and social data covers the enterprises within the scope of consolidation.

Data Reporting

The financial data in this report is extracted from Annual Report FY2024 of XTC. The greenhouse gas emission data is obtained from Greenhouse Gas Verification Report issued by GUANGZHOU CEPREI CERTIFICATION BODY SERVICES CO.,LTD. and SGS-CSTC Standards Technical Services Co., Ltd. Other data is sourced from our internal systems or compiled manually.

External Assurance

RSM China CPA LLP independently guarantees the environmental, social and corporate governance performance key indicators in this report, and the external assurance, working scope, methodology of work and conclusion of assurance are set out in the Appendix.

Report Availability

This report is released annually in electronic format, available in both Simplified Chinese and English versions. In cases where there are discrepancies between the two versions, the Chinese version shall prevail. Electronic copies of the report can be viewed and downloaded from our official website (www.cxtc.com) and the Shanghai Stock Exchange website (www.sse.com.cn). During the report preparation process, we have strived to take into account the interests and expectations of different stakeholders and to keep the content concise, clear, and reader-friendly. Due to various practical constraints, this report may fall short of expectations. Feedback and suggestions are sincerely welcomed, and we remain committed to continuous improvement.

Explanatory Note

Abbreviation	Full Name
XTC, We	Xiamen Tungsten Co., Ltd.
XTC Haicang Branch	Xiamen Tungsten Co., Ltd. Haicang Branch
Xiamen Jialu	Xiamen Tungsten (H.C) Co., Ltd.
Malipo Haiyu Tungsten	Malipo Haiyu Tungsten (H.C) Co., Ltd.
Luoyang Yulu	Luoyang Yulu Tungsten Mining Co., Ltd.
Ninghua Xingluokeng	Ninghua Xingluokeng Tungsten Mining Co., Ltd.
Duchang Jinding	Jiangxi Duchang Jinding Tungsten Co., Ltd.
Xiamen Honglu	Xiamen Honglu Tungsten & Molybdenum Industry Co., Ltd.
Xiamen Golden Egret	Xiamen Golden Egret Special Alloy Co., Ltd.
Haicang Golden Egret	Xiamen Golden Egret Cemented Carbides Co., Ltd.
Xiamen Penglu	Xiamen Golden Egret Special Alloy (H.C.) Co., Ltd.
Golden Egret (Thailand)	Golden Egret Cemented Carbide (Thailand) Co.,Ltd.
Jiujiang Golden Egret	Jiujiang Golden Egret Hard Material Co., Ltd.
Luoyang Golden Egret	Luoyang Golden Egret Geotools Co., Ltd.
Ganzhou Hongfei	Ganzhou Hongfei Tungsten and Molybdenum Materials Co., Ltd.
Fujian Xinlu	Fujian Xinlu Tungsten Co., Ltd.
Golden Dragon Rare-earth	Fujian Golden Dragon Rare-earth Co., Ltd.
GANPOWER	Ganzhou Highpower Technology Co., Ltd.
XWXN (Xiamen)	XTC New Energy Materials (Xiamen) Co., Ltd.
XWXN (Sanming)	XTC New Energy Materials (Sanming) Co., Ltd.
XWXN (Ningde)	XTC New Energy Materials (Ningde) Co., Ltd.
XTC (Jinglu)	Xiamen XTC New Energy Materials (H.C) Ltd.
XWXN (Yaan)	XTC New Energy Materials (Yaan) Co., Ltd.
XTC (Hydrogen)	XTC Hydrogen Energy Science and Technology (Xiamen) Ltd.
Chengdu Hongbo Molybdenum	Chengdu Hongbo Molybdenum Co., Ltd.
Chengdu Hongbo Industrial	Chengdu Hongbo Industrial Co., Ltd.
Chengdu Dingtai	Chengdu Dingtai New Material Co., Ltd.
Tianjin SofTool	SofTool Manufacturing Co., Ltd.
Basic Electronic Materials	Fujian Basic Electronic Materials Co., Ltd.
Bobai Judian	Bobai Judian Mining Co., Ltd.
RMAP	Responsible Minerals Assurance Process
LECD	L (Likelihood, the probability of an accident), E (Exposure, the frequency of exposure to a hazardous environment), C (Consequence, the potential consequences of an accident). Three factors are given different scores. The sum of these three scores is then multiplied to D (Danger) to evaluate the level of risk associated with working conditions.
PQCD	P (Productive), Q (Quality), C (Cost), D (Delivery), it is an important indicator for measuring and evaluating manufacturing operations.



Chairman's Statement

In 2024, the world remains amidst unprecedented changes unseen in a century. As the global economy undergoes both recovery and transformation, new opportunities are emerging. A profound interplay between scientific revolutions and industrial transformation is reshaping our times, while the shift toward green and low-carbon development has become a defining theme in the evolution of human civilization. Against this backdrop of a rapidly changing world and complex global landscape, XTC, guided by the “Made in China 2025” strategy, remains firmly focused on its core businesses. We are building strongholds of technological innovation and value creation across three key sectors—tungsten and molybdenum, new energy materials, and rare earths. By driving innovation to reshape industrial value and championing green transformation to redefine the future of the industry, we are striving to establish ourselves as a globally competitive and influential leader in high-end manufacturing, charting a new paradigm for enterprise development in the new era.

Innovation as the Backbone: Forging the Engine of High-Quality Development

We regard technological innovation as the primary driving force of corporate development. By building a complete innovation ecosystem that covers fundamental research, applied development, and industrial transformation, we are cultivating deep and integrated capabilities across research and industrial application. We actively promote the integration of product development with advanced global manufacturing systems. Relying on national-level research platforms, we have established systematic research and development capabilities in areas such as cemented carbides, refractory metals, battery materials, optoelectronic crystalline materials, and rare earth permanent magnet motor industry cluster, continually pushing technological boundaries. Through innovation, we reshape our core competitiveness and empower the global industrial chain to move to a higher level. Technological potential is transformed into industrial momentum, driving a profound technological transformation of the industry.

Green as the Foundation: Drawing a New Blueprint for the Net-Zero Era

We actively respond to global climate initiatives and align with national strategic goals, embedding green principles throughout the entire lifecycle of our operations. We integrate green transformation into the pulse of industrial evolution and contribute to global temperature control targets. We are committed to achieving carbon peaking by 2030 and net zero by 2050 across our operations. To this end, we are building a comprehensive and high-standard green manufacturing system and promoting new production models with great potential for replication. We take multi-dimensional measures such as energy structure optimization, process technology innovation, and value chain collaboration on emissions reduction to reduce carbon emissions both in our own operations and across the industrial ecosystem. We focus on the development of recycling technologies for regenerated tungsten and high-value metals such as cobalt and nickel, aiming to improve resource efficiency and contribute to the advancement of the circular economy.

Responsibility as a Top Priority: Building a Sustainable Industrial Ecosystem

We firmly believe that responsibility is essential in the global era. Guided by strategic synergy, shared governance, and value co-creation, we integrate the concept of responsibility into the entire management process from raw materials to final products. We strengthen systematic assessments of material compliance, environmental impacts, and social responsibilities, advancing supply chain management from simple compliance to collaborative responsibility. With a market-oriented mindset, we explore the value of our products and refine lean manufacturing to deliver superior quality, stable performance, and sustainable solutions to customers worldwide. Our independently developed products, such as high-strength tungsten wire for photovoltaic applications, titanium alloy cutting tools, and high-voltage mid-nickel battery materials, align precisely with industry needs and promote high-quality development in sectors such as photovoltaics, precision manufacturing, and new energy.

Co-Creation as a Bridge: Fostering a Shared Social Responsibility Ecosystem

We embrace the philosophy of shared responsibility and mutual growth, linking the company's development closely with community progress. Together, we shape a harmonious vision for sustainable development. We are committed to building a responsibility ecosystem centered on co-created mechanisms, integrated resources, and shared outcomes. By maintaining long-term and stable partnerships with communities, we listen to local voices and build enduring support systems in areas such as educational equity, public well-being, and cultural enrichment. Through collaborative efforts, we strive to achieve mutual prosperity and shared benefits.

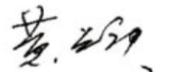
People as the Root: Unlocking the Inner Drive for Value Creation

We view talent as the most valuable resource for enterprise development and are dedicated to building a platform for talent aggregation and shared growth. We always place employee safety and well-being as a top priority, protecting the legitimate rights of every employee and fostering a workplace that is fair, inclusive, and warm. We care deeply about each employee's growth and development. Guided by value creation, we cultivate professional expertise through talent development systems, unleash potential through long-term incentive mechanisms, and gather collective wisdom through a diverse and inclusive culture. By linking personal development closely with the company's high-quality growth, we build a solid bridge for shared interests and mutual success, working hand in hand with every employee to create remarkable achievements.

Governance as the Guiding Principle: Cultivating Enduring Momentum for Sustainability

We define the future of our enterprise through modern governance. In an increasingly complex and dynamic external environment, we are constructing a deeply integrated mechanism that connects sustainable development with strategic decision-making. We continue to optimize our sustainability governance system, improve comprehensive risk management, and enhance the guiding force of our sustainability strategy. Supported by data-driven approaches, we integrate sustainability goals with business performance, making governance capability the foundational engine for corporate development.

With favorable winds propelling us on a long journey and great responsibilities urging us forward, XTC embarks once again with renewed determination. We remain steadfast in our mission of "making XTC a place for employees to realize personal value, a place for customers to find solutions, a place for shareholders to invest in, and a place for society to benefit from." Rooted in tradition yet embracing transformation, we are committed to writing a new chapter of sustainable development. With the spirit of innovation to shape the future and the posture of collaboration grounded in mutual trust, we will walk side by side with all our partners to build an open and inclusive ecosystem of sustainable value. In facing challenges with resolve and accumulating strength over the long term, we aim to contribute a powerful voice to the symphony of social progress and human well-being, ushering in a new era of sustainable development together.

Chairman of XTC 

About XTC

We focus on three core businesses: tungsten and molybdenum, new energy materials, and rare earth. Through continuously technological and managerial innovation, we have built a complete front-end tungsten mine selection, mid-end tungsten and molybdenum smelting and production of tungsten and molybdenum powders, high-end deep processing applications such as hard alloys, tungsten and molybdenum wire and cutting tools, and recycling of the entire industry chain, with many technologies leading internationally. We have established a complete new energy material product line to support 3C consumer electronics, new energy vehicles, and energy storage to create more possibilities and provide advanced material solutions for achieving carbon neutrality. We have established a collaborative system covering the entire rare earth industry chain. At the upstream, we strategically invest in mining and smelting separation segments to ensure a stable supply of raw materials. At the downstream, we have deepened our involvement in high-value-added fields through majority-owned subsidiaries, covering the entire industry chain, including high-purity rare earth oxides, rare earth metal processing, phosphorescent materials, high-performance magnetic materials, and optoelectronic crystals, thus creating a complete industry chain loop.

Our Mission

We aim to make XTC a place for employee to realize personal value, a place for customer to find solutions, a place for shareholder to invest in, and also a place for society to benefit from.

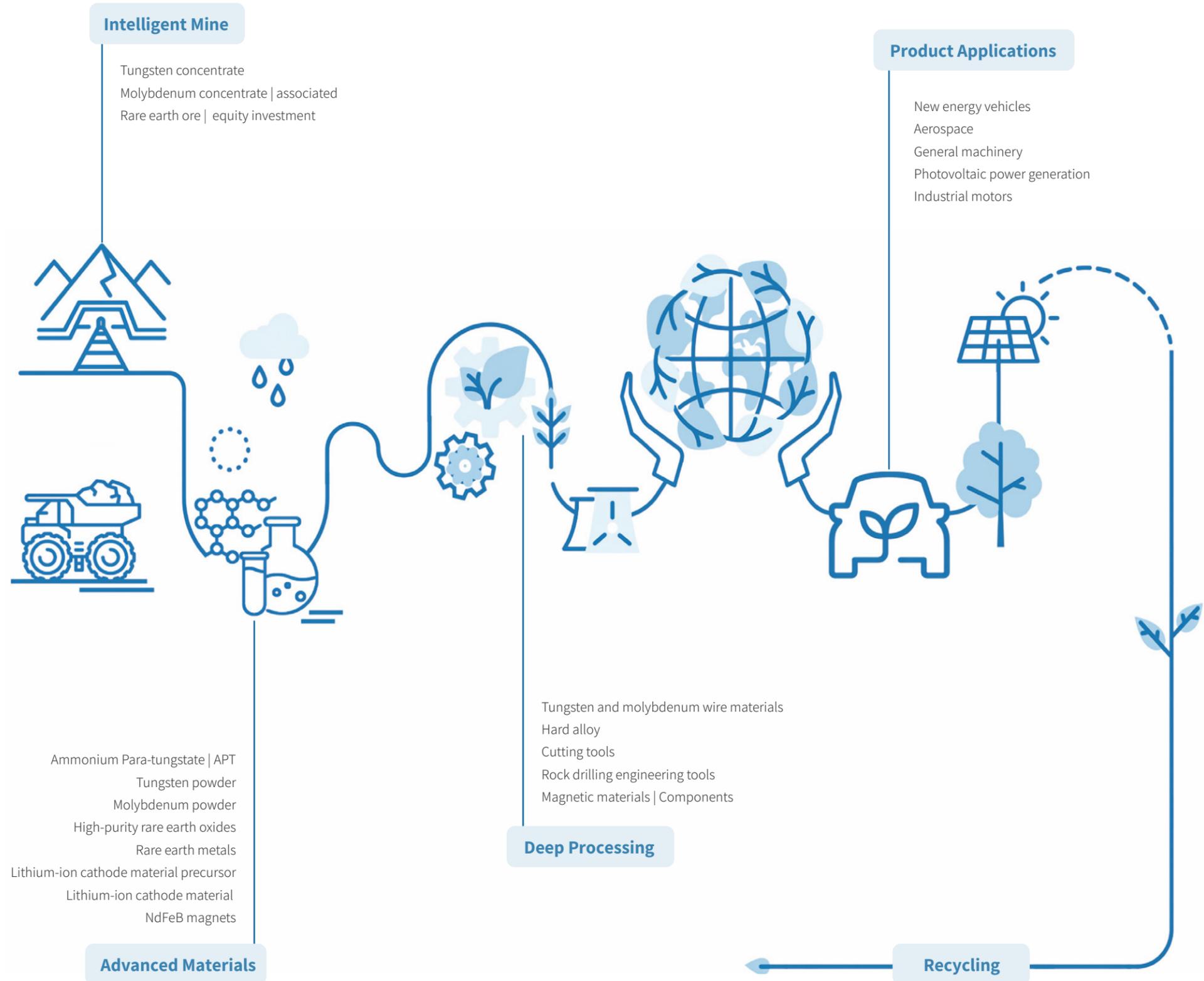
Our Vision

To build XTC into a platform for talent gathering, technology innovation, and industrial development.

Our Business Policy

Pay attention to details, strive for progressive technology, advance steadily, endeavor to enhance the market share, and focus on long-term interests.

Our Business



Business Distribution Map

- Tungsten and Molybdenum
- Rare Earths
- New Energy
- Others

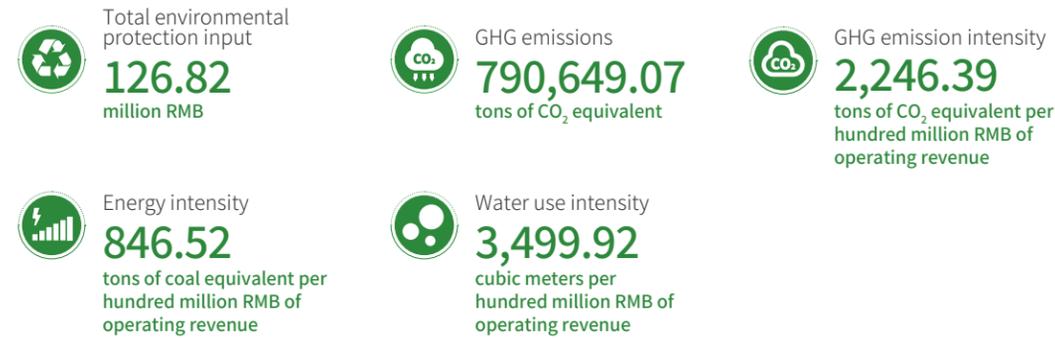


2024 Economic Environmental and Social Impact

Economic Impact



Environmental Impact



Social Impact



2024 Honor and Awards

Awards Recipients	Honors and Awards
XTC	Member of the S&P Global Sustainability Yearbook (China Edition) 2025
XTC	Recognized as "Industry Mover" by S&P Global
XTC	Ranked 382nd in the 2024 Fortune China 500
XTC	Selected as the "2024 Fortune China Industry Ranking of Stars - Most Admired Companies"
XTC	Ranked 294th in the "2024 Top 500 China Manufacturing Enterprises" by China Enterprise Confederation and China Enterprise Directors Association
XTC	Selected as the "2024 Best Practices in Sustainable Development for Listed Companies" by CAPCO
XTC	Selected as the "2024 Best Practices in Board of Directors for Public Companies" by CAPCO
XTC	Selected as the "2024 Best Practices in Board Office Operations for Public Companies" by CAPCO
XTC	Selected as the "Best Practices in Investor Relations Management for Public Companies" by CAPCO
XTC	Awarded the "Leading Manufacturing Enterprise in Fujian Province" by the Fujian Provincial Department of Industry and Information Technology
XTC	Ranked 13th in the "2024 Top 100 Fujian Manufacturing Enterprises" by the Fujian Enterprises and Entrepreneurs Confederation
Golden Dragon Rare-earth	Ranked 22nd in the "Top 100 Strategic Emerging Industry Enterprises in Fujian" by the Fujian Enterprises and Entrepreneurs Confederation
Ninghua Xingluokeng	Selected in the 2024 5G Factory Directory by the Ministry of Industry and Information Technology
XWXN	Ranked 130th in the "2023 Global Top 500 New Energy Enterprises" jointly released by the China Energy News and the China Institute of Energy Economics
XWXN	Awarded the "Manufacturing Single Champion Enterprise" by the Ministry of Industry and Information Technology
XWXN	Ranked 4th in the "Top 100 Strategic Emerging Industry Enterprises in Fujian" by the Fujian Enterprise and Entrepreneurs Confederation
Xiamen Golden Egret	Ranked 28th in the "Top 100 Strategic Emerging Industry Enterprises in Fujian" by the Fujian Enterprise and Entrepreneurs Confederation



Communications with Stakeholders

We uphold the mission of "making XTC a place for employee to realize personal value, a place for customer to find solutions, a place for shareholder to invest in, and also a place for society to benefit from." We have established open and diversified communication mechanisms with all stakeholders to gain deep insights into their concerns and expectations, respond in a timely manner, and integrate these inputs into our sustainable development governance. In doing so, we strive to achieve coordinated development and value co-creation with our stakeholders.

Stakeholders	Matters of Concern	Communication Channels
Employees	Occupational Health and Safety Employee Compensation and Benefits Pollutant Discharge Waste Disposal	Employees Consultation Employee Training and Activities Employee Complaints Employee Satisfaction Surveys
Clients	Safety and Quality of Products and Services Data Security and Customer Privacy Protection Tax Compliance Supply Chain Security	Customer Service and Complaint Management On-site Visits Customer Satisfaction Surveys
Suppliers	Safety and Quality of Products and Services Anti-Commercial Bribery and Anti-Corruption Data Security and Customer Privacy Protection Tax Compliance	Supplier Conferences Supply Chain Management Platform Supplier Training On-site Visits
Investors	Risk Control and Compliance Communications with Stakeholders Innovation-driven Development Tax Compliance	Information Disclosure of Listed Company Shareholders' Meetings / Earnings Conference Call and Webcast Investor Hotline / Investor Interactive Platform Investor Visits and Research Roadshow Event / Brokerage Strategy Meeting
Financial Institutions	Supply Chain Security Risk Control and Compliance Tax Compliance Anti-Commercial Bribery and Anti-Corruption	Information Disclosure of Listed Company Project Cooperation
Media Institutions	Innovation-driven Development Anti-Commercial Bribery and Anti-Corruption Energy Usage Pollutant Discharge	L Information Disclosure of Listed Company Media Communications Public Opinion Monitoring
Government and Regulatory Bodies	Climate Response Pollutant Discharge Circular Economy Promoting Industry Development	On-site Visits Cooperation on Government Project Meeting and Training
Non-governmental Organizations	Circular Economy Usage of Water Resources Pollutant Discharge Innovation-driven Development	On-site Visits Welfare Activities Public Opinion Monitoring
Local Communities	Rural Revitalization Social Contributions Ecosystem and Biodiversity Protection Communications with Stakeholders	Online Communications and On-site Visits Community Grievance Assistance Services

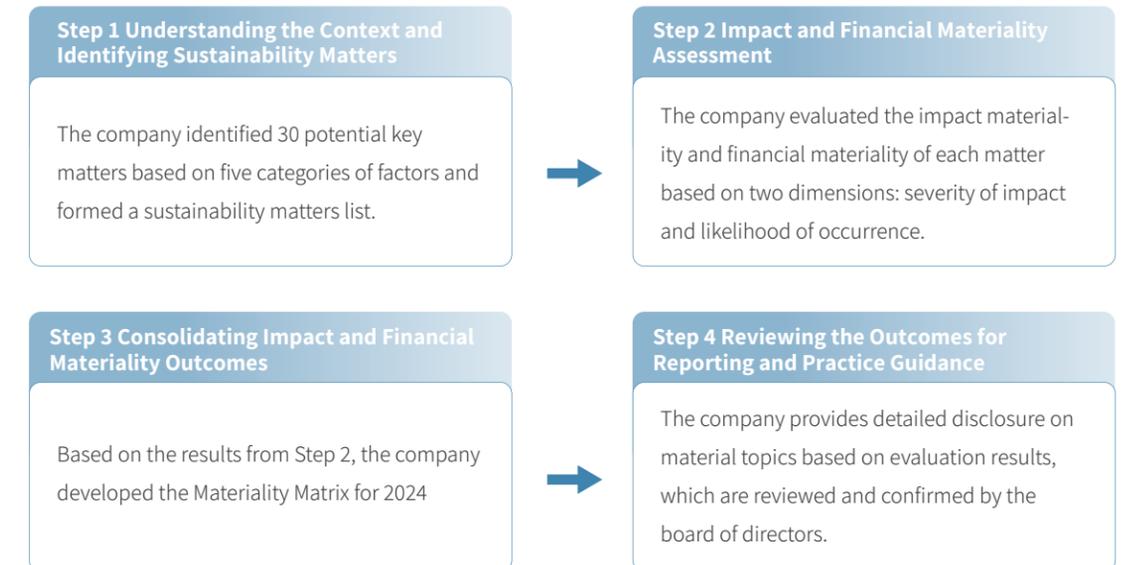
Assessment and Management of Material Matters

We conducted double materiality assessments in alignment with the methodologies outlined in latest domestic and international disclosure standards, including the Corporate Sustainability Disclosure Standards - General Requirements (Trial), jointly formulated by the Ministry of Finance of the People's Republic of China, the Ministry of Foreign Affairs, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Ecology and Environment, the Ministry of Commerce, the People's Bank of China, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), the National Financial Regulatory Administration, and the China Securities Regulatory Commission. We also referred to the Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies - Sustainability Report (Trial) and the Guide No.4 for Self-Regulatory Supervision on Listed Companies of the SSE - Compilation of Sustainable Development Reports issued by the Shanghai Stock Exchange, the European Sustainability Reporting Standards (ESRS) released by the European Commission, and the two IFRS Sustainability Disclosure Standards (ISDS) issued by the International Sustainability Standards Board (ISSB). Following the double materiality assessment principle (financial materiality and impact materiality), we identified sustainability matters that have a material impact on our enterprise value and the stakeholders.

We conducted an assessment of material matters from both financial materiality and impact materiality perspectives. In terms of financial materiality, we evaluated and analyzed the potential impact of each matter on the company's business development, financial planning, and performance. Regarding impact materiality, we assessed and analyzed the external economic, environmental, and social impacts from the company's performance on each matter. We considered stakeholder research as a crucial part of the impact materiality assessment, gathered the impact materiality evaluations of 564 stakeholders on sustainability matters, and combined these findings with the financial materiality assessment results. Ultimately, we identified 13 material matters.

Double Materiality Assessment Process

2024 Double Materiality Assessment Process



Step 1: Understanding the Context and Identifying Sustainability Matters

We comprehensively considered the following five classes of factors to identify a list of sustainability matters relevant to our business.

1. Sustainability Disclosure Standards and Guidelines Worldwide

The Corporate Sustainability Disclosure Standards – General Requirements (Trial), jointly formulated by the Ministry of Finance of the People's Republic of China, the Ministry of Foreign Affairs, the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Ecology and Environment, the Ministry of Commerce, the People's Bank of China, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), the National Financial Regulatory Administration, and the China Securities Regulatory Commission, the Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies – Sustainability Report (Trial) and the Guide No.4 for Self-Regulatory Supervision on Listed Companies of the SSE – Compilation of Sustainable Development Reports issued by the Shanghai Stock Exchange, the European Sustainability Reporting Standards (ESRS) released by the European Commission, and the two IFRS Sustainability Disclosure Standards (SDS) issued by the International Sustainability Standards Board (ISSB).

2. International Initiatives

The United Nations Sustainable Development Goals (SDGs), the 29th Conference of the Parties of the UNFCCC (COP 29), the Due Diligence Guidance for Responsible Business Conduct of Organization for Economic Co-operation and Development (OECD), etc.

3. Global Economic and Macro-Policy Outlook

International: Global temperature control targets under the Paris Agreement, Science-Based Targets initiative (SBTi), EU Carbon Border Adjustment Mechanism (CBAM), international trade trends and policy changes, etc.
Domestic: The Outline of the 14th Five-Year Plan for Economic and Social Development (2021–2025) and Long-Range Objectives through the Year 2035 of the People's Republic of China, China's carbon peak and carbon neutrality targets, industry regulation policies, etc.

4. Global Market Trends

The market and consumer preferences are shifting towards green and low-carbon products, with expansion and consumption growth in industries such as new energy vehicles, aerospace, and general machinery. Additionally, the international market continues to raise the threshold requirements for corporate qualifications, product quality, ESG performance, and other factors.

5. Corporate Strategic Plan and Development Needs

Under the strategic development plan of product-service integration, digital intelligence, environmental sustainability, and internationalization, along with alignment to industry regulations and policy requirements, efforts should be made to enhance resilience in risk response and drive sustainable development.

Sustainability Matters List

Dimension	Sustainability Matters
Environmental	Climate Response Pollutant Discharge Waste Disposal Ecosystem and Biodiversity Protection Environmental Compliance Management Energy Usage Usage of Water Resources Circular Economy
Social	Rural Revitalization Social Contributions Innovation-driven Development Ethics of Science and Technology Responsible Sourcing Supply Chain Security Equal Treatment to Small and Medium-sized Enterprises Safety and Quality of Products and Services Data Security and Customer Privacy Protection Promoting Industry Development Equal Employment Human Rights Protection Employee Communication Employee Development and Training Employee Compensation and Benefits Occupational Health and Safety
Governance	Due Diligence Communications with Stakeholders Risk Control and Compliance Anti-Commercial Bribery and Anti-Corruption Anti-unfair Competition Tax Compliance

Step 2-1: Impact Materiality Assessment

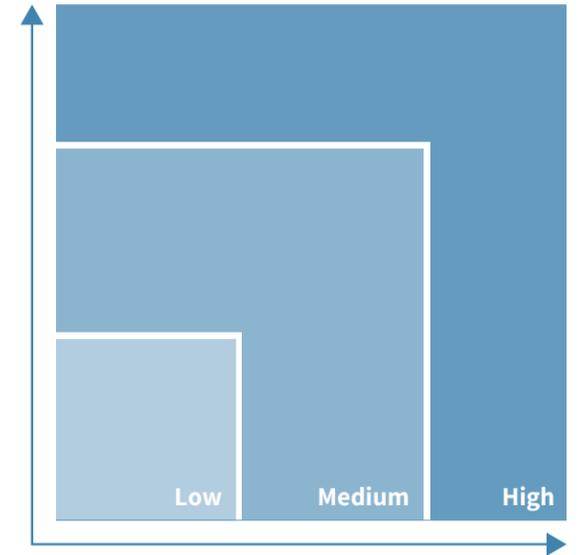
We assessed the impact materiality of each sustainability matter based on two dimensions: the severity of impact and the likelihood of occurrence.

Criteria 1: Severity of Impact

We conducted a preliminary assessment of the impact of the identified sustainability matters on the economy, environment, and society through a questionnaire survey, with 564 valid responses collected. Based on the survey results, we quantified the impact of each matter using qualitative ratings (1-5 scale) through statistical methods such as weighted averages and variance analysis. By combining the weight distribution, we calculated the comprehensive impact score to determine the severity of impact of each sustainability matter.

Criteria 2: Likelihood of Occurrence

We assessed the likelihood of the occurrence of impacts related to each matter based on the frequency of similar past events and relevant experience, and quantified and classified these probabilities to determine the likelihood of occurrence of impacts for each sustainability matter.



Impact Materiality Assessment Outcomes

	Impact Materiality: Low	Impact Materiality: Medium	Impact Materiality: High
Sustainability Matters	Tax Compliance	Safety and Quality of Products and Services	Supply Chain Security
	Ethics of Science and Technology	Due Diligence	Climate Response
		Social Contributions	Responsible Sourcing
		Occupational Health and Safety	Innovation-driven Development
		Data Security and Customer Privacy Protection	Risk Control and Compliance
		Anti-Commercial Bribery and Anti-Corruption	Pollutant Discharge
		Usage of Water Resources	Energy Usage
		Communications with Stakeholders	Waste Disposal
		Equal Treatment to Small and Medium-sized Enterprises	Environmental Compliance Management
		Rural Revitalization	Promoting Industry Development
		Anti-unfair Competition	Human Rights Protection
			Equal Employment
			Ecosystem and Biodiversity Protection
			Employee Development and Training
			Employee Compensation and Benefits
			Employee Communication
			Circular Economy

Step 2-2: Financial Materiality Assessment

We assessed the financial materiality of each sustainability matter based on two criteria: the potential magnitude and the likelihood of occurrence.

Criteria 1: Potential Magnitude

We assessed the magnitude of which the opportunities and risks associated with each sustainability matter may have direct and indirect, positive and negative impacts on the company's financial planning and performance during the reporting period and the foreseeable future.

Reference Indicators	
Costs	Considering factors such as market price of resources, trend forecasts, and the company's historical costs
Profits	Taking into account costs and revenues, and assessing the impact on profits

Criteria 2: Likelihood of Occurrence

The likelihood of financial effects on the company from the opportunities and risks associated with each sustainability matter in the short, medium, and long-term.

Financial Materiality Assessment Outcomes

		Financial Materiality: Low ^[1]	Financial Materiality: Medium ^[2]	Financial Materiality: High ^[3]
Sustainability Matters	Equal Employment		Social Contributions	Climate Response
	Employee Communication		Equal Treatment to Small and Medium-sized Enterprises	Innovation-driven Development
	Tax Compliance		Promoting Industry Development	Pollutant Discharge
	Ethics of Science and Technology		Occupational Health and Safety	Environmental Compliance Management
			Due Diligence	Circular Economy
			Data Security and Customer Privacy Protection	Safety and Quality of Products and Services
			Communications with Stakeholders	Risk Control and Compliance
			Human Rights Protection	Waste Disposal
			Employee Development and Training	Ecosystem and Biodiversity Protection
			Anti-unfair Competition	Energy Usage
			Rural Revitalization	Supply Chain Security
			Employee Compensation and Benefits	Anti-Commercial Bribery and Anti-Corruption
				Usage of Water Resources
				Responsible Sourcing

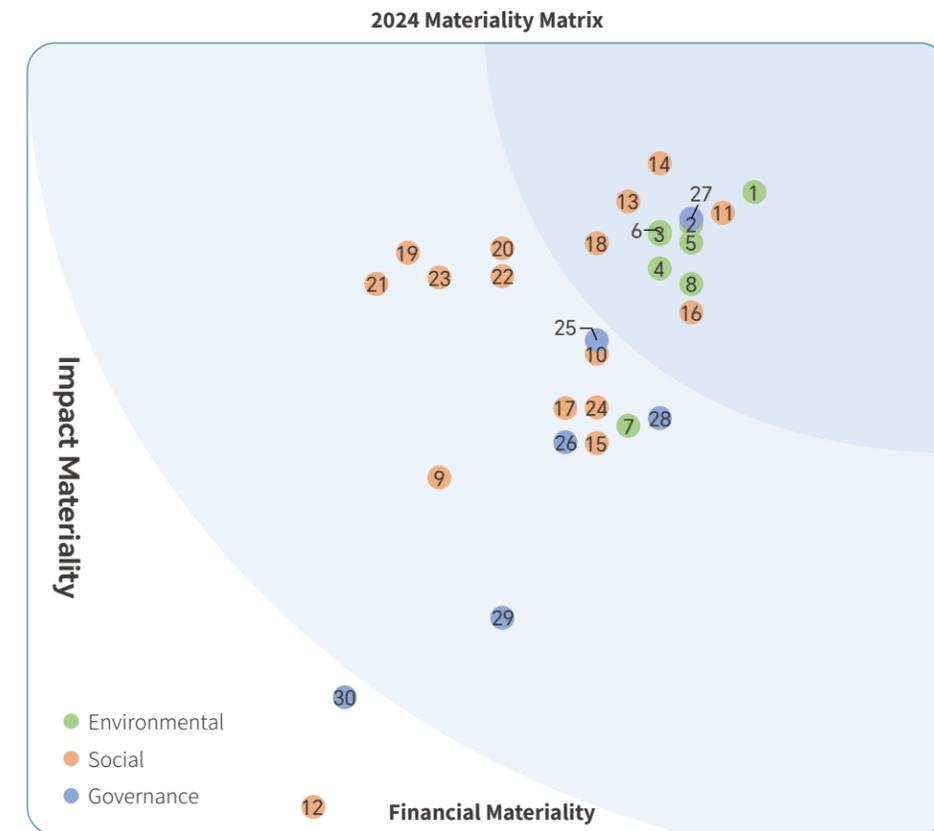
[1] Low Financial Materiality: Refers to matters that may have a certain financial impact in the short, medium, and long term, but the overall impact is relatively minor.

[2] Medium Financial Materiality: Refers to matters that have a financial impact in the short term and may exert further influence in the medium to long term, but the overall impact is relatively minor.

[3] High Financial Materiality: Refers to matters that have a considerable financial impact in the short term and are highly likely to cause material financial impacts in the medium to long term.

Step 3: Consolidating Impact and Financial Materiality Outcomes

We conducted a comprehensive analysis and prioritization of sustainability matters based on the results of both the impact materiality and financial materiality assessments. The final materiality ranking of each matter is determined, and the results are visually presented in a materiality matrix. Based on the double materiality assessment, we identified 13 sustainability matters with high impact and financial materiality.



Impact and Financial Materiality	Sustainability Matters			
High	1 Climate Response	11 Innovation-Driven Development	3 Waste Disposal	14 Supply Chain Security
	6 Energy Usage	27 Risk Control and Compliance	8 Circular Economy	2 Pollutant Discharge
	13 Responsible Sourcing	18 Promoting Industry Development	16 Safety and Quality of Products and Services	
	4 Ecosystem and Biodiversity Protection		5 Environmental Compliance Management	
Medium	9 Rural Revitalization	20 Human Rights Protection	22 Employee Development and Training	
	25 Due Diligence	24 Occupational Health and Safety	26 Communications with Stakeholders	
	10 Social Contributions	7 Usage of Water Resources	23 Employee Compensation and Benefits	
	19 Equal Employment	21 Employee Communication	17 Data Security and Customer Privacy Protection	
	29 Anti-unfair Competition	15 Equal Treatment to SMEs	28 Anti-Commercial Bribery and Anti-Corruption	
Low	30 Tax Compliance	12 Ethics of Science and Technology		

Step 4: Reviewing the Outcomes for Reporting and Practice Guidance

Guided by these results, we aim to enhance sustainability reporting and management practices, with detailed management measures and specific actions for the material matters provided in the relevant sections of this report.

Material Matter	Scope of Impact				Affected Stakeholders	Risks	Opportunities	Time Duration ^[4]	Corresponding SDGs	Location in the Report
	Value Chain Upstream	Operations	Value Chain Downstream	Communities						
Climate Response	✓	✓	✓	✓	<ul style="list-style-type: none"> Employees Clients Suppliers Investors Financial Institutions Media Institutions Government and Regulatory Bodies Non-governmental Organizations Local Communities 	<ul style="list-style-type: none"> Market Risk: A global shift toward green consumption preferences may negatively impact our market share and business revenue if our products fail to meet low-carbon and environmentally friendly market demands. Technology Risk: Failure to keep pace with technological developments in the industry and to master green and low-carbon technologies may result in low production efficiency, increased costs, and a loss of market competitiveness. Policy Risk: Increasingly stringent climate-related regulations and compliance requirements, both domestically and internationally, may lead to higher carbon compliance costs. Operational Risk: Extreme weather events may damage our buildings, equipment, and facilities, resulting in asset depreciation and increased operating costs. Reputational Risk: Failure to meet greenhouse gas reduction commitments and targets may reduce stakeholder trust and public recognition, adversely affecting our brand image and reputation. 	<ul style="list-style-type: none"> Market Opportunity: Developing certified green and low-carbon products to meet downstream market demand for environmentally friendly goods can attract more eco-conscious consumers and expand market share. By continuously reducing carbon emissions and strengthening carbon asset management, the company may also seize opportunities to generate additional revenue through carbon trading markets. Technological Opportunity: By staying attuned to innovation trends in eco-friendly technologies, the company can build technological barriers in areas such as green and low-carbon technology and resource recycling, thereby enhancing its competitiveness. Financial Opportunity: The development of green and low-carbon projects can provide the company with greater access to green financing and government grants or subsidies, reducing capital costs and easing cash flow pressure. Reputational Opportunity: By implementing carbon reduction initiatives and promoting emission reductions throughout the value chain, the company can establish a green corporate image and enhance its brand's environmental value. 	Short-term Mid-term Long-term	 	Climate Response
Innovation-driven Development	✓	✓	✓		<ul style="list-style-type: none"> Employees Clients Suppliers Investors Non-governmental Organizations 	<ul style="list-style-type: none"> Market Risk: Rapid technological advancements in the industry may diminish the competitiveness of our products if our R&D efforts cannot keep up with market trends and industrial policy directions, or if our technological outcomes fail to translate into competitive advantages. Technology Risk: Leakage of core technologies or loss of key technical personnel may weaken our technological edge; failure to register and secure intellectual property rights in time may lead to IP disputes. Financial Risk: Increased R&D efforts require more financial and human resources, which may raise both costs. Given the high investment and long cycle of R&D activities, misjudgment in technical direction or failed R&D projects may result in wasted resources and significant sunk costs. 	<ul style="list-style-type: none"> Market Opportunity: Technological upgrades and iterations will enhance product quality and production efficiency, reduce energy consumption and emissions, and meet the growing customer demand for green, safe, and high-quality products. This will strengthen market competitiveness and expand the company's presence in the high-end market. Technological Opportunity: Breakthroughs in innovation and strategic deployment in frontier technologies can help the company seize emerging technological ground, build strong technical barriers, and enhance its technological advantage. Financial Opportunity: Technological innovation can improve production efficiency and reduce energy consumption, thereby lowering production costs. Policy Opportunity: R&D projects or enterprises that align with policy requirements may receive financial incentives and subsidies, helping to ease funding pressure for innovation and providing sustainable support for ongoing R&D activities. 	Short-term Mid-term Long-term		Innovation-driven Development
Supply Chain Security	✓	✓	✓		<ul style="list-style-type: none"> Clients Suppliers Investors 	<ul style="list-style-type: none"> Market Risk: Failure to effectively assess and supervise suppliers or to meet client expectations regarding supply chain standards may result in the loss of market opportunities. Negative publicity related to suppliers' performance in areas such as environmental protection, safety, human rights, quality, or business ethics may be transmitted through the supply chain and cause a trust crisis regarding the company's products. Operational Risk: The raw materials required for the company's products may face supply disruptions due to geopolitical risks, resource depletion, or environmental policies, thereby affecting production. Financial Risk: Resource shortages or significant fluctuations in raw material prices may increase procurement costs, impacting the company's profitability and operational performance. 	<ul style="list-style-type: none"> Market Opportunities: Effective risk management helps the company make informed decisions, address various risk factors, better adapt to a complex and dynamic external environment, and maintain market competitiveness. It also strengthens the confidence and recognition of business partners, creating more business opportunities. Operational Opportunities: Establishing a comprehensive and effective risk management system can enhance the company's resilience to risks, reduce the impact of unexpected risks, and improve business stability. 	Short-term Mid-term Long-term	 	Supply Chain Security and Resilience
Responsible Sourcing										

[4] The impact duration is categorized into short-term, medium-term, and long-term. Short-term refers to within one year (inclusive) after the end of the sustainability information reporting period. Medium-term refers to one to five years (inclusive) after the end of the sustainability information reporting period. Long-term refers to more than five years after the end of the sustainability information reporting period.

Material Matter	Scope of Impact				Affected Stakeholders	Risks	Opportunities	Time Duration ^[4]	Corresponding SDGs	Location in the Report
	Value Chain Upstream	Operations	Value Chain Downstream	Communities						
Risk Control and Compliance	✓	✓	✓		<ul style="list-style-type: none"> Clients Suppliers Investors Financial Institutions Government and Regulatory Bodies 	<ul style="list-style-type: none"> Operational Risk: If the company fails to prioritize and strengthen risk management, it may lead to management failures or disruptions in key business operations, affecting operational stability and resulting in a loss of market competitiveness. Financial Risk: The occurrence of risk events may cause significant financial losses, including the need to pay large fines or compensation. It may also lead to decreased trust from financial institutions, tighter credit policies, reduced financing capacity, and increased financing costs. Reputational Risk: Violations of business ethics or legal and regulatory breaches may negatively impact the company's reputation. 	<ul style="list-style-type: none"> Market Opportunities: Effective risk management helps the company make informed decisions, address various risk factors, better adapt to a complex and dynamic external environment, and maintain market competitiveness. It also strengthens the confidence and recognition of business partners, creating more business opportunities. Operational Opportunities: Establishing a comprehensive and effective risk management system can enhance the company's resilience to risks, reduce the impact of unexpected risks, and improve business stability. 	Short-term Mid-term Long-term		Risk Management Internal Control and Compliance
Environmental Compliance Management	✓	✓	✓	✓	<ul style="list-style-type: none"> Employees Clients Suppliers Investors Financial Institutions Government and Regulatory Bodies Non-governmental Organizations Local Communities 	<ul style="list-style-type: none"> Compliance Risk: Failure to disclose environmental information as required or involvement in environmental violations may result in regulatory penalties and damage to the company's creditworthiness. Financial Risk: Strengthening environmental management, taking remedial actions, and conducting environmental training will increase the company's financial and human resource costs. Environmental violations may result in fines and other economic losses. Reputational Risk: If the company's operations damage the surrounding environment or adversely affect local communities, or if environmental violations occur, it may trigger negative evaluations from customers, investors, and local residents, harming the company's reputation. 	<ul style="list-style-type: none"> Brand Opportunities: A robust environmental management system that balances ecological benefits with economic benefits helps enhance the company's green brand value. This attracts more attention from capital markets during the global green and low-carbon transition, boosting market influence. 	Short-term Mid-term Long-term	 	Environmental Compliance Management
Energy Usage	✓	✓	✓		<ul style="list-style-type: none"> Clients Suppliers 	<ul style="list-style-type: none"> Market Risks: International markets and customers are increasing their demands on supply chain companies regarding clean energy use, energy conservation, and emission reduction. If the company fails to gradually optimize its energy structure, it may face barriers to market entry and lose business opportunities. Operational Risks: Adjustments in the energy structure may lead to instability in the energy supply chain and fluctuations in energy prices, which could impact the company's production activities. Financial Risks: The elimination or replacement of traditional energy sources or high-energy-consuming equipment may result in asset depreciation. The purchase of low-emission energy or the construction of photovoltaic facilities may increase the company's operational costs in the short to medium term, leading to cash flow pressure. 	<ul style="list-style-type: none"> Market Opportunities: Increasing the use of clean energy, optimizing the energy structure, and continuously reducing operational carbon emissions and product carbon footprints can attract more market and customer interest, maintaining a competitive advantage. Financial Opportunities: Reducing the reliance on fossil energy for production activities can help avoid additional costs caused by the instability or price fluctuations of traditional energy supply chains. In the long term, this can save energy costs and reduce sensitivity to changes in carbon emission costs. 	Short-term Mid-term Long-term		Energy Usage
Pollutant Discharge		✓	✓	✓	<ul style="list-style-type: none"> Employees Clients Government and Regulatory Bodies Local Communities 	<ul style="list-style-type: none"> Compliance Risks: Policies, regulations, and regulatory requirements related to pollutant emissions and waste disposal are becoming stricter. Failure to meet emission standards may result in penalties from regulatory authorities, leading to financial losses and damage to the company's reputation. Financial Risks: Introducing advanced equipment or upgrading technological processes to reduce pollutant emissions and waste generation will increase the company's operating costs. 	<ul style="list-style-type: none"> Brand Opportunity: Strictly controlling pollutant emissions and waste disposal, and minimizing the negative environmental impact of production activities, can enhance public recognition of the company's value. 	Short-term Mid-term Long-term	 	Pollutant Discharge Waste Disposal
Waste Disposal										

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Material Matter	Scope of Impact				Affected Stakeholders	Risks	Opportunities	Time Duration ^[4]	Corresponding SDGs	Location in the Report
	Value Chain Upstream	Operations	Value Chain Downstream	Communities						
Promoting Industry Development	✓	✓	✓		<ul style="list-style-type: none"> Clients Suppliers Government and Regulatory Bodies Non-governmental Organizations 	<ul style="list-style-type: none"> Market risk: Failure to actively engage in industry exchanges and development may reduce the company's influence within the industry, leading to the loss of cooperation opportunities. Technology risk: As industry technology evolves rapidly, lack of active participation in industry exchanges and innovation collaborations may hinder the company's R&D breakthroughs, resulting in a loss of competitive advantage in the market. 	<ul style="list-style-type: none"> Market opportunity: Promoting deep collaboration with upstream and downstream enterprises in the value chain in areas such as green transition and value co-creation helps maintain long-term, friendly, and stable partnerships, bringing more business opportunities. Technology opportunity: Actively participating in industry technology cooperation and exchanges allows the company to stay aligned with industry development trends, support breakthroughs in core technologies, and build patent barriers, thereby gaining a first-mover advantage in market access; participation in national and industry standard setting can transform the company's technological strengths into industry entry thresholds, enhancing its influence within the value chain. Brand opportunity: Proactively engaging in industry exchanges and innovation collaborations, and contributing to industry development with proprietary technologies, can enhance the company's reputation, influence, and appeal. 	Mid-term Long-term		Promoting Industry Development
Ecosystem and Biodiversity Protection		✓		✓	<ul style="list-style-type: none"> Government and Regulatory Bodies Non-governmental Organizations Local Communities 	<ul style="list-style-type: none"> Compliance risk: Mineral extraction may disturb surface vegetation, destroy wildlife habitats, or pollute soil and water bodies, which could trigger environmental restoration obligations and expose the company to regulatory penalties and legal actions. Increasingly stringent biodiversity protection regulations may limit the scope of mine development or raise the cost of ecological restoration. Reputational risk: With growing public attention on environmental protection, environmental damage or negative impacts on ecosystems caused by production activities may harm the company's brand image. 	<ul style="list-style-type: none"> Policy opportunity: By engaging in ecological restoration and biodiversity protection projects, the company may be prioritized for access to green financing and government subsidies, thereby reducing the financial cost of environmental protection investments. Branding opportunity: Developing an eco-friendly growth model can help establish a responsible corporate image, enhance recognition from local communities and other stakeholders, and increase the company's green brand value. 	Mid-term Long-term	  	Ecosystem and Biodiversity Protection
Circular Economy	✓	✓	✓	✓	<ul style="list-style-type: none"> Clients Suppliers Investors Financial Institutions Government and Regulatory Bodies Non-governmental Organizations Local Communities 	<ul style="list-style-type: none"> Technical risk: The continuous rise in requirements for resource recovery rates and cleaner production processes under the circular economy may pose challenges. If the company's resource recycling technologies lag behind industry advancements, it may weaken cost advantages and result in loss of market share. Financial risk: Investments in resource recycling technologies may increase the company's short-term financial burden. Policy risk: Stricter policies related to the use of recycled materials and battery recycling may raise the company's compliance costs. 	<ul style="list-style-type: none"> Technical opportunity: The development trend of the circular economy will drive the company to achieve technological breakthroughs in the field of resource recycling, helping to build technical advantages. Financial opportunity: Resource recycling can reduce financial costs related to raw material procurement and waste disposal, thereby enhancing the company's profitability. It also lowers dependency on external resources and mitigates risks associated with raw material price fluctuations. Branding opportunity: Expanding efforts in resource recycling can reduce the potential negative environmental impact of production waste, generating a positive influence on the company's brand reputation. 	Short-term Mid-term Long-term	 	Circular Economy
Safety and Quality of Products and Services	✓	✓	✓		<ul style="list-style-type: none"> Clients Suppliers 	<ul style="list-style-type: none"> Market risk: If safety incidents or quality issues arise from products, they may lead to customer complaints, returns, or recalls, potentially resulting in customer loss and negatively impacting the company's business performance. Financial risk: Product testing and quality management require corresponding financial investment, increasing operational costs. Safety or quality issues may also expose the company to administrative penalties, legal actions, and compensation claims, thereby raising financial costs. Reputational risk: Public exposure of product safety or quality incidents could trigger a crisis of trust among customers and the public, damaging the company's brand value and reducing brand loyalty. 	<ul style="list-style-type: none"> Market opportunity: High-quality products and services can attract more customers, strengthen competitive advantages, and enhance the competitiveness and influence of products and services. Brand opportunity: This can generate positive word-of-mouth, increase customer satisfaction and trust, and enhance the company's brand image. 	Short-term Mid-term Long-term	  	Safety and Quality of Products and Services

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01

Sustainability- Related Governance

Governance Structure and Mechanisms

Shareholders' Rights and Interests

Party Building

Under the backdrop of escalating global resource constraints, mounting climate change challenges, and ever-increasing stakeholder expectations, the industry in which we operate is confronting unprecedented pressures and opportunities for transformation. We fully recognize the pivotal role of sustainable development in generating long-term corporate value. We are resolutely committed to embedding sustainability principles into every facet of corporate governance frameworks and business decision-making processes. Through the establishment of a systematic, institutionalized, and standardized sustainable development management system, ESG (Environmental, Social, and Governance) considerations are rigorously integrated across the entire spectrum of strategic planning, risk management, operational execution, and performance evaluation. This comprehensive integration establishes a solid foundation for optimizing synergistic value creation across economic, environmental, and social domains.

Governance Structure and Mechanisms

We have established our corporate mission as "making XTC a place for employee to realize personal value, a place for customer to find solutions, a place for shareholder to invest in, and also a place for society to benefit from," defining our long-term responsibilities and goals across three dimensions of environmental protection, social responsibility, and corporate governance. As a responsible corporate citizen, we adopt the United Nations' 17 Sustainable Development Goals (SDGs) outlined in the 2030 Agenda for Sustainable Development as our action guide, focusing on key areas including climate change mitigation, industrial and technological innovation, responsible production and consumption, and promoting decent work and economic growth. We regularly evaluate and update our ESG management objectives to adapt to evolving external environments and stakeholder expectations.

To ensure effective achievement of our corporate strategies and ESG management objectives, we have established a top-down ESG governance architecture and accountability system with clearly defined responsibilities:

At the highest governance level

Our Board of Directors assumes ultimate responsibility for sustainable development strategies and performance. The Board has established a Strategy and Sustainable Development Committee, which is responsible for guiding and overseeing our ESG-related matters. The committee convenes regular meetings to review major sustainable development issues. To ensure governance effectiveness, we continuously optimize our monitoring and evaluation mechanisms, including internal audits, external third-party verification, and periodic performance assessments. The Board's Strategy and Sustainable Development Committee conducts annual supervision and evaluation of our strategies, ESG management objectives, and processes to ensure their adaptability and effectiveness, thereby systematically enhancing the outcomes of our sustainable development management.

At the strategic leadership level

We have established an ESG Leadership Group, composed of senior executives, responsible for ESG strategy implementation, target decomposition, and daily management.

At the managerial execution level

We operate an ESG Office and ESG Task Force, which coordinate ESG-related efforts across departments and subsidiary companies, provide professional guidance and support, and execute routine management tasks for ESG initiatives.

At the operational implementation level

All subsidiary companies are accountable for executing sustainability policies and ESG operational practices. To strengthen the integration of sustainability into business operations, subsidiary companies develop tailored implementation plans within the overarching strategic and policy frameworks set by headquarters, aligning with their unique operational characteristics. We integrate sustainability objectives into our performance evaluation system, covering areas such as carbon reduction, resource efficiency, safety performance, and employee development. By establishing this governance model that combines top-down directives with bottom-up engagement, we ensure sustainability principles permeate every operational facet, making them a shared responsibility among all employees.

The ESG Governance Structure



Designated Body	Composition	Responsibilities
Board of Directors	Audit Committee Strategy and Sustainable Development Committee Nomination and Remuneration Committee	<ul style="list-style-type: none"> Research and propose recommendations on ESG strategy, material matters, and ESG related matters Monitor and inspect the implementation and improvement of ESG work Review ESG-related reports
ESG Leadership Group	Chairman(Leader of the Group) CEO Executive Vice President Administrative Vice President Finance Vice President Secretary of the Discipline Inspection Commission Board Secretary General Manager of Mining Business Unit President Assistant	<ul style="list-style-type: none"> Review and establish ESG goals and strategies based on significant ESG matters and risks, formulate annual work tasks Review ESG-related policies and matters, and report to the Strategy and Sustainable Development Committee Listen to and review the ESG work plans and outcome reports of ESG working group, and subsidiaries and affiliated enterprises
ESG Office	Strategic Development Center Operational Management Center Board Secretary Office Human Resources Management Center Financial Management Center Discipline Inspection Office Office Legal Affairs Department Audit Department	<ul style="list-style-type: none"> Collaborate with subsidiaries and affiliated enterprises to jointly formulate, promote, and implement ESG goals, strategies, and policies, regularly monitor and report on the execution of related tasks
ESG Task Force	ESG Strategy and Investment Environmental(Carbon Peaking and Carbon Neutrality, Energy, Environmental Management) Social Governance	<ul style="list-style-type: none"> Manage daily ESG information and collect annual ESG information, assisting in compiling ESG reports
Subsidiaries and Affiliated Enterprises	Relevant Functional Departments of Subsidiaries and Affiliated Enterprises	<ul style="list-style-type: none"> Implement ESG goals, strategies, and policies, and carrying out related work

The Sustainability Policies

We uphold the integration of sustainable development principles into our corporate operations, strictly comply with laws and regulations in all jurisdictions where we operate, and continuously refine our policies on sustainability issue management in alignment with business development needs. We declare our commitment to becoming a model enterprise in ethical practices, fostering mutually beneficial and trust-based relationships with stakeholders including shareholders, employees, business partners, and indigenous communities in our operating regions. All consolidated entities and employees under our governance are required to adhere to the following globally applicable codes of conduct as defined in our Sustainability Policies.

	Code of Business Conduct	Supplier Code of Conduct	Basic Norms of Environmental Protection
	Management Regulations on Anti-Corruption and Anti-Bribery	Basic Specifications for Work Safety	Environmental Protection Statement

Appointment of Directors and Senior Management

According to the "Articles of Association" and the "Working Rules of Nomination and Remuneration Committee," the Board's Nomination and Remuneration Committee is responsible for carrying out the proposal and appointment procedures for company directors and senior management personnel. The Committee evaluates candidates against multidimensional criteria including independence, diversity, and professional competence (e.g., gender, educational background, expertise, career experience, and external affiliations) to compile a preliminary list of director and senior management candidates, conducts qualification reviews based on the mandatory requirements for directors and senior management roles, and submits formal recommendations to the Board of Directors. Director candidates approved by the Board are presented as proposals to the Shareholders' General Meeting for voting, with newly appointed directors formally elected upon shareholder resolution, while senior management candidates approved by the Board are appointed through corresponding resolutions.

Diversity and Professionalism

We are committed to building a Board of Directors and senior management team with diverse perspectives in expertise, gender, age, and cultural backgrounds to address the complexities of the global business environment and growing sustainability challenges.

In terms of Board composition, we prioritize diversity as a critical factor in director nomination and selection. Our Board currently comprises 9 directors, including 3 independent directors and 3 external directors. Professionally, Board members possess multidisciplinary expertise in materials science and deep processing, engineering management, financial management, risk control, human resource management, economics, accounting, law, and compliance management, forming a complementary skill matrix to enhance the Board's oversight and understanding of sustainability issues. Within the Board committees—the Strategy and Sustainable Development Committee, Audit Committee, and Nomination and Remuneration Committee—independent directors constitute over 50% of membership, with all committee chairs held by independent directors. Through rigorous adherence to regulatory requirements and internal governance policies, our independent directors leverage their professional strengths to provide expert guidance, conduct supervisory reviews, and ensure scientifically informed Board decision-making, thereby safeguarding the interests of shareholders and the company through standardized governance and orderly operations.

Our senior management team consists of 5 executives, with women representing 20% of the cohort. The team possesses extensive industry experience and demonstrates diversified competencies in strategic planning, operational management, technological innovation, financial management, and risk mitigation. We emphasize cultivating sustainability leadership within the executive team through specialized training programs, international exchanges, and hands-on projects, systematically enhancing their proficiency in climate change, social responsibility, and corporate governance.

The Directors and Senior Management Profile

Name	Position	Age	Professional Background				Board Committees			Attendance (Board meetings and Board committee meetings)	Shares Held at the End of Reporting Period (Shares)
			Industry Experience	Operations Management	Risk Management and Compliance	Financial Accounting	Strategy and Sustainable Development Committee	Audit Committee	Nomination and Remuneration Committee		
Huang Changgeng (Male)	Director Chair	60	✓	✓	✓				100%	200,000	
Wang Dan (Female)	Vice Director Chair	43		✓	✓	✓			100%	0	
Hou Xiaoliang (Male)	Director	59		✓	✓			✓	100%	0	
Wu Gaochao (Male)	Director and CEO	58	✓	✓	✓				100%	150,000	
Zhong Kexiang (Male)	Director and Executive Vice President	52	✓	✓	✓		✓		100%	100,000	
Xie Xiaotong (Male)	Director	57			✓	✓		✓	100%	0	
Ye Xiaojie (Male)	Independent Director	39				✓	✓	✓	100%	0	
Cheng Wenwen (Male)	Independent Director	61		✓		✓		✓	100%	0	
Zhu Haomiao (Male)	Independent Director	46	✓				✓	✓	100%	0	
Hong Chao'e (Male)	Vice President	58		✓	✓	✓			/	100,000	
Zhong Bingxian (Male)	Vice President and CFO	49		✓	✓	✓			/	100,000	
Zhou Yujun (Female)	Vice President and Board Secretary	38		✓	✓				/	100,000	

Governance Capability Enhancement

Our Board of Directors strictly complies with relevant laws, regulatory requirements, and the provisions of our Board Meeting Procedures to establish and improve decision-making mechanisms, diligently fulfill duties, and perform obligations in accordance with regulations. During the reporting period, we convened a total of 12 Board meetings, reviewing 97 proposals; held 8 special meetings of independent directors, reviewing 20 proposals; 12 Audit Committee meetings, reviewing 47 proposals; 5 Nomination and Remuneration Committee meetings, reviewing 24 proposals; 7 Strategy and Sustainability Committee meetings, reviewing 17 proposals; and 9 Supervisory Board meetings, reviewing 34 proposals.

We have prioritized the professional competency development of directors, supervisors, and senior management by providing them with regular training programs to enhance their understanding of global sustainability trends and response capabilities, thereby improving our scientific governance level. During the reporting period, our directors, supervisors, senior management, and relevant management personnel participated in 36 training sessions organized by the China Securities Regulatory Commission, stock exchanges, listed company associations, and internal programs. Training topics included compliance operations of listed companies, risk management, information disclosure, market value management and mergers and acquisitions, fundraising management, ESG special topics, etc.

◎ Compensation of Director and Senior Management

We have implemented a transparent compensation system aligned with long-term value creation, ensuring that the compensation arrangements for the Board and senior management are effectively incentivized based on sustainable performance while meeting the expectations of shareholders and other stakeholders. Through scientific and transparent compensation governance, we have closely aligned the interests of the Board and senior management with the company's long-term value and stakeholder well-being, establishing a robust incentive mechanism to maximize comprehensive economic, environmental, and social value.

Compensation Plan Development

Our Board's Nomination and Remuneration Committee is responsible for formulating and reviewing compensation policies and plans for directors and senior management, as well as developing and implementing performance evaluation criteria. In accordance with the "Articles of Association" and the "Working Rules of Nomination and Remuneration Committee," compensation plans for salaried directors and senior management are proposed by the Committee, approved by the Board, and submitted to the Shareholders' General Meeting for ratification. External directors and supervisors receive allowances as determined by the Shareholders' General Meeting. The compensation of the Chairman and senior management is calculated under the "Annual Compensation Implementation Plan" approved by the Shareholders' General Meeting. Independent directors constitute over 50% of the Committee's membership, with an independent director serving as its chairperson, ensuring the independence and objectivity of compensation decisions.

Under the "Annual Compensation Implementation Plan" the total annual compensation for our Chairman and senior management comprises a base salary and performance-based bonuses linked to corporate economic performance (including financial metrics such as net profit attributable to shareholders) and individual performance assessments. Within the performance evaluation framework, we have progressively increased the weighting and influence of ESG factors, such as work safety metrics, ensuring that environmental and social responsibilities are prioritized alongside financial performance.

Clawback Mechanism

To restrain short-term profit-seeking behavior, we have implemented a remuneration risk control mechanism. We reserve 30% of the post-tax annual performance-based salary as a risk fund, which will be disbursed only after the completion of tenure or post-tenure audits. In cases of major violations or misconduct during the term of service, the corresponding amount may be deducted or forfeited from the risk fund. This mechanism is designed to strengthen risk accountability and align compensation with long-term performance.

Compensation and Performance Reviews

To encourage long-term value creation, we have implemented a restricted stock incentive plan and an employee stock ownership plan. Performance metrics include EBITDA/revenue, compound net profit growth rate, and core business revenue as a percentage of total revenue. Equity grants are subject to stringent performance evaluations, with a two-year lock-up period followed by a three-year vesting schedule post-grant to reinforce long-term incentives. To broaden participation, these plans extend to 101 mid-to-senior managers and technical experts globally, creating a multi-tiered incentive system from executives to core talent. As of the reporting period's end, our directors and senior management collectively hold 75.7640 shares, representing 0.0477% of the company's total equity.

Equity Incentive Mechanism

◎ Related Party Transaction

We strictly comply with relevant laws, regulations, and regulatory requirements governing related-party transaction management to ensure that our decision-making and business activities align with the interests of all shareholders, particularly minority shareholders. We have established the "Approval Policy on Related-Party Transaction," which clearly defines the scope of related parties and transactions, decision-making procedures, pricing principles and methodologies, recusal mechanisms, and information disclosure requirements to ensure the fairness, transparency, and necessity of all transactions.

To ensure fair pricing in related-party transactions, we require all such transactions to adhere to market-oriented principles, with prices comparable to those in independent third-party transactions. For material related-party transactions, we may engage independent financial advisors to provide professional opinions, offering objective foundations for Board decisions.

We continuously refine our related-party identification mechanisms by establishing a related-party information database and strengthening substantive reviews, thereby enhancing related-party transaction management to ensure consistency and effectiveness in group-level oversight.

◎ Conflict of Interest

In addressing potential conflicts of interest, we have explicitly defined the fiduciary duties of directors, supervisors, and senior management in our "Articles of Association." We strictly prohibit directors, supervisors, and senior management from exploiting their positions to seize business opportunities that rightfully belong to the company for personal or third-party gain, or from operating competing businesses either independently or on behalf of others. Additionally, we have established the "Code of Business Conduct" to formally articulate our principles and stance on conflict-of-interest prevention.

To prevent and mitigate adverse impacts arising from conflicts of interest, thereby safeguarding the maximum interests of the company and all shareholders, We require directors, supervisors, and senior management to promptly disclose any circumstances that may involve conflicts of interest, ensuring timely identification and effective management of such risks. When directors face conflicts of interest in Board deliberations, they must declare such interests and recuse themselves from voting; when senior management encounters conflict in operational decision-making, they must escalate the matter to non-conflicted superiors or peers for decision-making authority transfer, thereby guaranteeing objectivity and independence.

We encourage employees and external partners to report potential conflict-of-interest violations through our independent reporting channels, with robust protections against retaliation in any form.

Shareholders' Rights and Interests

We are committed to establishing a fair and transparent shareholder rights protection mechanism, ensuring all shareholders equally enjoy statutory rights and receive reasonable returns, thereby supporting the company's long-term sustainable development.

Shareholder Rights Protection

In protecting shareholder rights, our "Articles of Association" explicitly define shareholders' fundamental entitlements, including the right to know, participate, vote, inquire, and receive profits, while establishing diversified channels for exercising these rights. We standardize the implementation of Shareholders' General Meeting procedures—including convening, conducting, and voting—in strict compliance with applicable laws, regulatory requirements, and our "Shareholders' Meeting Procedures." Specific voting mechanisms such as separate vote counting and cumulative voting are implemented, with online voting platforms provided to minority investors to ensure equal treatment for all shareholders of the same class. During the reporting period, we held 5 Shareholders' General Meetings, deliberating 29 proposals.

To guarantee all investors' equal access to company information, we rigorously formulate and continuously refine our "Information Disclosure Policy" in accordance with legal requirements. This policy clarifies the fundamental principles, responsible departments and duties, scope and formats, timeliness requirements, and internal procedures for information disclosure, providing clear guidance to ensure disclosures are timely, truthful, accurate, complete, and equitable.

Investor Relations Management

We prioritize effective communication and interaction with shareholders through a multi-tiered investor relations management system. We have established the "Investor Relations Management Policy," which clearly defines the fundamental principles, responsible departments and duties, operational content, and methodologies for investor relations management to systematically advance and implement related initiatives. We actively promote the application of information systems for investor relations management to achieve proactive and refined engagement, ensuring close communication with investors. We continuously optimize diversified communication mechanisms with investors through our corporate website, social media platforms, telephone, fax, email, stock exchange interaction portals, and other channels. Engagement formats include Shareholders' General Meetings, earnings briefings, corporate roadshows, analyst conferences, investor site visits, and online Q&A sessions, guaranteeing timely responses to shareholder inquiries.

During the reporting period, we held 8 earnings communication events and actively participated in collective earnings briefings organized by securities regulatory authorities and associations for public companies, promptly addressing investor questions received via on-site, online, and telephone channels; we innovatively deployed visualized financial reports and AI virtual host technology in semi-annual and third-quarter earnings briefings to enhance reporting effectiveness and interactive experiences;

we responded to 91 investor inquiries on the SSE E-interactive platform with a 100% response rate; we leveraged media platforms such as Xinhua News Agency and China Securities Journal to multi-dimensionally present our brand image and communicate corporate value through print, video, online, and offline campaigns; we conducted over 200 investor research sessions, including nearly 30 on-site visits engaging approximately 1,300 participants, significantly strengthening mutual understanding and trust with shareholders.



Dividend Distribution Plan

In terms of shareholder returns, we implement a stable, proactive, and sustainable dividend policy aimed at continuously enhancing shareholder value and promoting long-term investment. In June 2024, we completed the distribution for the 2023 fiscal year, paying a cash dividend of 4.00 RMB (inclusive of tax) for every 10 shares to all shareholders. The total cash dividend distributed amounted to 567,239,440.00 RMB (inclusive of tax), representing 35.41% of the net profit attributable to ordinary shareholders of the listed company as reported in the 2023 consolidated financial statements.

Shareholder Feedback Management

We prioritize feedback from minority shareholders. Our "Information Disclosure Policy" specifies procedures for handling investor complaints related to violations of information disclosure regulations, unauthorized external guarantees, or failures in investor communication mechanisms. Investors may submit complaints via telephone, written correspondence, or email, which will be coordinated and resolved by the Board Secretary Office.

Party Building

As a state-owned enterprise, we have consistently upheld the leadership of the Party in driving development and strengthening our mission and responsibility in the new era. We earnestly implement the Party's and the nation's policies and guidelines, aligning closely with our five-year strategic management plan and the goals of the 14th Five-Year Plan. We are committed to standardizing our governance system, promoting democratic decision-making, and institutionalizing innovation in Party building. We have deepened the "deep learning for excellence, daring to strive for leadership, and practical efforts for effectiveness" campaign, carried out in-depth disciplinary education, and continuously integrated Party building with business operations, laying a solid foundation for the company's high-quality development.

The Leadership Role of the Party Committee for Enhancing Corporate Governance Capacity

We have actively advanced the integration of Party leadership into our corporate governance. By effectively implementing the rules of procedure for Party organizations and improving the collective leadership mechanism, we have fully leveraged the Party Committee's role in setting the direction, overseeing the overall situation, and ensuring implementation. This has ensured that major decisions are made democratically, scientifically, and in a standardized and efficient manner, thereby continuously improving our governance effectiveness. During the reporting period, we strictly enforced the decision-making system for "major issues, major personnel appointments and dismissals, and significant bidding decisions." We held 70 Party Committee meetings, during which we deliberated in advance on 327 major matters related to our reform and business operations. These included issues such as major strategies, key appointments and removals, and critical bidding processes. We have also continued to deepen the reform of our rules and regulations system by systematically abolishing, revising, and establishing policies. We issued or revised a total of 41 corporate regulations and updated 61 articles of association for our subsidiaries. Compliance management requirements have been embedded across all areas and processes of our business operations.

The Execution Role of Party Organization for Strengthening Grassroots Battlegrounds

We have improved organizational management, coordinated Party-building resources, and established integrated platforms to enhance our organizational "combat effectiveness." During the reporting period, we completed the re-election or supplementation of 35 Party organizations. We revised the Party-building assessment checklist and deepened the "Star-Rated Compliance Evaluation" program, achieving a 100% standard compliance rate for grassroots Party branches, with the number of four-star and above branches rising to 60. We have innovated Party-building models by exploring "on-chain" Party-building, which brings together synergies from multiple upstream and downstream enterprises through collaborative construction, achieving resource connectivity across the supply chain. We have also deepened the development of Party-building brands, creating nearly 20 Party-building brands, such as "New Egret" and "Tungsten Brilliance, Unbounded Radiance," guided by initiatives like "Party Building + Management Innovation" and "Party Building + Digital Empowerment," forming a brand matrix that blooms in multiple directions. We have conducted in-depth Party discipline education, focusing on key learning areas, expanding learning platforms, and launching the innovative "Six Learning Interactions" model. By utilizing real-life cases for warning education, we have continually strengthened the awareness of integrity and self-discipline among Party members and cadres, and deepened the comprehensive and strict governance of the Party.

The Vanguard Role of Party Members to Support Quality and Efficiency in Production and Operations

We focus on the goal of "promoting high-quality development" and concentrate on key and challenging tasks for the year, establishing an emergency vanguard role with Party members leading employees to overcome difficulties and eliminate bottlenecks. During the reporting period, we formed a technical innovation task force led by Party members, undertaking national and company-level scientific research projects. Party members and cadres took the lead in "going out," accelerating the construction of overseas projects in France, South Korea, Laos, and other countries, while expanding our product's international market. Party members and cadres also actively took responsibility, focusing on key projects, and promoting the steady implementation of major projects such as the Xiamen Golden Egret cemented carbide industrial project and the WXXN (Yaan) lithium-ion project.



02

Environmental

Climate Response

Energy Usage

Usage of Water Resources

Pollutant Discharge

Waste Disposal

Ecosystem and Biodiversity Protection

Environmental Compliance Management

Circular Economy

We fully recognize the critical importance of environmental protection to sustainable development. We actively respond to global environmental governance initiatives and international standards, aligning our actions with the United Nations Sustainable Development Goals, the Paris Agreement, and other global commitments. We integrate environmental responsibility into our strategic decision-making and daily operations, striving to minimize our impact on the natural environment across the entire lifecycle of resource development, manufacturing, and product recycling. Through technological innovation and management optimization, we continuously improve the efficiency of energy and resource utilization, reduce pollutant emissions, and protect biodiversity. We will take our responsibility and continue to collaborate with stakeholders to explore climate solutions and contribute our strength to the achievement of global climate goals.

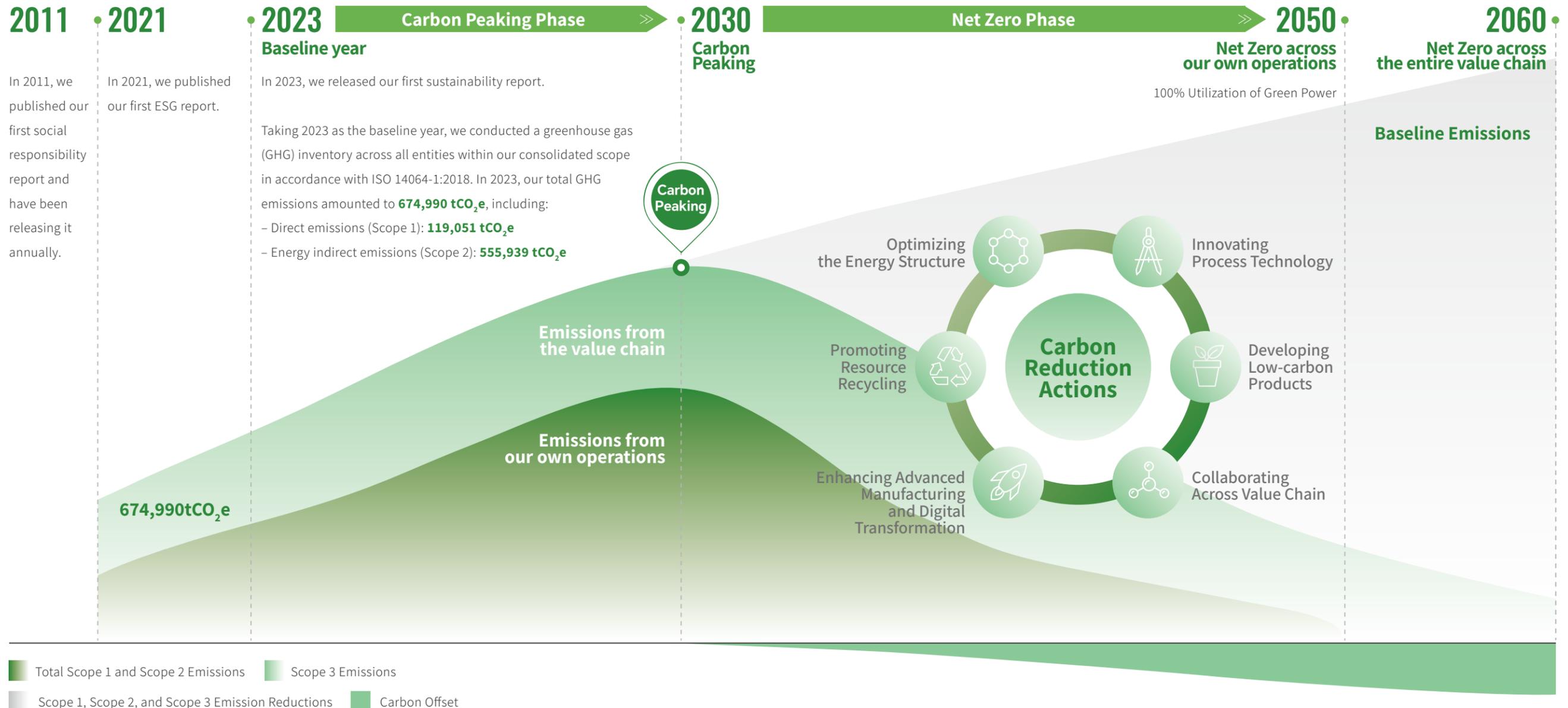
Environmental Matters	2024 Management Objectives	Implementation Measures
Climate Response  	<ul style="list-style-type: none"> Complete carbon verification and certification for 35 subsidiaries in accordance with ISO 14064-1:2018 standard. Complete ISO 14067 product carbon footprint certification for 34 products. Increase investment in the research and development of green and low-carbon products. 	<ul style="list-style-type: none"> We Set carbon peaking and net zero targets, focusing on key areas such as energy structure optimization, process technology innovation, resource recycling, low-carbon product development, intelligent manufacturing and digital transformation, and value chain collaboration on emissions reduction. We strived to explore and implement systematic carbon reduction measures across the entire value chain. In 2024, we completed carbon verification for 35 subsidiaries and obtained carbon footprint certification for 34 products. Our total R&D investment for the year reached approximately 1,456.15 million RMB.
Energy Usage 	<ul style="list-style-type: none"> Optimize the energy structure and gradually increase the proportion of clean energy usage. Continuously improve the energy management system, with the coverage of production subsidiaries certified under the ISO 50001 Energy Management System reaching no less than 40%. 	<ul style="list-style-type: none"> We established and optimized the energy management system, actively promoting energy-efficient use and green transformation. This included increasing the proportion of self-generated and consumed clean energy such as solar, wind, and hydro power, optimizing the energy structure, and increasing the share of renewable energy. In 2024, the proportion of clean energy usage reached 46.92%, and the coverage of production subsidiaries certified under the ISO 50001 Energy Management System increased to 44%.
Usage of Water Resources  	<ul style="list-style-type: none"> Improve the water resource recycling rate. 	<ul style="list-style-type: none"> We introduced water-saving processes and equipment, implemented full-process water usage monitoring and control, and achieved wastewater recovery and reuse through technological innovation. This significantly reduced the consumption of fresh water and promoted the sustainable use of water resources.
Pollutant Discharge    	<ul style="list-style-type: none"> All subsidiaries achieve compliant emissions for waste gas, wastewater, and noise throughout the year. Complete the construction of the wastewater monitoring project for the Xiamen regional environmental laboratory. 	<ul style="list-style-type: none"> We established an emissions monitoring and treatment system, using industry-leading clean production processes and end-of-pipe treatment technologies to systematically reduce the environmental impact caused by air pollutants, water pollutants, and noise.

Environmental Matters	2024 Management Objectives	Implementation Measures
Waste Disposal    	<ul style="list-style-type: none"> All subsidiaries achieve safe and compliant disposal of waste throughout the year, with a gradual increase in waste recycling rates. 	<ul style="list-style-type: none"> We adhered to the principles of "reduction, recycling, and harmless treatment," to optimize production processes, implement green packaging, and strengthen classification and recycling efforts. We aimed to continuously reduce the generation of general waste while enhancing resource recycling to minimize the negative environmental impact of waste emissions. Through the implementation of a "source reduction – process control – safe disposal" management strategy, a comprehensive lifecycle management system for hazardous waste established.
Ecosystem and Biodiversity Protection   	<ul style="list-style-type: none"> Promote ecological restoration efforts such as re-greening and land reclamation, with a target of no less than 90,000m² of restored mining area during the year. 	<ul style="list-style-type: none"> We focused on biodiversity protection, adhering to the principle of "protecting during development and developing while protecting." We conducted environmental impact assessments prior to project initiation to identify key ecosystems, affected species, and habitats within project areas, with corresponding protection and compensation measures formulated. We carried out ecological restoration activities concurrently with business operations, including greening of impacted areas, to minimize environmental impact and create favorable ecological conditions for local biodiversity conservation. In 2024, the green restoration area of the mining zones reached 95,918 square meters.
Environmental Compliance Management   	<ul style="list-style-type: none"> Continued improvement of the environmental management system, with the coverage rate of ISO 14001-certified manufacturing subsidiaries increased to no less than 60%. No environmental violations occurred during the year. 	<ul style="list-style-type: none"> We formulated the Standardized Management Guidelines for Environmental Protection to define requirements for environmental impact assessment, compliance monitoring, environmental risk control, and emergency management. Following the principles of "prevention first, full-process management, and continuous improvement," We established a systematic and comprehensive environmental risk control mechanism to support sustainable development. In 2024, the coverage rate of ISO 14001-certified manufacturing subsidiaries increased to 69%, and no environmental violations occurred throughout the year.
Circular Economy  	<ul style="list-style-type: none"> Launch scrap disposal process projects and non-metallic resource recycling projects to continuously improve resource recovery and utilization efficiency. Increase the proportion of recycled materials used in production processes. Expand investment in the recycling of secondary resources such as regenerated tungsten materials, cobalt, nickel, and rare earth metals with high added value. Improved the recycling rate of packaging materials. 	<ul style="list-style-type: none"> We emphasized resource recovery and utilization by establishing a closed-loop management system of "resources-products-recycled resources," integrating the concept of a circular economy into business operations, and enhancing resource efficiency while reducing environmental impacts through systemic innovation and full-process management.

Climate Response

Climate change is one of the most pressing challenges facing humanity today, and companies play a critical role in the global climate action. We have integrated climate change response into our long-term strategic planning and are committed to leading the industry's low-carbon transition. We have developed a scientific and systematic carbon reduction roadmap and are committed to achieving net zero across our operations by 2050. Our climate actions go beyond continuously reducing the carbon footprint of our operations and products, we also actively contribute to carbon reduction for society by developing low-carbon products and working with partners to build a low-carbon value chain. Meanwhile, we actively assess the physical and transition risks posed by climate change to our operations, develop adaptive strategies, and continuously enhance our climate resilience.

XTC Net Zero Pathway



■ Total Scope 1 and Scope 2 Emissions
 ■ Scope 3 Emissions
■ Scope 1, Scope 2, and Scope 3 Emission Reductions
 ■ Carbon Offset

Baseline Emissions:

Refer to greenhouse gas emissions that would occur in the absence of any emission reduction measures.

Climate Strategy

We uphold the mission of "making XTC a place for society to benefit from" and actively respond to China's carbon peaking and carbon neutrality goals. We have established the strategic climate targets of "achieving carbon peaking by 2030 and net zero by 2050 across our operations."

From January 1, 2023, to December 31, 2050

Commit to achieving net zero for Scope 1 and Scope 2 emissions from our operational activities in accordance with PAS 2060

Achieving carbon peaking by **2030** and net zero by **2050** across our operations

Carbon Reduction Actions

Climate change presents both challenges and opportunities for our industry. We drive emission reductions with focus on key areas such as energy structure optimization, process technology innovation, resource recycling, low-carbon product development, intelligent manufacturing and digital transformation, and value chain collaboration on emissions reduction. We are committed to implementing systematic carbon reduction measures throughout the entire value chain, making green development a defining feature of our company.

Energy Structure Optimization

As an energy-intensive enterprise, optimizing the energy structure is a key pillar of the company's emission reduction strategy. By actively investing in or promoting the use of green and clean energy sources such as photovoltaic power, wind energy, and nuclear power, as well as purchasing green electricity and renewable energy certificates, we aim to increase the share of renewable energy in our energy mix and accelerate the decarbonization of our power sources.

Highlight | Promoting the Use of Green and Clean Energy

At Golden Dragon Rare-earth, the company actively develops photovoltaic power stations to continuously enhance its energy self-sufficiency. By participating in the Fujian power market, the company prioritizes the purchase of clean electricity sources such as nuclear, wind, and hydropower to advance its energy transition and reduce reliance on fossil fuels. By the end of 2024, the company had installed approximately 6MW of photovoltaic capacity, generating 5.93 million kWh of electricity and achieving an estimated carbon reduction of about 3,182 tCO₂e. Additionally, through green electricity market transactions, the company purchased a total of 34.71 million kWh of green power, resulting in a further carbon reduction of approximately 18,625 tCO₂e.

At XWXN, the company actively promotes the use of clean energy by implementing measures such as rooftop photovoltaic installations and direct purchases of green electricity. By incorporating photovoltaic, wind, and nuclear power, XWXN continues to optimize its energy mix and reduce carbon emissions from production and operations. In 2024, clean energy accounted for 84.32% of the company's electricity consumption.

At Jiujiang Golden Egret, the company has utilized approximately 50,000 square meters of rooftop space to develop a distributed photovoltaic power generation project, continuously advancing the low-carbon transformation of its energy structure. The project has a designed capacity of 5MW and has now been completed. It is expected to generate around 5.64 million kWh of electricity annually, resulting in an estimated carbon emissions reduction of approximately 3,026 tCO₂e.

At Tianjin SofTool, the company has been developing distributed photovoltaic (PV) power generation projects by utilizing rooftops and parking areas, actively promoting the use of clean energy. The planned capacity of the project is 4,814 kWp, including a rooftop PV system and the necessary grid-connected facilities. In 2024, the company signed an energy management agreement and initiated project construction. The project is expected to be completed and put into operation in 2025. Once operational, it is projected to generate approximately 5.36 million kWh of electricity in its first year, resulting in an estimated carbon emissions reduction of around 2,876 tCO₂e.



Golden Dragon Rare-earth's Green Electricity Consumption Certificate



International Renewable Energy Certificate(I-REC) of XWXN (Sanming) Photovoltaic Rooftops at the Plant of Golden Dragon Rare-earth



Photovoltaic Rooftop at XWXN (Ningde)

Process Technology Innovation

Process technology innovation is the core driving force for manufacturing enterprises to achieve carbon reduction goals. We are committed to innovation-driven development, increasing investment in research and development and process improvements, and promoting low-carbon technological transformation at every stage of the production process. We advocate for the use of advanced energy-saving equipment and intelligent control systems, optimizing process parameters and production scheduling to maximize energy utilization.

Highlight | Technological Innovation in Processes Drives Energy Conservation and Carbon Reduction

At Golden Dragon Rare-earth, the company actively promotes process optimization and technological innovation to drive green and low-carbon development. By introducing high-efficiency energy-saving equipment, optimizing equipment management, adopting circular technologies, and upgrading production processes, the company has significantly enhanced resource efficiency and achieved notable energy-saving and emission-reduction results. In 2024, a series of energy-saving retrofit projects were carried out, resulting in total electricity savings of approximately 3,363,657 kWh and a reduction of around 1,805 tCO₂e in carbon emissions. Key initiatives included:

- **Permanent Magnet Motor Retrofit:** 124 permanent magnet motors were upgraded, achieving a total installed capacity of 1,354 kW. The proportion of permanent magnet motors in use increased from 7% to 27%, effectively improving the energy efficiency of production equipment.
- **Optimized Equipment Management:** Improvements in the management of air compressors in production workshops led to annual electricity savings of about 1,335,500 kWh, reducing carbon emissions by approximately 717 tCO₂e.
- **Application of circular technology:** The renovation of the circulating water system in workshops through tidal flow adjustments and management optimization saved approximately 604,660 kWh of electricity and reduced carbon emissions by about 324 tCO₂e.
- **Production process upgrades:** Fine-tuning the parameters of the low-temperature zone in sintering furnaces saved around 52,577 kWh and reduced emissions by about 28 tCO₂e. Optimization of the dewaxing process in infiltration furnaces saved approximately 42,890 kWh, cutting emissions by around 23 tCO₂e. Speed reduction optimization for 96 Roots pump motors resulted in savings of about 250,968 kWh and reduced emissions by roughly 135 tCO₂e. Upgrading the automatic control systems for 27 chillers saved around 180,160 kWh and reduced emissions by about 97 tCO₂e. Implementing boost and frequency reduction upgrades for 50 fans led to savings of approximately 249,543 kWh and a reduction of around 134 tCO₂e in emissions.

At GANPOWER, the company has conducted comprehensive process optimization and innovation on the wet line to reduce energy consumption and promote resource recycling. The key initiatives include:

- **Process technology innovation:** The "hydrochloric acid—sodium chlorate" system used in leaching and impurity removal processes was replaced with a "sulfuric acid—hydrogen peroxide" system, achieving a reduction of over 60% in steam consumption. The external slag was transformed from iron-manganese-aluminum slag to iron-aluminum slag, resulting in a more than 50% reduction in the slag output per ton of metal.
- **Metal recovery:** In the extraction process, manganese metal is recovered, enabling resource utilization.
- **Energy-saving equipment application:** The company replaced low-efficiency motors with permanent magnet motors, improving energy utilization efficiency by over 10%.

Highlight | Promotion and Application of Energy-Saving Equipment and Intelligent Control Systems

At Ganzhou Hongfei, the company actively promotes the adoption of high-efficiency energy-saving equipment and introduces intelligent control systems to optimize energy use in real time, significantly reducing carbon emissions. Key initiatives include:

- **Energy-efficient equipment application:** The company replaced motors of three circulating water pump systems with permanent magnet motors and upgraded two old air compressors to permanent magnet variable-frequency motors, effectively reducing energy consumption during production.
- **Process energy-saving upgrades:** In the tungsten rod annealing process, IGBT high-frequency power supplies were adopted to replace traditional electron tube-based systems, reducing energy consumption by 60%. Additionally, by developing self-made medium-frequency sintering furnaces and replacing silicon-controlled rectifiers with IGBT power supplies, power conversion efficiency was improved by 10%, further enhancing energy efficiency.
- **Intelligent control system implementation:** An automated monitoring system for the reduction furnace was introduced, building a cloud platform for centralized monitoring. The platform features large-screen displays showing real-time equipment operation, collects key operational data, and generates reports. A centralized gas monitoring system was also introduced to track the pressure and temperature of hydrogen, nitrogen, and high/low-pressure air, with centralized alerts triggered under abnormal conditions. Through automated monitoring and data analysis, the company achieves precise equipment regulation and reduces energy waste.

Resource Recycling

Resource recycling is an important approach to reducing the carbon footprint across the value chain. We integrate the concept of a circular economy into all aspects of our operations by building a closed-loop management system of "resources-products-recycled resources." It reduces the environmental impact of waste disposal and effectively lowers carbon emissions from raw material extraction and processing, maximizing resource value while minimizing carbon emissions.

Highlight | Comprehensive Utilization of Mineral Resources

At Ninghua Xingluokeng, the company actively promotes the recycling and reuse of mineral resources through the implementation of waste rock disposal processes and non-metallic resource recovery projects. On one hand, by discarding ore that does not meet grade requirements, the project reduces energy consumption during the beneficiation process. On the other hand, the discarded ore is crushed and sold externally as construction material, while substandard sand and gravel generated during production are also sold as construction sand. These measures enhance both environmental and economic benefits. Additionally, the company has invested in feldspar and quartz recovery projects to continuously improve the resource utilization rate of mineral extraction.

At Duchang Jinding, the company actively promotes comprehensive utilization of mineral resources by enhancing the efficient recovery of low-grade ores, tailings, and associated minerals, thereby improving the overall resource utilization rate. The project consists of two key components: separation and recovery of mineral-bearing waste rock, and waste rock enrichment through crushing systems. It is being implemented in two phases. Phase I involves the construction of a crushing and pre-concentration system with a processing capacity of 1.31 million tonnes per year, producing 0.45 million tonnes of construction aggregate annually. Phase II focuses on the separation and recovery of mineral-bearing waste rock, processing 1.65 million tonnes per year and yielding 0.67 million tonnes of construction aggregate. Upon completion, the project is expected to increase annual tungsten metal production by 400 tonnes and molybdenum metal production by 80 tonnes, significantly enhancing the recovery efficiency of valuable elements, reducing solid waste emissions, and achieving both economic gains and green development.

Highlight | High Value-added Metal Recycling

In terms of shareholder returns, we implement a stable and sustainable dividend policy, committing that, when profitable and with sufficient cash flow, the annual dividend will account for no less than 35% of the net profit attributable to ordinary shareholders of the listed company in the consolidated financial statements. In 2024, despite cyclical fluctuations in the industry, we proceeded with an annual dividend of RMB 4.20 per 10 shares, representing a 5% increase compared to the previous year.

- **In the cascade utilization stage**, we recover used battery packs and apply processes such as whole-pack charging tests, performance evaluations, and classification of new energy battery packs by pack grade. These recovered battery packs are then reused in energy storage products, backup power systems, low-speed vehicles, solar-powered streetlights, and other power supply products.
- **In the resource regeneration stage**, we operate complete production lines for the disassembly, discharge, high-temperature pyrolysis, crushing and separation, leaching, solvent extraction, and evaporation crystallization of waste power batteries. With an annual processing capacity of 10,000 tons of waste batteries, battery scraps, cathode and anode materials, and nickel-cobalt waste, we not only achieve effective recovery and utilization of high value-added metals but also significantly reduce our environmental impact.

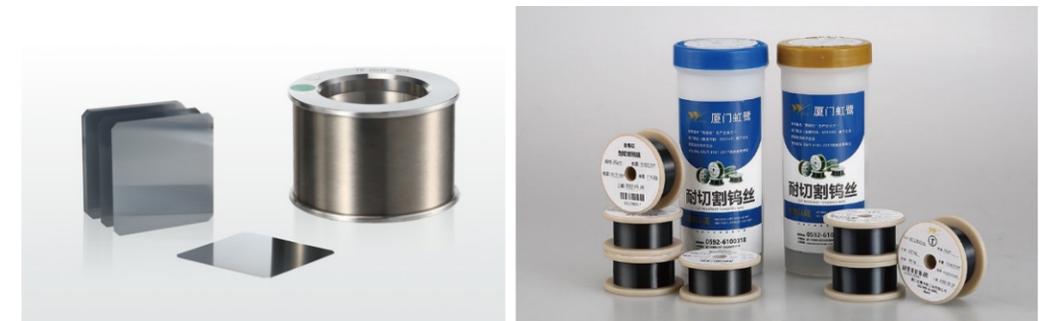


Low-Carbon Product Development

Low-carbon product development is a strategic initiative to meet the growing market demand for green solutions. Through innovative design and advanced material applications, we actively develop critical materials and components that support the clean energy transition. Our products play a vital role in enabling the growth of renewable energy and electric mobility sectors, enhancing our competitiveness while contributing to society's carbon reduction goals.

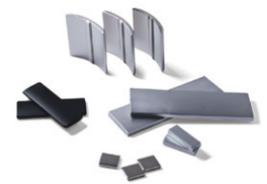
Highlight | High-Strength Tungsten Wire for Photovoltaics

Driven by global "dual carbon" goals, the installed capacity of the photovoltaic industry continues to grow, placing higher demands on silicon wafer cutting technologies. Traditional carbon steel diamond wires have become insufficient for precision cutting due to strength limitations. Leveraging our mature tungsten wire manufacturing technology, we independently developed high-strength tungsten wire specifically designed for photovoltaic applications. This product, with its finer diameter, effectively reduces saw kerf width, minimizes silicon material loss, and increases wafer yield, thereby improving material utilization efficiency. Its high strength allows for faster cutting speeds with lower wire breakage rates, significantly boosting production efficiency. In addition, the product offers high recycling value, as the used wire can be recovered and reused, supporting sustainability throughout the product lifecycle. The application of high-strength tungsten wire has advanced silicon wafer processing technologies, improved overall resource efficiency in the photovoltaic sector, and provided robust support for the industry's high-quality, low-carbon development.



Highlight | Rare Earth Permanent Magnet Materials

Leveraging our full value chain capabilities, we actively invest in the research and development of key technologies related to high-performance magnetic materials. We focus on application development in core areas such as electric vehicle drive systems, high-efficiency wind power technologies, and intelligent motor components. Our goal is to continuously improve the stability and versatility of our products, providing high-quality magnetic material solutions to support the green energy and intelligent manufacturing sectors, and to contribute to the low-carbon development of related industries.



- **Stable Quality:** We use high-grade raw materials such as metallic neodymium, praseodymium-neodymium alloys, ferroboron, and pure iron. Through the adoption of advanced domestic and international equipment and processing techniques, we ensure consistent and reliable product quality.
- **Green and Environmentally Friendly:** Our sintered NdFeB permanent magnet materials comply with the "Specification for green-design product assessment - Sintered Nd-Fe-B Magnetic Material." All environmental and energy performance indicators exceed industry standards. For example: The particulate emission concentration is 27.9 mg/m³, well below the 100 mg/m³ limit; Both hazardous waste and NdFeB scrap recycling rates have reached 100 percent. In addition, we conduct systematic evaluations of the environmental impact of our products across different lifecycle stages and propose optimization measures. These include reducing the use of non-renewable rare earth elements and developing magnetic materials based on more abundant rare earths. Through these actions, we are achieving business growth while honoring our ecological responsibilities.

Highlight | New Energy Materials

In the era of carbon neutrality, green, safe, and recyclable new energy has become a core driving force. We promote the energy revolution through material innovation and provide advanced material solutions for the industry. Since entering the field of cathode material research and development in 2004, we have continuously increased R&D investment and made breakthroughs in a number of key technologies for both 3C lithium batteries and power lithium batteries. We have successfully launched high-voltage lithium cobalt oxide, high-rate Ni3-series, high-voltage single-crystal Ni5-series, Ni6-series, Ni8-series, and Ni9-series NCM ternary materials, among other premium products. Through partnerships with battery manufacturers, we have supported the development of 3C digital devices, automotive power batteries, and energy storage applications.

In the field of ternary materials, we are continuously driving product upgrades to provide stable and efficient material solutions for the low-carbon transformation of the industry. Highlights include:

In the field of ternary materials, we are continuously driving product upgrades to provide stable and efficient material solutions for the low-carbon transformation of the industry. Highlights include:

- A newly developed Ni6-series 4.45V high-voltage ternary material that reduces nickel content while maintaining performance, improving cost-effectiveness.
- Multiple high-voltage ternary products designed for hybrid and range-extended electric vehicles have been developed and are now in mass production.
- Ultra-high-power Ni3-series ternary materials are being supplied in bulk to overseas customers.
- High-safety high-nickel ternary materials have passed nail penetration tests, earning positive feedback for their safety and cycle life.
- Ultra-high-nickel ternary materials have successfully passed system certification by overseas automotive OEMs.

In the field of hydrogen energy materials, we have optimized the composition and structure of hydrogen storage materials and applied advanced manufacturing processes to enhance material performance while reducing costs, thereby expanding their application scenarios. Highlights include:

- Our third-generation on-board hydrogen storage alloy has been stably supplied during the reporting period to well-known international carmakers for popular hybrid models. It has also been adopted for mass production in mainstream T-BOX products used in wide-temperature vehicle applications.
- Our newly developed low-cost solid-state hydrogen storage material has been deployed in bulk in post-electrolysis hydrogen storage, hydrogen refueling stations, and hydrogen-powered forklifts.

In the field of phosphate-based materials, we have focused on addressing the key challenge of poor low-temperature rate performance in lithium iron phosphate (LFP) batteries. By introducing liquid-phase synthesis technology and integrating three core techniques, homogeneous synthesis, precursor doping, and precise particle size control. We have developed products suitable for fast-charging power batteries, high-efficiency energy storage, and specialty military applications. Highlights include:

- Solid-liquid hybrid LFP and pure liquid-phase LFP products have completed customer audit certification and production line stability verification, are ready for mass production, and have begun large-scale deliveries.
- We developed hydrothermal lithium manganese iron phosphate (LMFP)^[1] for ultra-fast-charging power battery applications. By adopting bulk-phase doping and surface/interface coating technologies, the product demonstrates a clear competitive advantage.

Highlight | Product Carbon Footprint Management

We actively support China's dual-carbon goals and are committed to managing the carbon footprint of our products throughout their entire lifecycle. Focusing on selected key products, we have conducted carbon footprint accounting across the research and development, production, supply chain, and consumption stages. We analyze carbon emissions in detail across raw material extraction, manufacturing, transportation and distribution, and product use phases, identifying critical emission sources and implementing targeted reduction measures. During the raw material acquisition phase, we encourage our suppliers to adopt low-carbon practices. In the manufacturing stage, we reduce emissions by optimizing process flows, using clean energy, and introducing energy-efficient equipment. At the product application stage, we focus on recyclable product design to enhance material reuse and recycling rates. To date, we have completed carbon footprint assessments for multiple core products and obtained ISO 14067 Product Carbon Footprint Certification, providing credible carbon emissions data to support our downstream customers.

[1] LMFP is a novel cathode material formed by introducing manganese into the LFP structure. Its higher voltage platform, enabled by manganese's electrochemical characteristics, improves energy density and enhances low-temperature performance, all while maintaining high safety.

Advanced Manufacturing and Digital-Intelligent Transformation

Advanced manufacturing and digital-intelligent transformation represent innovative pathways for improving energy efficiency and reducing emissions. We promote lean and flexible production by deeply integrating advanced information technologies with manufacturing processes. By building intelligent production management platforms, we aim to ensure product quality while maximizing energy efficiency, setting a benchmark for low-carbon transformation in the industry.

Highlight | Smart Mine Construction

Traditional mining operations face challenges such as high labor intensity, significant safety risks, and rising operating costs. At Ninghua Xingluokeng, we actively advanced the construction of a "5G + Smart Mine" to improve production efficiency and operational safety through digital technologies. This initiative contributes to the development of a green, safe, and efficient mining model and offers a valuable reference for the industry's digital transformation. In partnership with Fujian Mobile, we upgraded existing intelligent mining equipment with 5G-enabled technologies. By leveraging China Mobile's "5G + Multi-Network Integration Technology," we implemented smart upgrades in unmanned mining, remote-controlled excavators and drilling rigs, and intelligent scheduling systems. These innovations enabled full-chain intelligent operations across loading, transportation, dispatch, and management. Our "Xingluokeng Tungsten Mine Multimodal Edge Computing 5G Smart Mine" project was recognized in the 2023 National Industrial Internet Pilot Demonstration List, positioning us as a national model for intelligent mining transformation.

At Duchang Jinding, we incorporated smart mine construction into the annual operational plan and continued to upgrade automation and intelligent systems. Key efforts included implementing platforms for mine automation, automatic acid addition, smart weighing, explosive warehouse monitoring and alarm, automated cone crushers for fine crushing, flotation column level control, automatic packaging of tungsten-molybdenum products, resource reserve management, and real-time mine environment monitoring. We actively pursued the strategy of "mechanizing labor replacement and automating labor reduction" by reinforcing mechanization in mining and automation in mineral processing. These efforts continuously enhance intelligent mine management and support our goal of building low-energy, low-carbon, high-efficiency smart green mines.



Value Chain Collaboration on Emissions Reduction

Collaborative emission reduction across the value chain is a key strategy for achieving full-chain decarbonization. We work closely with suppliers, customers, and industry partners to actively promote upstream and downstream cooperation on carbon reduction. Together, we strive to lower the carbon footprint of the entire value chain and build a more resilient and competitive low-carbon industrial ecosystem.

Highlight | Green Supply Chain Management

At XWXN, we regard green supply chain management as a critical lever in our low-carbon transformation. We have developed a comprehensive carbon reduction mechanism covering raw material procurement, energy optimization, carbon footprint verification, energy efficiency improvement, and logistics system upgrades. Through this mechanism, we aim to achieve collaborative green transformation with our suppliers and create a replicable low-carbon development model for the sustainable growth of the new energy materials industry.

In raw material procurement, we continuously increase the use of recycled content, especially for key metals such as nickel, cobalt, manganese, and lithium. By incorporating more secondary resources, we effectively reduce the overall carbon footprint of our products. In parallel, we encourage suppliers, based on their procurement volume share, to progressively establish carbon emission accounting systems in line with ISO 14064 and ISO 14067 standards. We also promote the use of clean energy to reduce reliance on fossil fuels. In logistics, we are actively upgrading our transportation systems to include more new energy vehicles. By optimizing logistics routes and increasing the proportion of low-emission vehicles, we have significantly reduced greenhouse gas emissions during transportation.

In 2024, we visited three key suppliers for in-depth exchanges and technical guidance to ensure the comprehensive implementation of low-carbon principles and to reinforce the execution of energy-saving and emission-reduction measures. In addition, for key raw materials such as ammonium bicarbonate and oxygen, we have supported suppliers in conducting carbon footprint assessments and encouraged them to participate in the carbon trading market, thereby achieving both environmental and economic benefits.



Climate-Related Risks, Opportunities and Financial Impacts

In response to the far-reaching impacts of climate change, we have integrated sustainability risks into our overall risk management framework to ensure that our business operations align with the challenges posed by climate change. Using the scenario analysis method proposed by the Intergovernmental Panel on Climate Change (IPCC), we have systematically assessed the physical risks and opportunities that may arise in the short, medium, and long term. Additionally, by incorporating the scenario models from the International Energy Agency (IEA), we have comprehensively analyzed the transition risks and opportunities we may face in the short, medium, and long terms. Based on these studies, we have developed targeted measures to address climate-related risks, continuously enhancing our resilience in the low-carbon transition and driving the achievement of sustainable business goals.

Scenario Overview		The Very Low GHG Emissions Scenario (Limit global temperature rise below 1.5°C)
Reference Model		IEA Net Zero Emissions by 2050 Scenario (NZE)
Scenario Description		<ul style="list-style-type: none"> The global energy sector to achieve net zero CO₂ emissions by 2050. The average global temperature increase is limited to within 1.5°C above pre-industrial levels.
Key Assumptions for the Very Low GHG Emissions Scenario		
Climate Policy	Asia	Mainland China "Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy" and the "Action Plan for Carbon Dioxide Peaking Before 2030" are issued to peak carbon dioxide emissions before 2030 and strive to achieve carbon neutrality by 2060.
		South Korea Committed to achieving carbon neutrality by 2050 and issued the "Framework Act on Carbon Neutrality and Green Growth."
		Thailand Committed to achieving carbon neutrality by 2050 and reaching net-zero emissions by 2065.
	Europe	European Union (EU) By 2030, the EU aims to reduce net greenhouse gas emissions by at least 55% compared to 1990 levels. By 2050, the EU intends to achieve climate neutrality for its economy and society, with a goal of achieving negative emissions after 2050. The EU has issued the "Fit for 55" package, the "Eco-design for Sustainable Products Regulation," the "European Green Deal," and the "European Climate Law," and has developed and implemented the Carbon Border Adjustment Mechanism (CBAM).
France France has committed to achieving carbon neutrality in 2050, with policies such as the "National Low-Carbon Strategy(SNBC)," the "National Climate Change Adaptation Plan," and the "Energy and Climate Law."		
United Kingdom (UK) The UK has pledged to achieve carbon neutrality by 2050, with the "Climate Change Act 2008" in place and the implementation of the UK Carbon Border Adjustment Mechanism (UK CBAM).		
Energy Usage		In this scenario, energy efficiency improves significantly, and coal and other high-carbon fossil fuels are gradually phased out: <ul style="list-style-type: none"> By 2025, the sale of new fossil fuel boilers will be prohibited. By 2030, electric vehicles will account for 60% of global car sales, and the annual installed capacity of solar and wind energy will reach 1,020 GW. By 2035, the sale of new internal combustion engine vehicles will be halted. By 2040, global electricity will achieve net-zero emissions, and coal and oil power plants without emissions reduction measures will be fully phased out. By 2050, nearly 70% of global power generation will come from solar photovoltaic and wind energy.
Macroeconomics		In this scenario, by 2050, the global population is anticipated to reach around 9.7 billion, with a trend of slowing growth. The global economy is expected to grow at an average annual rate of 2.6%, but the growth rate will vary across different countries, regions, and time periods.
Application of the Very Low GHG Emissions Scenario		
In this scenario, the policy and regulatory environment is stringent. Countries around the world collaborate closely to drive the evolution and development of policies, aiming to reduce the costs of clean energy technologies, broaden the diversity of key mineral resources and clean energy technologies, and build a resilient global supply chain system. The transition risks faced by the company reach their highest level, and therefore, a transition risk analysis is necessary under this scenario.		
Scenario Overview		The Very High GHG Emissions Scenario (The global temperature rise exceeds 2°C)
Reference Model		IPCC Representative Concentration Pathway (RCP) SSP5-8.5 Scenario
Scenario Description		<ul style="list-style-type: none"> Global greenhouse gas emissions will continue to rise by the end of the 21st century. Compared to the period of 1850-1900, the global surface temperature is likely to be higher by 3.3°C to 5.7°C over the period 2081-2100.
Key Assumptions for the Very High GHG Emissions Scenario		
Surface Temperature		In regions where the company operates, such as Asia and Europe, the annual average near-surface temperature changes are significant. It is projected that the number of days with temperatures above 35°C will increase substantially in the future, while the number of days with temperatures below 0°C will also rise significantly under the very high GHG emissions scenario.
Sea Level		In this scenario, sea levels in regions where the company operates, such as Asia and Europe, will continue to rise.
Application of the Very High GHG Emissions Scenario		
In this scenario, the policy and regulatory environment is the most lenient. However, with the increase in global temperatures, more frequent extreme weather events, changes in precipitation, and rising sea levels, the physical risks faced by the company are at their highest. Therefore, physical risk analysis is conducted under this scenario.		

Scenario Analysis | The Very Low GHG Emissions Scenario(Limit global temperature rise below 1.5°C)

Risk Type	Risk Description	Opportunity	Mitigation Measures	Impact Duration ^[2]	Financial Impact ^[3]
Technology	Industry Technology Iteration <ul style="list-style-type: none"> With growing global emphasis on green and low-carbon technologies, companies face significant pressure for technological upgrades. Failure to promptly adopt new technologies may lead to lower production efficiency, higher costs, and even loss of market competitiveness. Continuous R&D investment is required for technological innovation. Insufficient investment may cause missed opportunities for upgrades and impact long-term development. 	<ul style="list-style-type: none"> Actively develop low-carbon and environmentally friendly production technologies to align with global environmental trends. Drive technology iteration to enhance product quality and production efficiency, reduce energy consumption and emissions, strengthen market competitiveness, and expand high-end market share. 	<ul style="list-style-type: none"> Maintain an integrated industrial chain layout, closely monitor trends in the tungsten-molybdenum, energy new materials, and rare earth sectors, and flexibly adjust product portfolios based on technological shifts, capacity changes, and market and customer dynamics along the industry chain, focusing more on high value-added businesses. Further clarify the product and market positioning of each production site based on adjustments of previous product structure, optimize resource allocation, improve refined management, and promote product upgrades, transformation, and structural adjustments across all sites to boost production efficiency and product added value. 	Short-term, Medium-term, and Long-term	Moderate Impact
	Pressure from Greenhouse Gas Emission Regulations <ul style="list-style-type: none"> Increasingly stringent regulations on greenhouse gas emissions across countries. Failure to comply with relevant regulations may result in fines, production restrictions, or other sanctions, affecting operations. Rising carbon emission costs increase production expenses and compress profit margins. 	<ul style="list-style-type: none"> Reduce carbon emissions to earn carbon credits, which can be sold in carbon markets to generate additional revenue. Develop and innovate products certified as green and low-carbon to attract environmentally conscious consumers and investors. 	<ul style="list-style-type: none"> Actively implement a series of emission reduction measures aligned with carbon neutrality commitments and emission reduction targets, including enhancing energy efficiency in high-consumption equipment, promoting electrification upgrades, increasing the proportion of clean energy use, and offsetting emissions through carbon trading. Strengthen energy management by introducing advanced equipment, optimizing production processes, and adopting energy-saving technologies; gradually phase out high-energy-consuming equipment; accelerate electrification upgrades at production sites; promote the application of clean energy such as photovoltaic and wind power; increase the share of renewable energy; optimize the energy mix; and reduce reliance on traditional fossil fuels. 	Short-term, Medium-term, and Long-term	Moderate Impact
Market	Changing Market Preferences <ul style="list-style-type: none"> Demand for products may fluctuate due to technological substitution, market saturation, or a shift in consumer preferences toward green and low-carbon products, thereby impacting revenue. The market is highly sensitive to the pricing of products; price fluctuations may result in customer attrition or declining profit margins. 	<ul style="list-style-type: none"> Growth in applications in fields such as new energy and consumer electronics has opened up new market opportunities for the company. Product innovation and brand building help the company satisfy diversified market demands, enhance customer loyalty, and increase market share. 	<ul style="list-style-type: none"> Focus on deepening efforts in three core areas — tungsten and molybdenum, energy new materials, and rare earths — while driving industrial innovation, aligning technology development with market demand, and ensuring robust R&D investment and a multi-dimensional R&D system to strengthen breakthroughs in key core technologies and meet market needs for higher performance, greater safety, and higher energy efficiency products. Improve energy utilization efficiency, reduce product carbon emissions, and enhance the sustainable competitive advantage of products through refined energy management, optimization of the energy structure, and the application of energy-saving and emission-reduction technologies. 	Short-term, Medium-term, and Long-term	Moderate Impact
	Raw Material Supply and Price Fluctuations <ul style="list-style-type: none"> The supply of mineral resources may be disrupted by geopolitical risks, resource depletion, or environmental protection policies, affecting production. Fluctuations in raw material prices may lead to unstable production costs, impacting profit margins. 	<ul style="list-style-type: none"> Promote the utilization of recycled resources to reduce reliance on raw materials. Optimize production processes to improve resource utilization efficiency and lower sensitivity to raw material price fluctuations. 	<ul style="list-style-type: none"> Actively advance mine construction and development, achieving precise management and exploitation of mineral reserves, while securing long-term resource supply through various cooperative models to strengthen resource security. Enhance the raw material supply chain management system, promote supply chain risk management, and improve risk response measures. Expand domestic and international supply channels, improve resource recycling technologies, broaden recycling fields and channels, and build an industrial ecosystem to enhance the capability for secondary production of metal resources. 	Short-term, Medium-term, and Long-term	Minor Impact
Reputation	Negative Stakeholder Perception <ul style="list-style-type: none"> Failure to meet expectations in greenhouse gas emissions management may trigger doubts among investors and the public regarding the company's strategic execution capabilities, thereby damaging the company's reputation. Investment in technology research and development may not yield the expected outcomes, or the application of new technologies may underperform, potentially impacting the company's technological leadership within the industry and adversely affecting brand reputation. 	<ul style="list-style-type: none"> Actively promote green and low-carbon practices and develop green and low-carbon products. Continuously increase investment in research and development to master core technologies, thereby enhancing product competitiveness. 	<ul style="list-style-type: none"> Through continuous technological innovation, XTC has achieved multiple breakthroughs in the fields of tungsten and molybdenum, rare earths, and energy new materials, strengthening industry position and influence, and enhancing brand reputation. XTC has published annual Sustainability Report /ESG report for consecutive years, showcasing the efforts and achievements in environmental protection, social responsibility, and corporate governance. 	Short-term, Medium-term, and Long-term	Minor Impact

[2] The impact duration is categorized into short-term, medium-term, and long-term. Short-term generally refers to within one year (inclusive) after the end of the sustainability information reporting period. Medium-term generally refers to one to five years (inclusive) after the end of the sustainability information reporting period. Long-term generally refers to more than five years after the end of the sustainability information reporting period.

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Scenario Analysis | The Very High GHG Emissions Scenario (The global temperature rise exceeds 2°C)

Risk Type	Risk Description	Mitigation Measures	Impact Duration ^[4]	Financial Impact ^[5]
Acute Physical Risks	<p>Floods and Typhoons</p> <ul style="list-style-type: none"> Asia: Typhoons causing strong winds, heavy rainfall, storm surges, and floods pose serious threats to the safety of buildings, production facilities, and inventories. Floods can also damage urban infrastructure and impact human well-being and health, particularly in coastal cities and residential areas. Europe: Coastal and inland flooding due to extreme weather events may pose major threats to public safety, economic development, and infrastructure stability, and could lead to supply chain disruptions, asset damages, and operational interruptions. 	<ul style="list-style-type: none"> Continuously enhance extreme weather monitoring by leveraging satellite data, meteorological platforms, and regional early warning systems to promptly identify risks such as typhoons, heavy rainfall, storm surges, and floods. Establish early warning mechanisms, optimize production planning, and adjust supply chain scheduling accordingly. For typhoon-prone regions in Asia, develop seasonal stockpiling plans for raw materials and critical components, and optimize inventory distribution in key areas to mitigate supply chain disruptions and ensure stable operations. Enhance the disaster resilience of plants and key infrastructure by reinforcing structures at coastal production facilities, warehouses, and logistics hubs in Asia. Optimize windproofing and waterproofing measures, and construct drainage and protective systems in areas with high flood risk. Before the arrival of typhoons or heavy rainfall, proactively relocate vulnerable inventory and optimize warehouse layouts to improve resilience against storm surges and flooding, thereby reducing the risk of asset loss. Strengthen the emergency management system by enhancing the Environmental Emergency Response Plan and regional emergency response mechanisms. Develop tiered response strategies for typhoon, heavy rainfall, and flood risks to ensure tailored measures for different regions and business scenarios. Regularly conduct disaster response drills in business areas to improve employees' emergency response capabilities, and encourage supply chain partners to establish their own disaster response systems to enhance overall supply chain resilience and ensure continuity of operations. 	Short-term, Medium-term, and Long-term	Minor Impact
	<p>Extreme Weather</p> <ul style="list-style-type: none"> Asia: The region may experience more frequent extreme temperature variations, changes in rainfall patterns, and prolonged droughts, impacting agricultural production, freshwater resource availability, and ecosystem stability. Food and water security are at risk. Europe: Due to global warming, the frequency and intensity of extreme heat events may continue to rise, posing serious threats to public health. High temperatures could lead to an increase in heat-related illnesses and mortality, especially affecting the elderly, individuals with chronic diseases, and outdoor workers. Extreme temperatures may also increase energy demand, leading to higher grid loads, and present challenges for agriculture, forestry, and urban infrastructure operations. 	<ul style="list-style-type: none"> Reasonably adjust employee working hours during extreme high-temperature weather. Reduce outdoor work and high-intensity physical labor, implement shift systems, or avoid working during the hottest periods to reduce health risks caused by high temperatures. Strengthen heatstroke prevention measures, provide sufficient protection and hydration for personnel working in high-temperature environments, and ensure employee health and safety. Improve temperature management in production workshops and storage facilities. In areas where product quality is susceptible to high temperatures, increase temperature control systems, install insulation materials, and optimize airflow solutions to ensure stable storage conditions for key raw materials and finished products, thereby minimizing product loss caused by temperature fluctuations. Optimize office environments based on regional climate characteristics, increase natural ventilation, install shading systems, and implement energy-saving designs to reduce air conditioning energy consumption and enhance indoor comfort. 	Short-term, Medium-term, and Long-term	Moderate Impact

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Scenario Analysis | The Very High GHG Emissions Scenario (The global temperature rise exceeds 2°C)

Risk Type	Risk Description	Mitigation Measures	Impact Duration ^[4]	Financial Impact ^[5]
Chronic Physical Risks	<p>Biodiversity Loss and Habitat Displacement</p> <ul style="list-style-type: none"> Asia: Key species and ecosystems are at risk of accelerated loss, which could lead to the degradation of ecosystem functions, including soil fertility decline, disrupted water cycles, and weakened regional climate regulation capabilities. The degradation of forest and wetland ecosystems may impair water retention capacity, increasing ecological vulnerability to droughts and extreme rainfall. This poses a long-term threat to agricultural productivity and biodiversity. Europe: Both marine and terrestrial ecosystems are facing severe impacts from climate change. Extreme temperatures, changing precipitation patterns, and ocean acidification may result in biodiversity loss and reduce the natural regulatory capabilities of ecosystems. Coastal erosion, wetland degradation, and forest ecosystem imbalances may further threaten regional ecological security. 	<ul style="list-style-type: none"> Strictly control project site selection and avoid business expansion in nature reserves, ecologically sensitive areas, and regions with high ecological value to minimize ecosystem disruption. Develop phased ecological restoration plans for mining areas, implementing revegetation, land reclamation, and soil and water conservation measures to restore vegetation cover and reduce soil erosion. Establish an ecological monitoring system to regularly track biodiversity changes in operational facilities and surrounding areas. Utilize a combination of remote sensing technology and field surveys to identify regional ecological degradation trends and develop conservation and intervention measures tailored to different ecological environments. This will ensure that the impact of mining and industrial facilities on the local ecosystem is minimized. 	Medium-term and Long-term	Minor Impact
	<p>Droughts</p> <ul style="list-style-type: none"> Asia: Drought, high temperatures, and abnormal precipitation may impact agricultural production, reducing crop yields and exacerbating freshwater shortages, further threatening industrial and residential water demands. Long-term water resource scarcity may disrupt ecosystem stability, affect agricultural irrigation, industrial water usage, and drinking water supplies, and increase regional environmental vulnerability. Europe: The combined effect of extreme high temperatures and dry conditions may accelerate the loss of surface and groundwater, decreasing the available water resource reserves. 	<ul style="list-style-type: none"> Continuously optimize production processes and advance the application of water-efficient technologies to reduce industrial water demand and increase wastewater recovery and recycling rates. Regularly conduct water resource risk assessments and reinforce water sustainability considerations in site selection and investment decisions, avoiding business expansion in water resource protection areas. Regularly provide water conservation training for employees, promote efficient water-saving measures, and improve water usage efficiency. 	Short-term, Medium-term, and Long-term	Minor Impact
	<p>Landslides</p> <ul style="list-style-type: none"> Asia: Due to geological instability, soil erosion, and long-term crustal movement, there is a risk of damage to buildings, infrastructure, and the potential loss of life and property. Landslides and ground subsidence may damage roads, railways, and other transportation routes, affecting normal transportation operations. They may also exacerbate safety hazards in mountainous and valley regions, threatening the stability of supply chains and logistics. Europe: Changes in geological conditions may lead to frequent landslides, mudflows, debris flows, and other disasters, posing direct threats to the safety of residents and production activities. Geological structures in mountainous and coastal areas may further deteriorate due to soil looseness, groundwater infiltration, or intensified human activities, leading to infrastructure damage and affecting urban planning, agricultural production, and the normal operation of transportation networks, thereby increasing long-term economic and social security risks. 	<ul style="list-style-type: none"> Actively promote ecological protection and risk prevention by implementing vegetation restoration and protection projects, such as afforestation, windproofing, and sand-fixation efforts. These actions aim to improve soil structure and surface stability, reducing the likelihood of landslides and other geological hazards. Establish a comprehensive landslide monitoring and early warning system using remote sensing technology, meteorological monitoring data, and geological assessments to track geological changes in real time, thereby enhancing early warning capabilities. 	Medium-term and Long-term	Moderate Impact
	<p>Sea Level Rise</p> <ul style="list-style-type: none"> Asia: Coastal fisheries may be significantly reduced due to rising sea levels, with the fishing economy potentially impacted by changes in marine ecosystems. Some regions may experience reduced precipitation and rising temperatures, affecting agriculture and water supply. Intensified ocean warming and acidification could lead to frequent coral bleaching, resulting in the degradation of coral ecosystems and disrupting the marine food chain. Europe: Coastal economies and infrastructure face heightened risks from rising sea levels, with ports, transportation networks, and coastal industries at risk of being impacted by extreme weather events and coastal erosion. 	<ul style="list-style-type: none"> Prior to making new investments or construction in low-lying or sea-level rise-prone areas, conduct a detailed climate adaptation assessment, considering the long-term impacts of sea level rise on infrastructure, logistics, and the environment. For existing assets at risk, evaluate the feasibility of relocation or reconstruction and implement engineering measures such as reinforcement, foundation elevation, and flood barriers to mitigate the potential impacts of extreme weather and coastal erosion, ensuring the stability of coastal production facilities. Optimize supply chain layout to reduce the impact of potential logistics disruptions, raw material shortages, and rising transportation costs due to sea level rise. Expand inland and multi-regional supply channels to diversify the supply chain, reduce dependence on coastal transport and single suppliers, and enhance the climate risk early warning system. This will ensure quick response capabilities during extreme weather events, improving operational continuity and resilience to risks. 	Medium-term and Long-term	Minor Impact

[4] The impact duration is categorized into short-term, medium-term, and long-term. Short-term generally refers to within one year (inclusive) after the end of the sustainability information reporting period. Medium-term generally refers to one to five years (inclusive) after the end of the sustainability information reporting period. Long-term generally refers to more than five years after the end of the sustainability information reporting period.

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GHG Emissions Management

We carry out carbon inventory in accordance with the ISO 14064-1:2018 standard, based on the principle of operational control, covering all operational activities and facilities of our domestic and overseas production sites.

Operational Boundaries

We have established the operational boundaries for our 2024 greenhouse gas (GHG) inventory to include: Scope 1 — direct GHG emissions; Scope 2 — energy indirect GHG emissions; and selected Scope 3 — other indirect GHG emissions.

During the reporting period, our subsidiary, XWXN, independently conducted its GHG inventory. The operational boundaries for its 2024 GHG inventory encompass: Scope 1 — direct GHG emissions; Scope 2 — energy indirect GHG emissions; and Scope 3 — indirect GHG emissions associated with transportation, products consumed by the company, and emissions related to the use of the company's products.

Calculation Method

We calculated our carbon emissions data in accordance with the ISO 14064-1:2018 standard, primarily using a calculation-based approach. Emissions were determined based on the formula "activity data × emission factor," supplemented by the use of emission coefficients and material balance methods. Calculations for different emission sources were conducted following the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Emissions related to energy consumption were calculated in accordance with the General Rules for Calculation of the Comprehensive Energy Consumption (GB/T 2589-2020) and the 2022 regional grid average carbon emission factors published by the Ministry of Ecology and Environment of China. For overseas operations, local grid emission factors were adopted. All greenhouse gas emissions data were ultimately converted into CO₂e based on the Global Warming Potentials (GWP) provided in the IPCC Sixth Assessment Report (AR6), expressed in metric tons per year, to ensure the scientific validity and international comparability of the results.

GHG Types

Our greenhouse gas emissions inventory covers seven types of gases, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

Greenhouse Gas Emissions

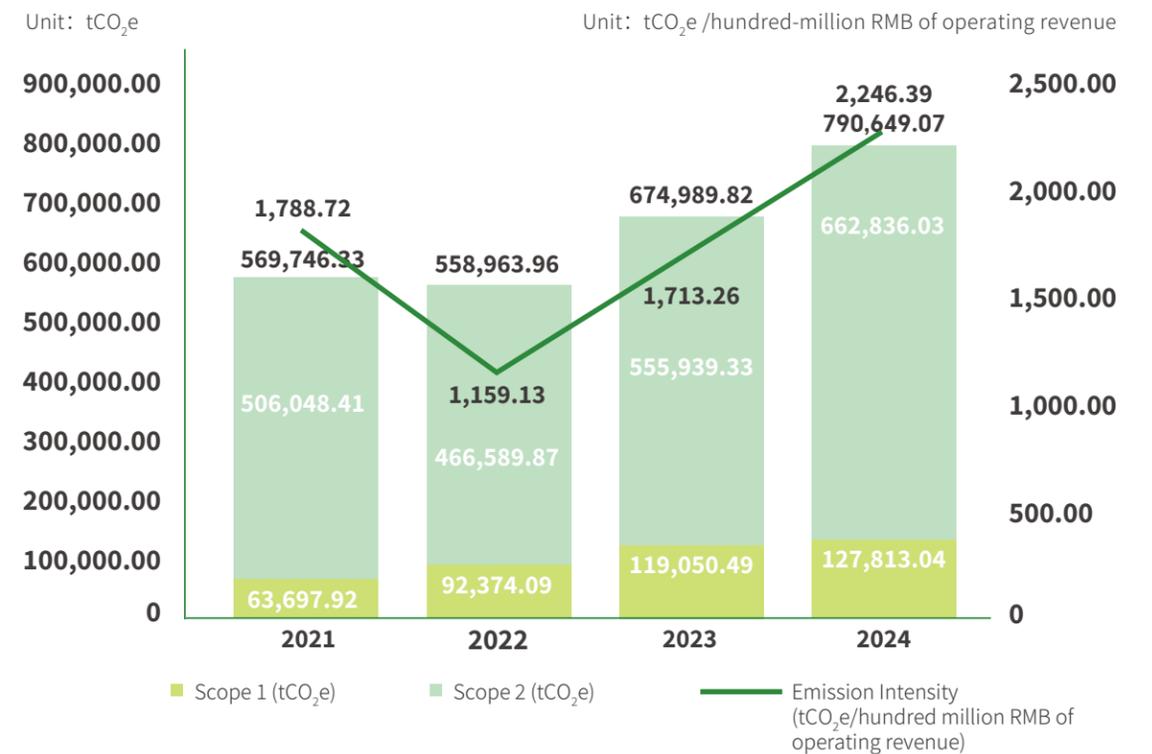
During the reporting period, the total greenhouse gas emissions from Scope 1 and Scope 2 reached 790,649.07 tCO₂e, with Scope 2 accounting for the largest share, contributing 83.83% due to the use of purchased energy. Due to business expansion, the consumption of natural gas, diesel, and coal increased compared to 2023, resulting in a rise of 8,762.55 tCO₂e in Scope 1 emissions. Additionally, the increase in electricity consumption led to a rise of 106,896.70 tCO₂e in Scope 2 emissions compared to last year. The increase in Scope 3 greenhouse gas emissions is mainly due to adjustments in the accounting boundaries and the expansion of emission types. This change primarily stems from the improvement in Scope 3 reporting criteria, rather than a significant increase in actual emissions. Overall, the total greenhouse gas emissions increased by 4,450,610.14 tCO₂e compared to 2023, primarily driven by business growth.

2024 GHG Emissions

Year	Scope 1 Emissions (tCO ₂ e)	Scope 2 Emissions (tCO ₂ e)	Total Scope 1 and Scope 2 Emissions (tCO ₂ e)	Scope 3 Emissions (tCO ₂ e)	Emission Intensity (tCO ₂ e/hundred million RMB of operating revenue)
2024	127,813.04	662,836.03	790,649.07	5,761,436.35	2,246.39
2023	119,050.49	555,939.33	674,989.82	1,426,485.46	1,713.26
2022	92,374.09	466,589.87	558,963.96	/	1,159.13
2021	63,697.92	506,048.41	569,746.33	/	1,788.72

Note The above Scope 2 emissions refer to indirect greenhouse gas emissions from purchased energy, based on a market-based approach.

GHG Emissions





Energy Usage

We view energy management as a core pillar of our low-carbon development. We have established and continuously optimized our energy management system, setting annual energy targets that are incorporated into the performance evaluations of the general manager and management teams. Through a system of accountability, we translate energy targets into specific actions for each department and production process, monitor progress on a monthly basis, and continuously enhance energy efficiency and optimize our energy structure.

Energy Consumption

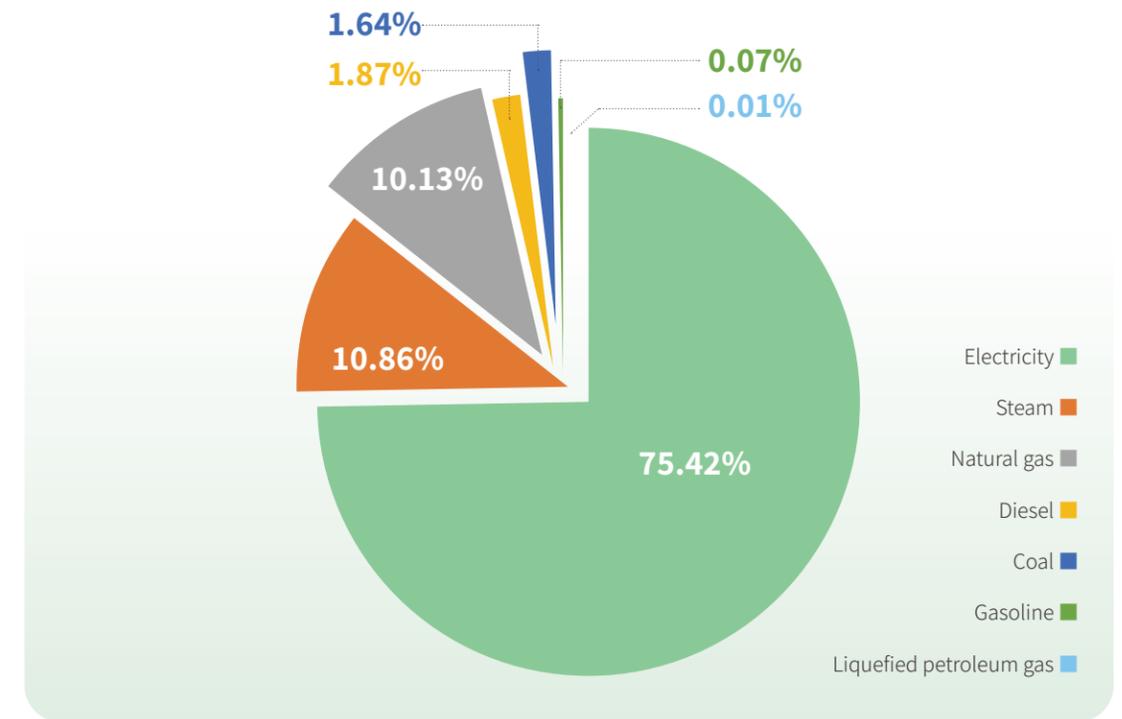
During the reporting period, our total energy consumption was 297,946.44 tons of coal equivalent, an increase of 30,158.75 tons compared to 2023, mainly due to business growth.

In our energy structure, electricity is the primary energy source and accounts for approximately 75.42% of total energy consumption. At present, thermal power represents about 53.08% of our electricity usage, while clean energy sources such as wind power, solar power, hydropower, and nuclear power make up approximately 46.92%.

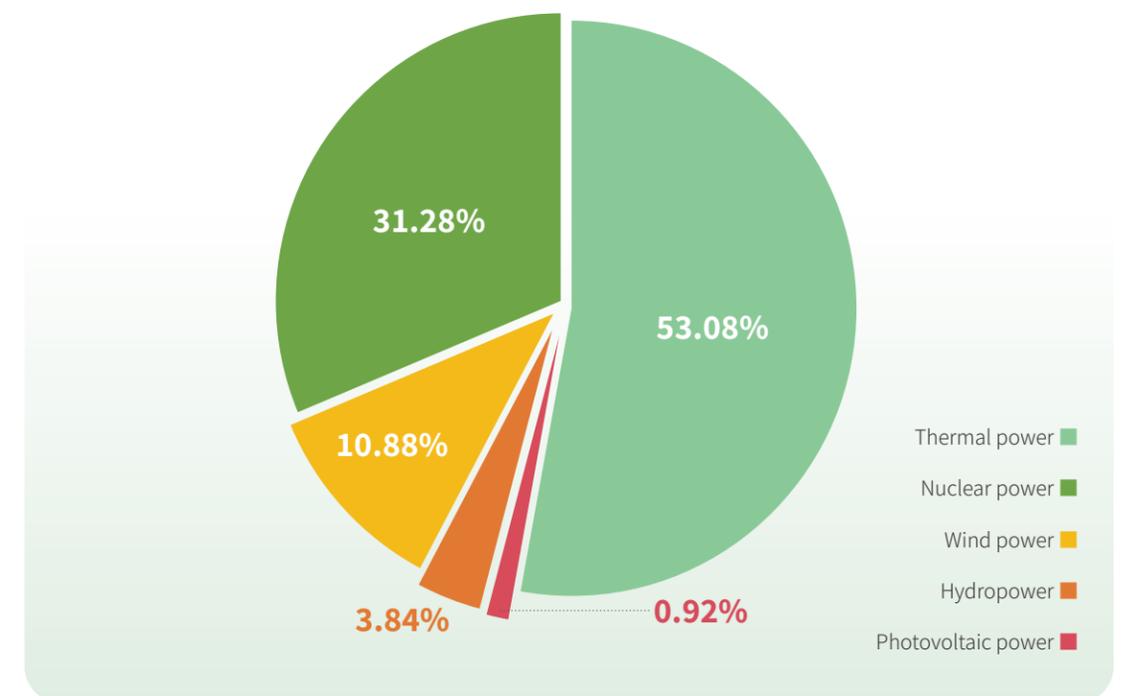
2024 Energy Consumption Structure

Energy Type	2024	2023	Comprehensive Energy Consumption in 2024 (tons of coal equivalent)	Comprehensive Energy Consumption in 2023 (tons of coal equivalent)	Energy Consumption Share in 2024(%)
Electricity (kWh)	1,828,341,666.09	1,631,612,744.27	224,703.19	200,525.21	75.42
Steam (t)	341,749.66	282,283.46	32,363.69	29,262.63	10.86
Natural Gas (m ³)	22,700,128.41	21,329,644.73	30,191.17	28,368.43	10.13
Diesel (L)	4,454,731.18	3,764,841.67	5,582.25	4,717.75	1.87
Coal (t)	6,835.92	6,453.55	4,882.90	4,609.77	1.64
Gasoline (L)	201,790.25	254,199.65	216.75	273.04	0.07
Liquefied Gas (kg)	3,786.00	17,999.54	6.49	30.86	0.01
Total			297,946.44	267,787.69	100.00

2024 Energy Consumption by Source



2024 Electricity Consumption by Source



Energy Management

Our key production enterprises have all developed an "Energy Management System" and are continuously improving the energy management system. During the reporting period, a total of 16 subsidiaries passed the ISO 50001 energy management system certification, covering 44% of the production enterprises.

Mining Operations	<p>At Ninghua Xingluokeng, we have developed the "Energy Metering Management Regulations" to strengthen energy metering management and improve energy efficiency. In addition, we have established an energy metering management working group, with clearly defined roles and responsibilities, aimed at promoting the orderly implementation of energy metering management and providing data support for the company's energy management strategy.</p>
Advanced Materials Production	<p>At our molybdenum production base in Chengdu, we have developed and issued the "Organizational Structure and Responsibilities of Energy Management," establishing an energy management organization led by the company's general manager, with department heads as members. We have also established the "Energy Management System," which outlines regulations for the economic operation of distribution transformers, energy use management, energy statistics management, and metering equipment management. Additionally, we have built an online energy monitoring and management system to ensure efficient use of energy.</p>  <p>At our rare earth material production base in Changting, we implement a monthly energy management system. We have promoted strategies such as staggered electricity usage and established a competition mechanism among internal departments to encourage continuous optimization and improvement of energy efficiency. To further reduce electricity costs, we introduced a peak-valley ratio model and adjusted the cost allocation rules based on this model. This cost incentive mechanism promotes both cost reduction and efficiency improvement. As a result of these measures, the overall peak-valley ratio has shown a downward trend, decreasing from 1.06 in 2023 to 1.03 in 2024.</p> <p>At our battery materials production base, we have established policies such as the "Energy Management Regulations" and the "Energy Management Manual" and set up an energy management structure centered around the energy-saving leadership team, with the general manager as the team leader and the deputy general manager as the deputy leader. We incorporate the energy consumption per unit product into the performance evaluation system of relevant departments and their responsible personnel, and break down this goal into specific tasks for each department to ensure the achievement of energy-saving targets. The company conducts an annual energy management review, tracks the implementation of previous management review decisions and internal audits, and forms a "Management Review Report." We assess the appropriateness, compliance, adequacy, and effectiveness of the energy management system, thoroughly analyze the reasons for any decline in energy performance or unmet goals, and take corrective actions promptly.</p>
Deep Processing	<p>We strictly adhere to energy management regulations and, in accordance with ISO 50001 standards, have developed policies such as the "Energy Management System," "Energy Management Manual," and "Energy Review Management Regulations." Focusing on lean production, we optimize manufacturing processes, integrating automation and digital technologies to enhance the operational efficiency of large-scale production. At the same time, we continuously reduce energy consumption and promote the in-depth implementation of the International Advanced Manufacturing (IAM) management system.</p>
Secondary Resource Utilization	<p>In GANPOWER, we regularly conduct internal energy audits and data monitoring to clarify the company's energy consumption structure and major energy-consuming equipment. We have installed meters on production lines and office areas to record energy usage data and established a monthly energy usage ledger.</p>

Energy Conservation and Emission Reduction

Mining Operations

At Luoyang Yulu, we have implemented waste heat recovery on three 250kW air compressors. By using a plate heat exchanger to utilize the compressed heat energy to heat the boiler, we have replaced the traditional steam heating method, reducing natural gas consumption by approximately 0.12 million cubic meters per year. In addition, we have adopted intelligent scale prevention technology to replace manual descaling, reducing equipment maintenance. The entire system maximizes the utilization of waste heat while ensuring the safe operation of the air compressors, simultaneously reducing steam consumption and the dual costs of compressor cooling, achieving both energy conservation and emission reduction.

Advanced Materials Production

At molybdenum production base in Chengdu, we have implemented the following measures to achieve energy conservation and emission reduction:

- Energy-saving measures for process equipment**
 - We have adopted a continuous closed-loop process, reducing the product's online dwell time, improving equipment efficiency, and lowering the energy consumption per unit of product.
- Energy-saving measures for site and building design**
 - During the architectural design phase, we fully considered natural factors such as lighting, climate, and wind direction to ensure that rooms have good orientation and ventilation. We have carried out energy-saving designs for office buildings, rest areas, and guardhouses according to the "Designing Standard for Energy Efficiency of Public Buildings" (GB50189-2015). Energy-saving designs for the workshop buildings were carried out according to the "Unified standard for energy efficiency design of industrial buildings" (GB51245-2017) for Category II industrial buildings.
- Energy-saving measures for water supply and drainage**
 - We have selected energy-efficient products for the valves and accessories in the pump's inlet and outlet pipelines. The cooling tower fans use variable frequency drive technology, and we utilize the backwater pressure to push the water into the cooling tower, reducing the energy consumption of the cooling water system.
- Energy-saving measures for HVAC**
 - We use high-performance rubber and plastic materials for air duct insulation to minimize energy loss. The air conditioning room temperatures are set reasonably to effectively reduce air conditioning energy consumption.
- Energy-saving measures for power gases**
 - We have selected high-efficiency energy-saving boilers, with boiler efficiency levels not lower than the Grades 2 specified in current industry standards "Minimum allowable values of energy efficiency and energy efficiency grades of industrial boilers" (GB 24500-2009), and a design thermal efficiency of no less than 92%. Additionally, we have enhanced the insulation measures for boilers and steam pipelines using high-quality insulation materials to reduce heat energy loss.
- Energy-saving measures for electrical systems**
 - The wire cross-section for overhead lines and cable lines is selected based on economic current density, reducing energy losses during power transmission.
 - The workshop's transformer station is located near the center of electricity consumption, with large power-consuming stations placed close to the transformer and distribution stations to minimize energy loss.
 - Lighting standards and power density values strictly follow the "Standard for Lighting Design of Buildings" (GB50034-2013), and natural light is combined with indoor artificial lighting to save electricity consumption.
 - For areas with outdoor lighting, light sensors automatically adjust the indoor lighting based on changes in illuminance.
 - High-efficiency, energy-saving T5 fluorescent lamps are used for electrical lighting, with LED lighting used in corridors, stairways, landscape lighting, and street lamps. Offices use LED flat-panel lights, and meeting rooms are equipped with LED flat-panel lights and additional lighting strips for assistance.

Deep Processing

At the tungsten and molybdenum wire production base in Xiamen, we have designed energy-efficient combustion chambers for gas heating furnaces and applied them to equipment such as wire drawing machines. This has improved combustion efficiency, reduced energy consumption, and achieved a natural gas saving rate of approximately 30–35%.

At the cutting tool body and handle production base, we have implemented the following measures to achieve energy conservation and emission reduction:

- Turn off lighting in all areas except production zones and personnel passageways.
- Leverage natural rooftop lighting in precision machining workshops to maintain indoor brightness.
- Install solar panels in parts of the plant for self-generated lighting power.
- Install sound-activated switches for dormitory common areas to eliminate the problem of lights being left on unnecessarily.

Secondary Resource Utilization

At GANPOWER, we recover flue gas and waste heat from boilers to increase waste heat utilization. We have also installed insulation materials on steam pipelines to reduce heat loss, achieving more efficient energy use.

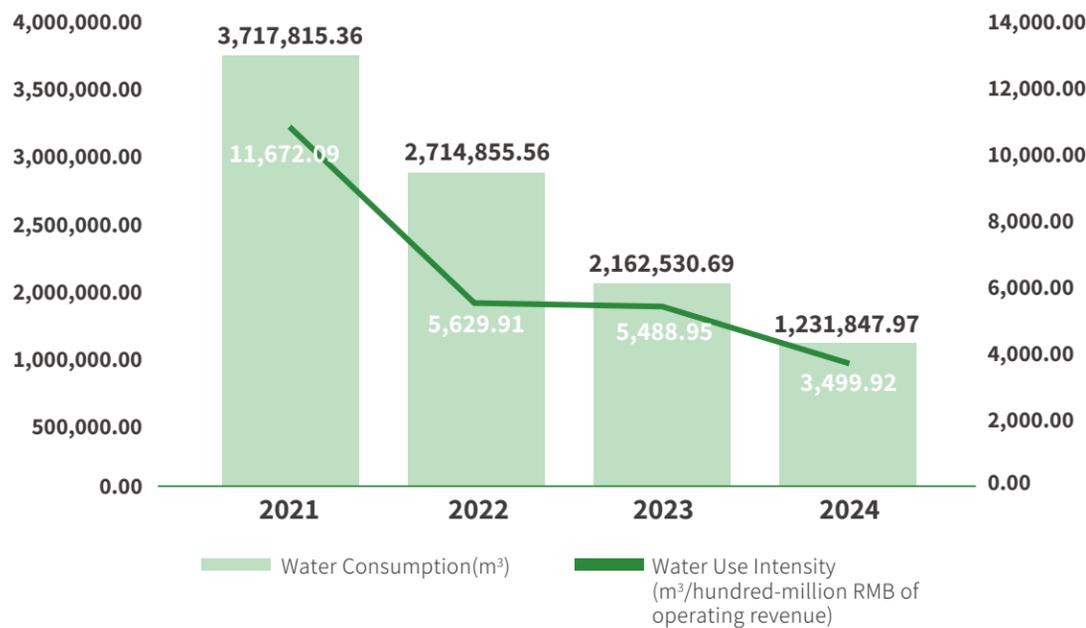
Usage of Water Resources

Water resource conservation is a key component of our environmental responsibility. We have issued an Environmental Protection Statement and are actively fulfilling our responsibilities in preserving aquatic ecosystems. In our business operations, we have adopted water-saving technologies and equipment, significantly reducing water consumption during production. We implement full-process monitoring and control of water usage to continuously improve water use efficiency. Through technological innovation, we recycle and reuse wastewater, greatly reducing the intake of fresh water and promoting the sustainable use of water resources. Meanwhile, we actively participate in watershed protection initiatives and support local water environment improvement projects, striving to build a harmonious relationship between humans and water.

Water Consumption

During the reporting period, we recorded a water consumption of 1,231,847.97 cubic meters, the water use intensity was 3,499.92 cubic meters per hundred-million RMB in revenue.

Water Consumption



Water Resource Management

We strictly comply with the Environmental Protection Law of the People's Republic of China, the Water Law of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, and other relevant laws and regulations. To strengthen water resource management, we have established a series of internal policies, including the Environmental Protection Management System, the Basic Environmental Protection Standards, and the Water Resource Management Statement. These frameworks guide our efforts to meet business needs while striving for the sustainable management of water resources.

Mining Operations

At Ninghua Xingluokeng, we have established a comprehensive water recycling system that includes the Plant Return Water System, Tailings Pond Return Water System, Seepage Collection Pool Return Water System, and Wastewater Discharge Treatment System. These integrated systems enable 100% recycling of water used in mineral processing operations.

The Plant Return Water System

The Plant Return Water System mainly consists of one 53-meter thickener and two 30-meter thickeners. After clarification, the overflow water is collected and pumped into a 2,000-cubic-meter plant return water tank for recycling across the entire facility.

The Tailings Pond Return Water System

The Tailings Pond Return Water System treats tailings wastewater through flocculation, neutralization, self-purification, aeration, adsorption, and sedimentation processes. The clarified water then flows back to the concentrator via siphon pipes for reuse.

The Seepage Collection Pool Return Water System

The Seepage Collection Pool Return Water System collects initial dam seepage, surface drainage, and catchment from the tailings pond. This water is stored in a 12 thousand-cubic-meter seepage collection pool, pumped to the high-level tailings water tank, and subsequently recycled in the concentrator.

At the same time, we actively participate in the River Chief System initiated by the Ninghua County Government by serving as a corporate river chief, promoting river protection and management, and jointly safeguarding local water resources:

- Strictly implements the Corporate River Chief Inspection System to standardize inspection procedures, ensuring early detection, early intervention, and early resolution of water pollution issues;
- Carries out weekly inspections, with increased inspection frequency for river sections prone to problems;
- Maintains a River Chief Log, documenting detailed records of river surface waste, potential obstructions, illegal structures along the riverbanks, abnormal water conditions, and any signs of ecological damage.

In Duchang, our mine wastewater recycling rate exceeds 90%, and 100% of mine inflow water is recovered and reused. We have established an efficient wastewater management system and sewage treatment facilities to promote the integrated use of both industrial and domestic wastewater:

Domestic sewage treatment and recycling

In residential areas, underground drainage ditches collect domestic sewage, which flows into sewage tanks. After harmless treatment through underground facilities, the treated water enters the tailings system for recycling;

Tailings pond wastewater recycling

Wastewater from the tailings pond is transported via the return water system to the high-level tank at the concentrator and reused in production. After aeration and sedimentation, the water undergoes COD degradation and pH neutralization before being discharged in compliance with standards, achieving a wastewater recycling rate of over 90%;

Mine inflow water management and recovery

By optimizing ore extraction techniques, we ensure that 100% of mine inflow water is recovered and reused.

Advanced Materials Production

At our tungsten smelting production base in Haicang, we ensure comprehensive water resource protection through measures such as technological innovation, hazard monitoring, and water conservation education:

Technological innovation

In the ion exchange process, we achieved a breakthrough in technology and process improvement, shifting from low-concentration to high-concentration adsorption. This reduced water consumption per ton of APT produced from 70t to 30t, saving approximately 200,000t of water annually, effectively improving water resource utilization efficiency;

Hazard monitoring

As a key soil-regulated enterprise at the municipal level, we strictly implement soil and groundwater monitoring and risk prevention responsibilities. We conduct self-monitoring and hazard identification annually, collaborating with third-party organizations to develop the "Soil and Groundwater Self-Monitoring Plan" and "Soil and Groundwater Hazard Identification Report," both of which have been reviewed by experts;

Water conservation education

We actively promote water conservation through channels such as the OA platform, WeChat public account, and bulletin boards. Water-saving signs are posted at water points in the plant to raise employees' awareness of water conservation. We regularly hold "Water Conservation with Me" themed meetings to deepen employees' water-saving education and distribute promotional materials during World Water Conservation Week to further promote water-saving concepts.

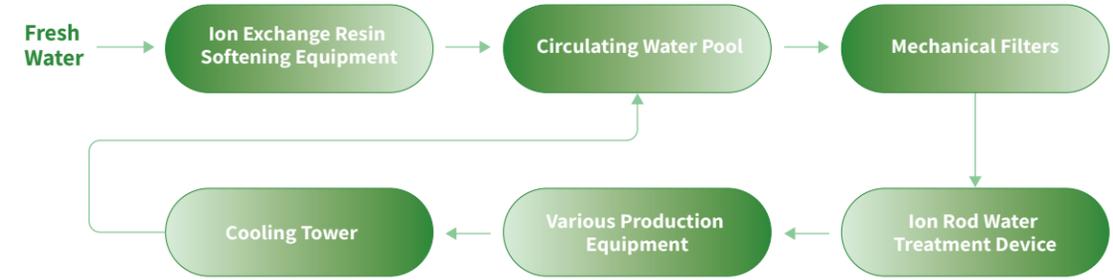
At our tungsten smelting base in Longyan, we optimize production processes and establish a reclaimed water reuse system. By recycling internal wastewater and spent acid within the process, we achieve water resource recycling and reduce the consumption of fresh water.

At our tungsten smelting production base in Wenshan, Yunnan, we actively explore ammonia nitrogen treatment and have introduced advanced steam stripping technology. By replacing the original stripping tower with a steam stripping tower, we enhanced the ammonia removal efficiency of ammonia-containing intermediate materials, enabling the recovery and recycling of ammonia water. With this technology, we achieve an overall water saving of 3m³ per ton of APT produced, while also effectively improving the internal workshop environment and reducing the ammonia nitrogen content in the discharged wastewater.

At our molybdenum production base in Chengdu, we have established a Water Conservation and Emission Reduction Office, which has formulated several water conservation management systems, including the "Water Conservation Work Office Meeting System," "Planned Water Use Management System," "Water Saving Management System," and "Water Metering Management System." Regular water conservation work meetings are held, and we strictly implement water conservation planning with annual and monthly assessments for all departments. We also actively promote water conservation and emission reduction, encourage the adoption of new water-saving technologies, and summarize water-saving experiences to continuously enhance employees' awareness of water conservation.

We use resin exchange adsorption to remove calcium and magnesium ions, which are prone to scaling, from the incoming water. Additionally, we have installed mechanical filters and ion stick water treatment devices to eliminate suspended solids and algae from the circulating water, preventing pipeline blockages. Furthermore, we have replaced all severely scaled pipes and blocked cooling system interfaces. These technical improvements have reduced scaling in circulating water pipes and equipment, extended the service life of the equipment, and improved the cooling efficiency of water. As a result, we have achieved energy savings and reduced the use of cooling water, cutting down on fresh water consumption by approximately 34,650 tons per year.

Circulating Cooling Water System Renovation Process



Wastewater Treatment Equipment

At the rare earth materials production base in Changting, we established a water-saving leadership team with a dedicated water-saving management office. The team is responsible for formulating water-saving management systems and targets, conducting technical renovations of water-saving equipment, and promoting the management of water-saving enterprises. We have developed several water-saving management systems, including the "Simultaneous Implementation of the 'Three Simultaneous' and 'Four in Place' Management System," the "Water-Saving Work Meeting System," and the "Water-Saving Administrator Job Responsibility System." Every month, we analyze water usage statistics for each department and conduct at least one supervision checks of water facilities every week to identify and rectify abnormal water usage. This helps us detect and solve potential problems and waste in a timely manner, ensuring the rational use of water resources. In addition, we have implemented water-saving measures in all new, renovated, and expanded projects, ensuring that water-saving facilities are designed, constructed, and put into use simultaneously with the main project. We strictly adhere to the requirements of "Water Usage Plan in Place, Water-Saving Targets in Place, Water-Saving Measures in Place, and Water Management System in Place" in our daily water-saving management.

In addition, we have implemented a high-efficiency circulating water system to provide cooling water for 45 equipment units in the magnet production process. The system consists of six 55KW cold water pumps, six 37KW hot water pumps, six 7.5KW cooling fans, cold and hot water tanks, overflow devices, and an automatic control system. During operation, the cold water pumps supply cooling water to the equipment according to the set pressure. The heated water then naturally flows into the hot water tank, from where it is pumped through the hot water pump to the spray tower for cooling treatment, before returning to the cold water tank for recycling. Moreover, the number of cooling fans in operation is automatically calculated by the PLC control module based on feedback from the temperature sensors in the cold water tank, optimizing energy savings. By using this system, we can achieve an annual water saving of approximately 16,052,390m³. Currently, all cooling water for our equipment comes from the circulating water system, with a recycling rate of up to 98%.

At our battery materials production base, we actively promote improvements and innovations in water resource management measures, strengthen water resource protection, enhance water utilization efficiency, and aim to build a water-saving enterprise. We have formulated the "Resource and Energy Conservation Management Regulations" to standardize water management. Through optimizing production processes, selecting water-saving equipment, and implementing water recycling measures, we aim to maximize the conservation and rational use of water resources, effectively reducing water wastage:

At our Xiamen production base, we have set clear water-saving targets based on the actual production and operational situation. Taking the water consumption of 33 tons of water per ton of product in 2022 as the baseline, we plan to reduce this to 26 tons of water per ton of product by 2025, continually improving water resource usage efficiency.

At our Sanming production base, we have developed a water-saving checklist and continuously optimize it. We collect monthly water usage data and analyze anomalies to ensure timely identification and resolution of potential water wastage issues. Sensor-based switches have been installed in facilities such as handwashing sinks to effectively prevent water wastage. We also conduct regular inspections to detect leaks and take corrective actions to ensure efficient use of water resources.

At our Ningde production base, we recover lithium from the cleaning wastewater of semi-finished products, and the recovered freshwater is reused in the production line. Our lithium recovery project is planned in three phases. In the first phase, approximately 3,600m³ of wastewater will be processed annually, and about 2,880m³ of water is expected to be reused. Upon completion of all three phases, we expect the water reuse to reach 48,000m³, which will effectively improve the efficiency of water resource recycling.

Deep Processing

In Jiujiang's Cutting Tools Division, we introduced a plate heat exchanger internal circulation water system in the carburizing water pump room and the sintering water pump room. This system effectively reduces cooling water usage. By using deionized or distilled water as the cooling medium for the circulating water, it prevents scale buildup in the equipment's water circuits, extending the equipment's lifespan and improving operational stability.



Closed-Loop Water System with Plate Heat Exchanger

Highlight | Reclaimed Water Reuse System

Xiamen Honglu promotes water conservation and circular resource use in its production processes by recycling string-casting cooling water and general cooling water, thereby reducing water consumption intensity. To address wastewater discharge from the filament workshop's cleaning processes, the company organized relevant personnel to evaluate the feasibility of water reuse. As a result, a reclaimed water reuse system with a daily capacity of 200 tons was established in the filament workshop, achieving a reuse rate of over 90%.



Reclaimed Water Reuse System

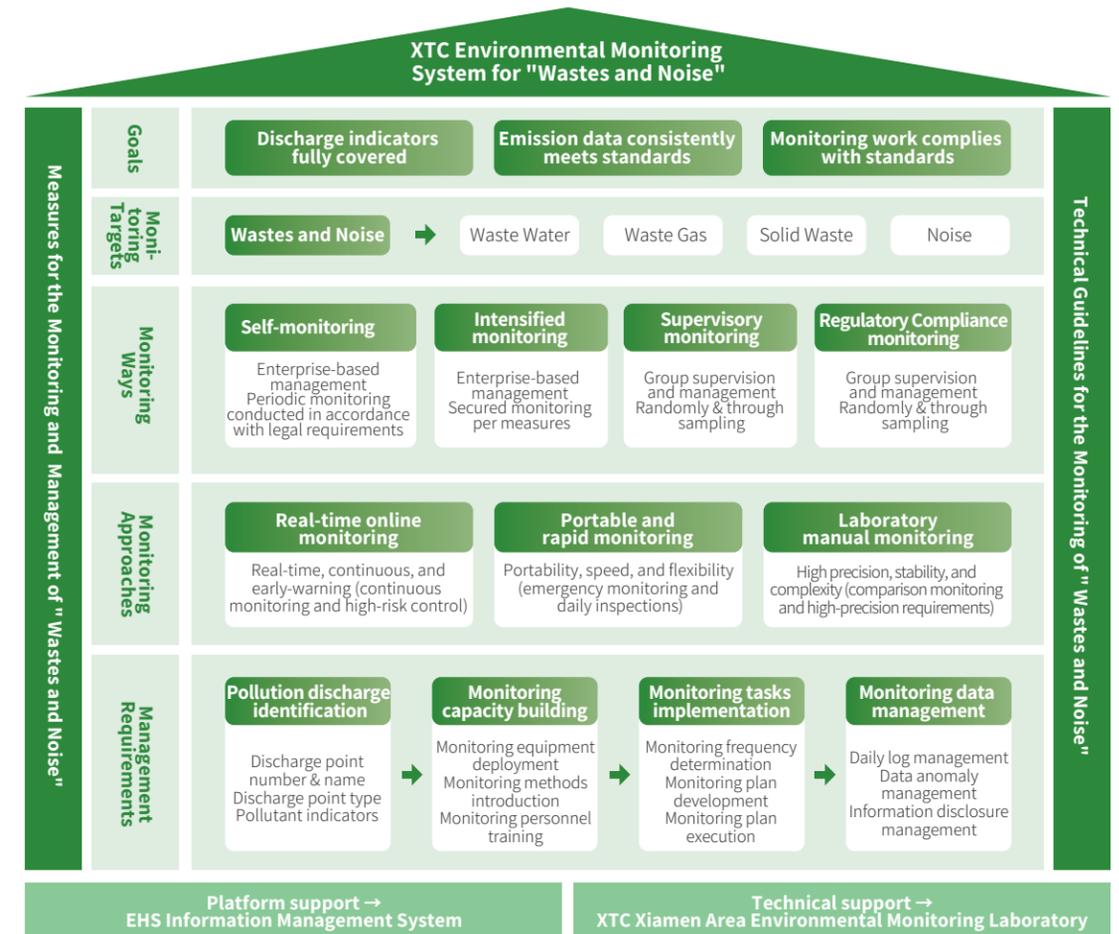
Secondary Resource Utilization

At GANPOWER, we make full use of the region's abundant water resources by collecting rainwater based on local conditions and reusing it in production, effectively reducing the consumption of fresh water.

Pollutant Discharge

Industrial pollutant discharges are a major source of environmental issues such as air pollution, water eutrophication, and soil degradation. These emissions directly affect ecosystem balance and public health. Reducing industrial pollutant and waste emissions is an environmental responsibility that enterprises must strictly fulfill. We have established a comprehensive emissions monitoring and control system that spans the entire production process. By adopting industry-leading clean production technologies and end-of-pipe treatment solutions, we systematically reduce environmental impacts caused by air pollutants, water pollutants, and noise. We enforce stringent emission standards and continuously optimize pollution control facilities to ensure that both the concentration and total volume of all pollutant emissions meet or exceed national and local regulatory requirements. Our company currently operates ten green factories, including seven recognized as national-level green factories and three as provincial-level green factories.

We have established a series of internal regulations for managing industrial pollutant emissions, including the "Environmental Monitoring and Management Measures for 'Wastes and Noise'" and the "Technical Guidelines for Monitoring 'Three Wastes and Noise'". A comprehensive monitoring system has been put in place to manage waste gas, wastewater, solid waste, and noise ("three wastes and noise"), with clear requirements for all subsidiaries to take full environmental responsibility, improve internal environmental management, and prevent environmental risks. In accordance with relevant laws and regulations, each subsidiary engages qualified third-party agencies to conduct self-monitoring to ensure that all industrial pollutant emissions comply with regulatory standards. In addition, we commission accredited third-party institutions to carry out unannounced inspections through random sampling, with monitoring results promptly communicated to the respective subsidiaries. During the reporting period, the Safety Production and Environmental Protection Department at our headquarters conducted 40 such unannounced monitoring sessions to ensure all subsidiaries maintained compliant pollutant discharge levels.



Waste Gas Emissions Management

We recognize that industrial waste gas emissions are a major contributor to air pollution and climate change, directly affecting regional air quality and public health. Our emissions mainly originate from production processes and kitchen fume exhaust, with key pollutants including nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM), non-methane hydrocarbons (NMHC), ammonia (NH₃), and hydrogen chloride (HCl). We embed the concept of clean production into every stage of process design, equipment selection, and daily operations. We strictly comply with relevant laws and regulations such as the Air Pollution Prevention and Control Law of the People's Republic of China and the Comprehensive Emission Standards for Air Pollutants (GB16297-1996), along with applicable industry-specific standards. We adopt a dual approach that combines source control with end-of-pipe treatment, managing emissions based on their specific characteristics. Through process optimization and fuel substitution, we actively reduce pollutant generation. We also equip our facilities with high-efficiency dust removal systems, desulfurization and denitrification units, and VOCs treatment devices to ensure that all types of exhaust gases are discharged in full compliance with regulatory standards.

Emissions Situation

During the reporting period, all our affiliated enterprises achieved compliance with emissions standards for the waste gases generated.

Emissions of Air Pollutants from Key Environmental Supervision Units of the Company in 2024

Enterprise Name	Main Pollutants and Characteristic Pollutants	Emission Concentration	Name of Implemented Pollutant Emission Standard	Total Annual Emissions (tons)	Approved Emission Volume of Pollutant Discharge Permit (tons/year)	Emission Method	Number of Discharge Outlets	Distribution of Discharge Outlets	Excessive Emission
XTC Haicang Branch	Ammonia	<0.25mg/m ³	Emission Standard of Odor Pollutants (GB14554-93)	0.146126	68.90	Organized emission after meeting the standards	3	Workshop Roof Exhaust Stack, Ball Mill Top Ventilation Duct, Southwest Exhaust Stack of Technical Center	None
	Particulate matter	6.383mg/m ³	Xiamen Atmospheric Pollutant Emission Control Standard (DB35/323-2018)	0.549195	7.13				
	Cobalt and its compounds	0.0247mg/m ³	Emission Standard of Pollutants for Inorganic Chemical Industry (GB 31573-2015)	0.000787	/				
Chengdu Dingtai	Particulate matter	3.32625mg/m ³	Emission standard of air pollutants for boilers in Chengdu (DB51/2672-2020) Comprehensive Emission Standards for Air Pollutants (GB16297-1996)	0.759840	/	Organized emission after meeting the standards	8	Workshop 1, Workshop 2, Workshop 3, Workshop 4, Boiler room in the factory area	None
	Nitrogen oxides	0mg/m ³		0.168173	/				
	Sulfur dioxide	Not Detected		0.054468	/				
	Molybdenum	0.000321mg/m ³	Emission Standard of Pollutants for Inorganic Chemical Industry (GB 31573-2015)	0.000016	/				
	Ammonia	21.5842mg/m ³	Emission Standard of Odor Pollutants (GB14554-93)	3.242182	/				
Chengdu Hongbo Industrial	Ammonia	0.05225kg/h	Emission Standard of Odor Pollutants (GB 14554-93) Table 2: Standards	0.458225	/	Organized emission after meeting the standards	2	Molybdenum Four-Tube Furnace Exhaust Chimney, Screening Dust Removal	None
	Particulate matter	10.55mg/m ³	Emission standard of air pollutants for industrial kiln and furnace (GB9078-1996) Table 2: Emission Limits for Other Furnaces and Kilns	0.877639	/				
	Particulate matter	39.75mg/m ³	Comprehensive Emission Standards for Air Pollutants (GB16297-1996) Table 2: Secondary Standards for Maximum Permissible Emission Concentration and Maximum Permissible Emission Rate	0.088016	/				
Golden Dragon Rare-earth (Plant of New Industrial District)	Non-methane hydrocarbons	16.1914mg/L	Emission standards of volatile organic compounds for industrial enterprises (DB35/1782-2018) Table 1: Emission Limits for Other Industries	0.674064	/	Organized emission after meeting the standards	9	2 Melting Emission Outlets, 5 Sintering Emission Outlets, 1 Shot Blasting Emission Outlet, 1 Machining Glue-Boiling Emission Outlet	None
	Particulate matter	34.7444mg/L	Comprehensive Emission Standards for Air Pollutants (GB16297-1996) Table 2: Secondary Standards	1.139984	/				
Golden Dragon Rare-earth (Plant of Rare Earth Industrial Park)	Nitrogen oxides	1.8214mg/m ³	Emission standard of pollutants for electroplating (GB 21900-2008) Table 5: Standards	1.104248	5.77	Organized emission after meeting the standards	13	Electrolytic Emission Outlets, 2 Spraying Emission Outlets, 1 Stripping & Electrophoresis Emission Outlet, 3 Phosphating Emission Outlets, 2 Electrolytic Emission Outlets, 1 Galvanizing Emission Outlet, 1 Shot Blasting Emission Outlet	None
	Particulate matter	12.5694mg/m ³	Emission standard of air pollutants for boiler (GB13271-2014) Table 2: Emission Limits for Gas Boilers	2.593999	/				
	Non-methane hydrocarbons	1.0067mg/m ³	Emission standard of volatile organic compounds for industrial surface coating (DB35/1783-2018) Table 1: Standards	0.301078	/				
	Sulfuric acid mist	0.7429mg/m ³	Emission standard of pollutants for electroplating (GB 21900-2008) Table 5: Standards	0.586242	/				
Fujian Xinlu	Particulate matter	15.5mg/m ³	Comprehensive Emission Standards for Air Pollutants (GB16297-1996) Table 2: Secondary Standards	0.152940	1.572	Organized emission after meeting the standards	6	Alloy dust removal exhaust stack, APT exhaust stack, leaching alkali spray exhaust stack, tungstic acid drying exhaust stack, tungstic acid exhaust stack, and waste tungsten exhaust stack	None
	Non-methane hydrocarbons	2.255mg/m ³	Emission standards of volatile organic compounds for industrial enterprises (DB35/1782-2018) Table 1	0.007671	/				

Enterprise Name	Main Pollutants and Characteristic Pollutants	Emission Concentration	Name of Implemented Pollutant Emission Standard	Total Annual Emissions (tons)	Approved Emission Volume of Pollutant Discharge Permit (tons/year)	Emission Method	Number of Discharge Outlets	Distribution of Discharge Outlets	Excessive Emission
GANPOWER	Sulfur dioxide	27.25mg/m ³	Comprehensive Emission Standards for Air Pollutants (GB16297-1996) Table 2: Limit Values;	0.141136	/	Organized emission aftermeeting the standards	4	Exhaust outlet for natural gas boiler, exhaust outlet for crushing and sorting, exhaust outlet for roasting furnace, and exhaust outlet for leaching	None
	Nitrogen oxides	75.08333mg/m ³	Standard for pollution control on hazardous waste incineration (GB 18484-2020) Table 3: Limit Values;	0.288984	/				
	Particulate matter	5.7861mg/m ³	Emission standard of air pollutants for industrial kiln and furnace (GB 9078-1996) Table 2 and Table 4: Secondary Standard Limits;	0.269129	/				
	Nickel and its compounds	0.00122125mg/m ³	Emission standard of air pollutants for boiler (GB13271-2014) Table 2: Limit Values	0.000096	/				
Duchang Jinding	Nitrogen oxides	73.01mg/m ³	Emission standard of air pollutants for boiler (GB13271-2014)	0.362127	/	Organized emission aftermeeting the standards	1	Boiler discharge outlet within the plant	None
	Sulfur dioxide	2.82mg/m ³		0.036536	/				
Luoyang Yulu	Non-methane hydrocarbons	3.67mg/m ³	Notice on Recommended Emission Limits for Volatile Organic Compounds Control in Industrial Enterprises across the Province (Henan Environmental Campaign Office [2017] No. 162)	0.372240	/	Organized emission aftermeeting the standards	2	Boiler room roof	None
	Particulate matter	2.9mg/m ³	Local Standard for Boiler Atmospheric Pollutant Emission in Henan Province (DB41/2089-2021)	0.079200	0.30				
	Nitrogen oxides	8.8mg/m ³	Local Standard for Boiler Atmospheric Pollutant Emission in Henan Province (DB41/2089-2021)	0.871200	1.21				
Malipo Haiyu Tungsten	Nitrogen oxides	137.166667mg/m ³	Emission standard of air pollutants for boiler (GB13271-2014) Table 1: Standard Limits	8.667000	/	Organized emission aftermeeting the standards	2	Sulfuric acid mist discharge outlet, and boiler chimney discharge outlet	None
	Particulate matter	24.783333mg/m ³		1.555056	/				
	Sulfur dioxide	38.833333mg/m ³		2.495455	/				
Xiamen Jialu	Ammonia	0.1137kg/h	Emission Standard of Odor Pollutants (GB14554-93)	1.009235	38.81	Organized emission aftermeeting the standards	3	Ammonia discharge outlet, exhaust gas discharge outlet 2, and 4# stack	None
	Nitrogen oxides	65.16mg/m ³	Xiamen Atmospheric Pollutant Emission Control Standard (DB35/323-2018)	1.687032	/				
	Particulate matter	3.74mg/m ³		0.104925	4.37				
XWXN	Particulate matter	3.93931mg/m ³	Xiamen Atmospheric Pollutant Emission Control Standard (DB35/323-2018)	2.720770	3.15	Organized emission aftermeeting the standards	26	Roof of the workshop building within the factory area	None
	Ammonia	1.298959mg/m ³	Emission Standard of Odor Pollutants (GB14554-93)	0.519750	17.56				
	Nickel and its compounds	0.018982mg/m ³	Comprehensive Emission Standards for Air Pollutants (GB16297-1996)	0.022000	1.51				
	Cobalt and its compounds	0.020271mg/m ³	Emission Standard of Pollutants for Inorganic Chemical Industry (GB 31573-2015)	0.011770	1.08				
	Manganese and its compounds	0.054977mg/m ³	Integrate emission standards of air pollutants (DB31/933-2015)	0.011030	0.55				
Xiamen Golden Egret (Tongan Plant)	Non-methane hydrocarbons	2.39mg/m ³	Xiamen Atmospheric Pollutant Emission Control Standard (DB35/323-2018)	0.035827	/	Organized emission aftermeeting the standards	12	10 dust emission outlets, 1 organic gas emission outlet, and 1 hydrogen chloride emission outlet	None
	Hydrochloric acid	1.07mg/m ³		0.154272	/				
	Particulate matter	18.5mg/m ³		1.007290	/				
Chengdu Lianhong Molybdenum Industry	Particulate matter	4.725mg/m ³	Comprehensive Emission Standards for Air Pollutants (GB16297-1996)	0.878838	/	Organized emission aftermeeting the standards	5	Surrounding the factory building	None
	Nitrogen oxides	12mg/m ³		0.090901	/				
	Hydrochloric acid	0.28mg/m ³		0.002121	/				
Haicang Golden Egret	Particulate matter	8.225mg/m ³	Xiamen Atmospheric Pollutant Emission Control Standard (DB35/323-2018)	0.616896	/	Organized emission aftermeeting the standards	4	Internal areas of the factory premises	None
	Non-methane hydrocarbons	15.36mg/m ³		0.683424	/				

Emission Reduction Measures

Mining Operations

At **Ninghua Xingluokeng**, the main air pollutants generated during production operations are particulate matter. We have taken the following measures to reduce particulate emissions:

- ▶ During the mining process, advanced blasting technology and dust capture facilities are used, along with mobile spraying and intelligent watering dust suppression equipment, to reduce dust emissions.
- ▶ In the beneficiation process, dust removal systems and spraying dust suppression devices are installed at areas prone to dust generation, achieving a dust control efficiency of over 99%.
- ▶ In the transportation process, sprinkling devices and dust suppression facilities are deployed to effectively reduce dust.
- ▶ In the mining area, automatic air pollutant monitoring and electronic display equipment are installed to monitor air pollutants in real-time. We also commission a qualified third-party agency to conduct quarterly tests at major emission points of waste gases to ensure all emissions comply with environmental protection standards.

At **Duchang**, the main air pollutants generated during production operations include particulate matter, sulfur oxides, nitrogen oxides, and others. We have implemented the following measures to reduce the emission of air pollutants:

Water sprinkling is applied in key areas or processes, such as open-air blasting, transportation roads, unloading at the tailings dump, and unloading of raw ore, to suppress dust.

To reduce the emission of waste gases from boiler combustion, liquefied natural gas (LNG) is used as fuel to minimize the generation of harmful gases and particulate matter from the source.

Five bag dust collectors are installed in the crushing system to effectively collect and treat the dust generated by the crushing process.

For tailings dry beach dust, measures such as rational mineral dumping and dry beach sprinkling are adopted to effectively control dust generation.

Transport vehicles are equipped with cleaning devices to reduce dust accumulation caused by vehicle transportation.

Regular cleaning and washing of factory roads are carried out to reduce dust.

At **Luoyang Yulu**, the main air pollutants generated during production operations include nitrogen oxides, particulate matter, and others. We have implemented the following measures to reduce the emission of air pollutants:

In the operation management of gas boilers, we actively promote low-nitrogen combustion technology. By optimizing the combustion process, we effectively reduce the emission of nitrogen oxides.

For the tail gas generated during the concentrate drying process, we employ high-efficiency wet electrostatic precipitator technology to effectively remove particulate matter and pollutants from the tail gas, achieving clean emission of the exhaust.

Advanced Materials Production

At the **tungsten smelting base in Longyan**, the main air pollutants generated during production operations include particulate matter and non-methane total hydrocarbons. We have implemented the following measures to reduce the emission of air pollutants:

- By expanding the coverage of the exhaust hood and collecting hot air, we merge the exhaust from the end and slag discharge ports to reduce unorganized emissions.
- Upgraded the leaching gas delivery pipeline by replacing the original welded air ducts with flanged, thick-walled pipe structures, eliminating risks such as aging cracks in welds, pipe deformation, and collapse, ensuring the stable operation of the exhaust system.
- Improved the mechanical sealing and air duct design of the acid mixing tank. The sealing method of the acid mixing tank has been upgraded from a water seal to a mechanical sealing device, and an independent exhaust pipeline has been designed to achieve hot air diversion, preventing cross-contamination of process gases.

At our **rare earth materials production base in Changting**, the main air pollutants generated during production and operations include particulate matter, sulfur dioxide, nitrogen oxides, sulfuric acid mist, and non-methane total hydrocarbons. We have adopted the following measures to reduce emissions of air pollutants:

- We have formulated the Environmental Protection Management Regulations, with our Safety and Environmental Protection Department responsible for supervising and managing atmospheric emissions, and we have developed a self-monitoring plan for air emissions in accordance with relevant laws and policies.
- We assign dedicated personnel in each department to conduct daily inspections of our waste gas treatment facilities to ensure stable operation. In the event of any abnormality, we take immediate corrective actions. Units or individuals who fail to perform their duties properly are subject to strict accountability, and in the case of accidents causing injuries or fatalities, we pursue legal responsibility in accordance with the law.
- We have installed an automatic graphite box cleaning device and a dust removal spray tower, and we have procured a second laser polishing machine to effectively reduce dust emissions during production.
- In our industrial park area, we treat exhaust gas using a combination of oil mist filtration and water spraying to ensure effective purification before discharge.
- In the surface treatment workshop, we have introduced advanced equipment that combines water spraying, activated carbon adsorption, and catalytic combustion, which efficiently removes harmful substances from exhaust gases.
- We regularly commission qualified third-party organizations to monitor atmospheric pollutant emissions, ensuring that both the concentration and total volume of emissions comply with national and local standards.



Waste Gas Treatment Facilities

At our battery materials production base, the main air pollutants generated during production and operations include particulate matter, ammonia, nickel and its compounds, cobalt and its compounds, and manganese and its compounds. We have implemented the following measures to reduce air pollutant emissions:

- We strictly enforce internal regulations such as the Environmental Protection Management System and the Waste Gas Management Regulations, adhering to the principle of reduction at source to control emissions and minimize pollutant generation.
- We continuously promote and optimize the application of real-time gas monitoring systems to ensure timely and effective treatment and control measures upon detection of harmful gases, thereby preventing atmospheric pollution.
- In accordance with emission limits outlined in GB16297-1996 Comprehensive Emission Standard for Atmospheric Pollutants, GB31573-2015 Emission Standard for Pollutants from Inorganic Chemical Industry, and DB35/323-2018 Xiamen Atmospheric Pollutant Emission Control Standard, we have established internal emission targets stricter than regulatory requirements, limiting gas emissions to no more than 15 mg/m³.
- We have installed online monitoring systems at all particulate emission points to enable real-time monitoring of particulate concentrations, ensuring data accuracy and stability.
- Ammonia gas monitoring devices have been added around plant boundaries, the wastewater treatment station, MVR units, and key workshop areas to track changes in ammonia concentrations in real time and ensure compliance with environmental standards.
- During equipment procurement and technological upgrades, we prioritize production technologies and machinery with high resource efficiency and low pollutant emissions.
- We have enhanced the capability to recover fugitive ammonia emissions in workshops and strengthened ammonia control measures. A new ammonia spray absorption tower has been installed in the precursor workshop to further reduce ammonia emissions.
- We have optimized exhaust filtration facilities to ensure that all production waste gases undergo high-efficiency purification before being stably discharged.
- We regularly clean the dust collector filter bags to maintain the dust removal system's efficiency.
- We conduct routine maintenance of exhaust fans to ensure proper functioning.
- We require suppliers and relevant parties to ensure that all chemicals meet quality standards. Rigorous inspections are carried out upon chemical delivery, and storage is strictly managed to prevent leaks and the spread of hazardous gases.
- For volatile chemicals, we check packaging integrity before use and manage storage under light-avoiding, low-temperature (room temperature), and ventilated conditions. In the event of a chemical spill, we strictly follow the Emergency Preparedness and Response Management Procedure to quickly contain gas volatilization and prevent harm to human health and the environment.
- We strictly prohibit open burning of waste and garbage both on and off-site, eliminating the risk of air pollution from incineration activities.



Deep Processing

At our Alloy and Cutting Tools Division in Xiamen, the main air pollutants emitted during production and operations include particulate matter, non-methane total hydrocarbons (NMTHCs), ammonia, and hydrogen chloride. We have adopted the following measures to reduce emissions of air pollutants:

- ▶ We treat particulate matter using cyclone dust collectors and bag filters.
- ▶ We treat NMTHCs with combustion equipment that utilizes an “adsorption-desorption catalytic” process.
- ▶ We neutralize hydrogen chloride emissions using an alkaline spray tower.
- ▶ For small quantities of recoverable dust generated during material feeding, we use a dedicated sealed multi-stage collection system.
- ▶ Ammonia-containing exhaust gas produced during the APT calcination process is treated using our patented technology, which decomposes and combusts the gas, converting it into nitrogen and water.
- ▶ Organic waste gas from the sintering process is treated through “adsorption concentration + catalytic combustion” before being discharged in compliance with standards.
- ▶ Waste gas from degreasing and vacuum sintering processes is handled by an advanced foreign sintering system equipped with paraffin condensation and recovery functions. After condensation and recovery, the remaining gas is discharged via rooftop axial fans.
- ▶ Tail gas from methanol production is burned in a heat-conducting oil furnace and co-discharged with the furnace's flue gas.
- ▶ Waste gas from the heat-conducting oil furnace, which uses natural gas as fuel, is discharged through a 15-meter-high exhaust chimney.
- ▶ Kitchen fume is treated with oil fume purification equipment before compliant discharge, while oil mist is separated by an oil mist separator and not discharged externally.
- ▶ We commission a qualified third-party agency to conduct quarterly waste gas testing to ensure that all emissions comply with applicable standards.

At our Cutting Tools Division in Luoyang, the main air pollutants generated during production and operations include nitrogen oxides (NO_x), volatile organic compounds (VOCs), and particulate matter. We have implemented the following measures to reduce air pollutant emissions:

- ▶ We conduct monthly monitoring of nitrogen oxides emitted from the heat-conducting oil furnace and take timely corrective actions based on the results to ensure compliance with legal and permitting requirements.
- ▶ We have upgraded and modified the air pollution control systems for the rock drilling rod brazing and alloy cleaning processes.
- ▶ We have installed new air pollution control equipment for the rock drilling thread line shot blasting machine, shot blasting machine, and carburizing furnace to improve treatment efficiency and ensure compliant emissions after purification.

Wastewater Discharge Management

Our wastewater primarily originates from domestic sewage, process wastewater, and workshop washing activities. The main pollutants include Chemical Oxygen Demand (COD), ammonia nitrogen, total nitrogen, and total phosphorus. We strictly comply with the Water Pollution Prevention and Control Law of the People's Republic of China and other applicable national and local regulations. We have established and rigorously implemented internal policies such as the Environmental Protection Management System, Pollutant Discharge Management Regulations, Wastewater Management Regulations, and Rainwater Management Regulations to regulate wastewater treatment and discharge, ensuring all effluents meet relevant standards. During the reporting period, we completed the construction of an environmental laboratory in the Xiamen region. The laboratory has acquired partial monitoring capabilities for water pollutants and has monitored selected wastewater discharge parameters from 16 subsidiaries in the Xiamen area. This development has significantly improved our wastewater monitoring efficiency and provided robust technical support for mitigating environmental risks.

Emissions Situation

During the reporting period, all our subsidiaries achieved compliance with wastewater discharge standards.

Wastewater Pollutant Emissions of the Company's Key Environmental Supervision Units in 2024

Enterprise Name	Main Pollutants and Characteristic Pollutants	Emission Concentration	Name of Implemented Pollutant Emission Standard	Total Annual Emissions (tons)	Approved Emission Volume of Pollutant Discharge Permit (tons/year)	Emission Method	Number of Discharge Outlets	Distribution of Discharge Outlets	Excessive Emission
XTC Haicang Branch	Chemical Oxygen Demand	46.885mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	64.669605	468.39	Emission after reaching the standard	1	Southwest factory wastewater discharge outlet	None
	Ammonia Nitrogen	13.858mg/L		8.595507	42.1551				
	Total Arsenic	0.060391mg/L		0.041034	0.4684				
	Total Lead	0.1765mg/L		0.107579	0.9368				
	Total Nickel	0.0675mg/L		0.030934	0.9368				
	Total Mercury	0.000715mg/L		0.000369	0.0469				
	Total Chromium	0.045333mg/L		0.017429	/				
	Total Cadmium	0.075mg/L	0.027263	/					
	Total Cobalt	0.094209mg/L	Integrated Wastewater Discharge Standard (DB31/199-2018)	0.056039	/				
Total Nitrogen	19.35mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015)	9.593771	65.575					
Chengdu Hongbo Industrial	Chemical Oxygen Demand	94mg/L	Integrated Wastewater Discharge Standards (GB8978-1996) Table 4: Tier 3 Standards	11.925612	/	Emission after reaching the standard	2	Factory South Discharge Outlet, Factory North Discharge Outlet	None
	Ammonia Nitrogen	10.055mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015) Table 1: Class B Standard Values	1.266134	/				
	Total Nitrogen	26mg/L		3.800195	/				
Golden Dragon Rare-earth (Plant of New Industrial District)	Chemical Oxygen Demand	47mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015) Table 1: Class B Standard Values	0.282000	11.18	Emission after reaching the standard	2	Main wastewater discharge outlet and domestic sewage discharge outlet in the factory area	None
	Ammonia Nitrogen	6.82375mg/L		0.040943	0.07				



Enterprise Name	Main Pollutants and Characteristic Pollutants	Emission Concentration	Name of Implemented Pollutant Emission Standard	Total Annual Emissions (tons)	Approved Emission Volume of Pollutant Discharge Permit (tons/year)	Emission Method	Number of Discharge Outlets	Distribution of Discharge Outlets	Excessive Emission
Golden Dragon Rare-earth (Plant of Rare Earth Industrial Park)	Chemical Oxygen Demand	9.6824mg/L	Emission standard of pollutants for electroplating (GB 21900-2008) Table 2: Standards	0.657968	11.18	Emission after reaching the standard	2	Main wastewater discharge outlet and domestic sewage discharge outlet in the factory area	None
	Ammonia Nitrogen	0.9214mg/L		0.056392	1.048				
	Total Copper	0.02558mg/L		0.001637	0.0118				
	Total Nickel	0.0295mg/L		0.000024	0.0011				
	Total Zinc	0.1209mg/L		0.007982	0.0216				
	Total Nitrogen	5.5517mg/L	0.366744	/					
	Total Phosphorus	0.0161mg/L	0.001132	/					
Fujian Xinlu	Chemical Oxygen Demand	33.68166mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015) Table 1: Class B Standard Values	2.590490	7.801	Emission after reaching the standard	3	Factory wastewater discharge outlet, workshop wastewater discharge outlet, and rainwater discharge outlet	None
	Ammonia Nitrogen	0.1999mg/L		0.015375	0.857				
	Total Lead	0.005417mg/L	Integrated Wastewater Discharge Standards (GB8978-1996) Table 1: Standards	0.000417	0.0502				
	Total Cadmium	0.0069mg/L		0.000531	0.0063				
	Total Arsenic	0.020988mg/L		0.001614	0.0314				
	Total Chromium	0.0283mg/L		0.002177	0.0314				
GANPOWER	Chemical Oxygen Demand	12.299mg/L	Integrated Wastewater Discharge Standards (GB8978-1996) Table 4: Tier 3 Standard Limits	0.161720	1.989	Emission after reaching the standard	1	Northeast corner of the factory area	None
	Ammonia Nitrogen	0.71212mg/L		0.033000	0.036				
	Total Cobalt	0.2mg/L		0.001939	/				
	Total Nickel	0.01mg/l		0.000167	/				
Duchang Jinding	Chemical Oxygen Demand	24.097mg/L	Integrated Wastewater Discharge Standards (GB8978-1996) Table 4: Standard Upgrade from Level 1	47.244900	100.48	Emission after reaching the standard	1	External wastewater discharge outlet	None
	Ammonia Nitrogen	0.0922mg/L		0.180700	5.98				
	Total Nitrogen	1.576mg/L		3.089080	14.35				
	Total Phosphorus	0.2984mg/L	Integrated Wastewater Discharge Standards (GB8978-1996) Table 4: Level 1 Standard	0.584989	0.598				
	Total Cadmium	0.0048mg/L		0.009330	0.12				
	Total Mercury	0.0006mg/L		0.001244	0.06				
	Total Lead	0.0004mg/L		0.000832	1.2				
Total Arsenic	0.1287mg/L	0.252327	0.6						

Enterprise Name	Main Pollutants and Characteristic Pollutants	Emission Concentration	Name of Implemented Pollutant Emission Standard	Total Annual Emissions (tons)	Approved Emission Volume of Pollutant Discharge Permit (tons/year)	Emission Method	Number of Discharge Outlets	Distribution of Discharge Outlets	Excessive Emission
Malipo Haiyu Tungsten	Chemical Oxygen Demand	16.333333mg/L	Emission Standard of Pollutants for Inorganic Chemical Industry (GB 31573-2015) Table 1	0.524232	2.274	Organized emission after meeting the standards	2	Discharge outlet of sewage treatment station, rainwater discharge outlet	None
	Ammonia Nitrogen	1.024333mg/L		0.043570	0.455				
	Total Cadmium	0.005mg/L		0.000211	/				
	Total Nitrogen	7.908333mg/L		0.336650	/				
	Total Arsenic	0.00735mg/L		0.000089	/				
	Total Lead	0.01mg/L		0.000422	/				
Ninghua Xingluokeng	Chemical Oxygen Demand	19.350174mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	2.060060	/	Organized emission after meeting the standards	5	Discharge outlet for domestic sewage, discharge outlet for tailings pond during the rainy season, 2 discharge outlets for sedimentation tanks, discharge outlet for leaching water from waste rock area	None
	Ammonia Nitrogen	0.403367mg/L		0.042943	/				
	Total Cadmium	0.000818mg/L		0.000085	/				
	Total Arsenic	0.007114mg/L		0.000742	/				
	Total Molybdenum	0.263535mg/L		0.027482	/				
Xiamen Jialu	Chemical Oxygen Demand	41.865mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	5.785366	12.9	Organized emission after meeting the standards	2	TW01 wastewater discharge outlet, TW02 workshop discharge outlet.	None
	Ammonia Nitrogen	16.46mg/L		2.249619	2.3				
	Total Arsenic	0.0296mg/L		0.003157	0.01				
	Total Nitrogen	8.11mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015)	0.681025	10.326				
	Total Lead	0.2mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	0.027542	0.148				
XWXN	Chemical Oxygen Demand	29.040806mg/L	Discharge standard of water pollutants for Xiamen (DB35/322-2018)	15.768548	45.9557	Emission after reaching the standard	1	Discharge outlet on the northwest side of the factory area	None
	Ammonia Nitrogen	2.809962mg/L		1.52750	6.1274				
	Total Nickel	0.060612mg/L		0.032911	0.0383				
	Total Manganese	0.040744mg/L		0.022123	1.5319				
	Total Cobalt	0.27291mg/L		0.148185	0.0574				
Xiamen Golden Egret (Tongan Plant)	Chemical Oxygen Demand	27mg/L	Discharge standard of water pollutants for Xiamen (DB35/322-2018)	1.305900	/	Emission after reaching the standard	1	Factory production wastewater and domestic sewage discharge outlet	None
	Ammonia Nitrogen	0.523mg/L		0.077652	/				
Chengdu Lianhong Molybdenum Industry	Chemical Oxygen Demand	347mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	2.595300	/	Emission after reaching the standard	1	South outlet of the factory	None
	Ammonia Nitrogen	21mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015)	0.157100	/				
Haicang Golden Egret	Chemical Oxygen Demand	386.5mg/L	Integrated Wastewater Discharge Standards (GB8978-1996)	14.384371	/	Emission after reaching the standard	2	Factory production wastewater and domestic sewage discharge outlet	None
	Ammonia Nitrogen	19.55mg/L	Wastewater quality standards for discharge to municipal sewers (GB/T31962-2015)	0.727592	/				

Emission Reduction Measures

Mining Operations

At Ninghua Xingluokeng, the main wastewater pollutants generated during production operations include Chemical Oxygen Demand (COD) and ammonia nitrogen. We strictly implement internal regulations such as the Environmental Protection Management System and have adopted the following measures to reduce wastewater pollutant emissions:

- Fully recycle all production wastewater to minimize discharge;
- During the rainy season, treat wastewater from the tailings pond to meet Class III surface water standards before discharge, reducing negative environmental impacts;
- Closely monitor all industrial and domestic wastewater discharge outlets, including parameters such as flow rate, pH, COD, and suspended solids. Monitoring is conducted at least three times per month, and for outlets subject to environmental performance assessments, at least 10 monitoring sessions are carried out monthly to ensure compliance with environmental standards;
- Engage qualified third-party agencies for monthly testing of discharged wastewater to ensure that emissions meet the required standards.

At the Duchang site, the main wastewater pollutants generated during production operations include Chemical Oxygen Demand (COD), ammonia nitrogen, total phosphorus, and total nitrogen. We have implemented the following measures to reduce wastewater pollutant discharge:

- Reduced the dosage of wastewater treatment chemicals by adjusting both the type and concentration of reagents. The dosing rates for polyacrylamide (PAM) and polyaluminum chloride (PAC) were lowered to 80 g/t and 5 g/t respectively, enhancing wastewater treatment efficiency while reducing operating costs, saving a total of RMB 0.45 million over the year;
- Completed an ozone capacity upgrade project, fully upgrading the ozone system and its supporting PLC system, and converting the two oxidation towers from series to parallel configuration. This increased wastewater treatment capacity from 200 m³/h to 600 m³/h;
- Commissioned a third-party agency to design a rainwater-sewage diversion system and carried out on-site construction within the plant to ensure effective separation and discharge of rainwater and sewage;
- Upgraded key areas prone to rain-sewage mixing and repaired damaged parts of the diversion structures to achieve full separation of rainwater and sewage;
- Installed drainage ditches, interception dams, sedimentation ponds, and water pumping facilities to fully collect and recycle leachate as production water;
- Discharged mining wastewater together with tailings into the tailings pond. Overflow water from the tailings pond is partially reused in production and partially discharged after ozone treatment and phosphorus removal.

Advanced Materials Production

At the tungsten smelting base in Longyan, the main wastewater pollutants generated during production operations include Chemical Oxygen Demand (COD), ammonia nitrogen, total lead, total chromium, and total cadmium. We have implemented the following measures to reduce the discharge of wastewater pollutants:

Constructed a new triple-effect evaporator, which recovers water from high-salinity wastewater produced by the tungstic acid production line in the form of condensate and extracts solid components such as sodium chloride for sale. This effectively reduces wastewater discharge and promotes resource recycling;

Added final-stage collection and monitoring processes in wastewater treatment, using both instrumental analysis and test strips to ensure that pollutants such as ammonia nitrogen meet discharge standards;

Reused a portion of wastewater and waste acid through a reclaimed water system, reducing the consumption of fresh water;

Implemented a cascading wastewater utilization strategy to improve the overall efficiency of water resource use.

At the battery materials production base, the main wastewater pollutants generated during production and operation include Chemical Oxygen Demand (COD), ammonia nitrogen, total nickel, total manganese, and total cobalt. We have implemented the following measures to reduce wastewater pollutant discharge:

- In accordance with the Discharge Standard of Water Pollutants for Xiamen (DB35/322-2018) and the Integrated Wastewater Discharge Standards (GB8978-1996), we have established a series of environmental indicators related to wastewater. Our Testing Center conducts weekly monitoring of wastewater discharge for pH, ammonia nitrogen, and heavy metals (nickel, cobalt, manganese, etc.);
- We have established an online water quality monitoring system that complies with national standards and has passed government inspection, allowing for real-time monitoring of ammonia nitrogen and COD in wastewater;
- We engage qualified environmental monitoring agencies annually to conduct environmental assessments of our wastewater discharge to ensure compliance with discharge standards;
- Two dedicated wastewater treatment systems have been set up to separately handle cobalt oxide and ternary precursor production wastewater. Wastewater from the workshops first flows into a regulating tank and is heated via a heat exchanger, then sent to a steam stripping tower for gas-liquid separation. The recovered ammonia gas is processed into ammonia water for reuse, promoting resource recycling. The remaining liquid is subjected to multi-stage treatment including plate-and-frame filtration and precision filtration, followed by pH adjustment in the acid-base regulation system, ensuring that all discharged water meets environmental standards.

Deep Processing

At the Tungsten and Molybdenum Wire Materials Division in Xiamen, the main wastewater pollutants generated during production and operation include Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD5), and ammonia nitrogen. We have implemented the following measures to reduce wastewater pollutant discharge:

A reclaimed water system has been built in both the Tianfeng Tungsten Wire Section 4 and the Tianxiang Phase II Tungsten Wire Section 8. The water reuse rate of this system exceeds **80%**, effectively conserving water resources and reducing wastewater discharge.

To address the issues of low efficiency and delayed processing in the existing graphite slurry cleaning wastewater treatment system, we have collaborated with Suntar Environmental Technology Co., Ltd. to develop a ceramic membrane treatment solution, aimed at upgrading and improving the wastewater treatment system.



© Noise Management

We strictly comply with the "Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution" and other relevant laws and regulations. We actively implement noise control measures to minimize the impact of production activities on the surrounding environment. A regular monitoring mechanism has been established, with noise monitoring conducted at the plant boundary at least once per quarter. In the event of noise complaints, we carry out additional targeted monitoring based on actual production conditions and the nature of the complaint. This ensures that noise emissions remain within national and local regulatory standards, contributing to a quiet and comfortable working and living environment for both employees and nearby communities. During the reporting period, all our subsidiaries achieved compliant noise emission levels.



Mining Operations

At Ninghua Xingluokeng, we adopt the following measures to reduce noise impact:

Installing sound barriers near noise sources to block and absorb noise, thereby reducing its transmission;

Conducting regular maintenance of noise-generating machinery to ensure stable operation and reduce noise levels;

Implementing rational production scheduling to avoid high-noise activities during nighttime or rest periods, minimizing disturbance to nearby residents;

Engaging qualified third-party institutions to conduct noise monitoring at plant boundaries to ensure emissions meet national and regional standards.

In Duchang, we take the following actions to mitigate noise pollution:

- Selecting equipment with high machining precision, superior assembly quality, and low noise levels, while also prioritizing vibration isolation and damping measures in the equipment foundation;
- Implementing targeted noise control measures using sound-absorbing materials and acoustic barriers for key noise sources such as the ball mills on the milling platform, vibrating equipment in the pre-selection and waste rock buildings, and vibrating screens and belt gearboxes in the manufactured sand plant. These efforts ensure boundary noise levels remain below 60 dB(A) during the day and below 50 dB(A) at night;
- Enforcing vehicle noise control by requiring reduced speed and no horn use when passing environmentally sensitive areas;
- Optimizing site layout and scheduling blasting and transport operations to minimize noise impact on the surrounding environment;
- Commissioning qualified third-party agencies to carry out comprehensive noise monitoring and evaluation at the plant boundary to effectively control noise pollution.

Advanced Materials Production

At the molybdenum production base in Chengdu, we conduct the following measures to reduce noise impact:

- We prioritize the selection of low-noise equipment and, during process design and equipment layout planning, place high-noise equipment in the central area of the plant to reduce its impact on the external environment.
- For equipment that generates significant noise, we apply a combination of noise control measures including wall insulation, acoustic rooms, acoustic enclosures, vibration isolation, silencing, and sound absorption. We also enhance maintenance efforts to ensure proper operation and prevent abnormal noise generation.
- During production, we manage noise by limiting equipment operating hours, staggering the use of high-noise equipment, prohibiting rough or improper operation, and forbidding the throwing or dropping of tools.
- Facilities are regularly inspected and maintained, and unscheduled supervision checks are conducted by the Safety and Environmental Protection Department to ensure stable operation of noise control equipment.
- We commission qualified third-party institutions to conduct comprehensive boundary noise monitoring at least once per year. The monitoring results are used to verify the effectiveness of noise control measures and to establish a complete monitoring archive.

At our battery materials production base, we perform the following measures to reduce noise impact:

- Implementation of Class III Boundary Noise Standards** | In accordance with the national "Emission Standard for Industrial Enterprises Noise at Boundary" (GB12348-2008) and the approval documents issued by the ecological and environmental authorities, we apply Class III standards for plant boundary noise control, ensuring noise levels remain below 65 dB(A) during the day and 55 dB(A) at night.
- Optimized Acoustic Building Design** | All noise-generating equipment is installed inside the production workshops. The acoustic properties of the building structures help reduce external noise emissions and minimize the impact on both the facility and surrounding environment.
- Strategic Equipment Placement** | High-noise equipment is arranged with careful consideration. Cooling towers are installed on the rooftops to reduce their impact on production areas and employees, while compressors and other loud equipment are placed indoors to benefit from the building's sound insulation.
- Strengthened Equipment Maintenance and Management** | We have established daily maintenance and inspection routines to ensure that all equipment operates in optimal condition. Key noise-generating equipment is regularly serviced to prevent noise pollution caused by mechanical aging or malfunction.
- Enhanced Noise Source Control** | We install vibration-damping pads and acoustic insulation materials to reduce the intensity of noise at its source. When new large-scale equipment is introduced or existing machinery generates abnormal noise, we take immediate mitigation measures such as installing acoustic barriers, optimizing vibration isolation structures, or replacing equipment with low-noise models to maintain compliance with noise standards.
- Regular Noise Monitoring** | The Safety and Environmental Management Department commissions qualified third-party institutions to conduct quarterly monitoring of noise indicators at the plant boundary. Based on the results, we continuously improve and refine our noise reduction measures.

Deep Processing

At the Alloy and Cutting Tools Division in Xiamen, we perform the following noise control measures:

We apply acoustic insulation and silencing treatments to minimize the impact of equipment operation noise on the surrounding environment.

Personnel working in high-noise areas are required to strictly follow personal protection protocols and wear the appropriate protective equipment correctly.

We completed noise reduction modifications for four sintered rotary vane pumps, further enhancing the noise management level of the production environment.

Waste Disposal

We strictly comply with the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste," the "Pollution Control Standard for General Industrial Solid Waste Storage and Disposal Sites," the "Pollution Control Standard for Hazardous Waste Storage," as well as other applicable national and local regulations and solid waste management standards. We continuously improve and refine our waste management systems and standardize waste classification and disposal procedures. Following the principles of "reduction, recycling, and harmless treatment," we strive to minimize waste generation by optimizing production processes, promoting green packaging, and enhancing waste sorting and recycling efforts. At the same time, we strengthen the circular use of resources to minimize the negative environmental impact of waste disposal.

Disposal Status

Waste disposal from the company's key environmental supervision units in 2024

Subsidiary	Performance
XTC Haicang Branch	A total of 7,955.33 tons of smelting slag and 70.91 tons of hazardous waste were generated. Both types of waste were entrusted to qualified third parties for comprehensive utilization or compliant disposal.
Chengdu Dingtai	The waste includes 74.65 tons of general industrial waste and 29.80 tons of hazardous waste. The hazardous waste and solid waste were entrusted to third-party entities for comprehensive utilization or to qualified units for disposal.
Chengdu Hongbo industrial	Generated 54.96 tons of general industrial waste (including spent furnace bricks and scrap iron), and 38.02 tons of hazardous waste, which were transferred for disposal.
Golden Dragon Rare-earth (Industrial New Zone)	Transferred and recycled 451.60 tons of general solid waste and 95.60 tons of hazardous waste. All waste was handled by qualified units.
Golden Dragon Rare-earth (Rare Earth Industrial Park)	Transferred and recycled 713.50 tons of general solid waste and 325.36 tons of hazardous waste. All waste was handled by qualified units.
Fujian Xinlu	Generated 39,514.76 tons of general solid waste and 7.14 tons of hazardous waste. All smelting slag and other solid waste were processed by third parties; hazardous waste was entrusted to qualified entities for disposal.
GANPOWER	A total of 80.19 tons of hazardous waste was handled by qualified third parties for comprehensive utilization or compliant disposal.
Duchang Jinding	Generated 3,464,062.95 tons of slag, including 1,774,701.33 tons of waste rock and 1,689,361.62 tons of tailings; 87.02 tons of industrial waste; and 14.79 tons of hazardous waste. A total of 665,372.45 tons of slag was recycled during the reporting period.
Luoyang Yulu	The industrial waste generated amounted to 3,051,760 tons, all of which was disposed of in the tailings pond. The hazardous waste transfer quantity was 0.25 tons, which was handed over to a qualified third-party for disposal.
Malipo Haiyu Tungsten	Generated 14,348.86 tons of smelting slag, 14,701.99 tons of by-product gypsum, 2,080.72 tons of furnace slag, 106.30 tons of industrial waste, and 20.72 tons of externally transported waste, totaling 31,258.59 tons. All waste was handled by qualified third-party recyclers.
Ninghua Xingluokeng	Generated 9,681,462.64 tons of slag, including 8,000,621.80 tons of waste rock and 1,680,840.83 tons of tailings; 7.62 tons of hazardous waste was transferred for disposal. A total of 1,632,224.90 tons of slag was recycled in 2024.
Xiamen Jialu	Generated and recycled 1,921.24 tons of general industrial solid waste; 74.27 tons of hazardous waste was transferred for disposal. All waste was entrusted to qualified units for compliant utilization or treatment.
XWXN	Generated 2,319.03 tons of general industrial waste (e.g., spent saggars and bulk bags), and 29.28 tons of hazardous waste, all of which were handled by qualified third-party entities.
Xiamen Golden Egret	Transferred 50.97 tons of hazardous waste of Tongan Plant. General solid waste included 253.70 tons of recyclable waste (e.g., non-metallic materials, scrap wood, and cardboard) and 329.85 tons of non-recyclable waste. All waste was handled by qualified service providers.
Chengdu Hongbo Molybdenum	Transferred 76.25 tons of hazardous waste, all handled by qualified entities.
Haicang Golden Egret	Generated 130.58 tons of general industrial waste (e.g., stainless steel scrap, cardboard, wood, and iron), and 136.55 tons of hazardous waste. All waste was handled by qualified third parties.

General Waste

General waste generated during our operations primarily consists of industrial waste (such as tailings, waste rock, discarded saggars, and used bulk bags) and domestic waste. Throughout our production and operational processes, we actively implement measures to reduce general waste generation. Through technological innovation and process optimization, we aim to enhance the comprehensive utilization of waste, thereby improving both environmental and economic performance in waste management.

Mining Operations

At Ninghua Xingluokeng, general waste is primarily industrial in nature, including tailings and waste rock. We manage such waste through the following approaches:

- A manufactured sand production workshop has been added at the end of the ore beneficiation process. Coarse-grained tailings are processed and sold as manufactured sand, while the remaining tailings are stored in the tailings storage facility.
- We continue to improve waste rock separation and recycling technologies, as well as ore processing enrichment methods. Waste rock separated during the screening stage of ore processing is sold externally as construction aggregate, and the remainder is stored in designated waste rock dumps. These efforts reduce waste rock discharge and enhance the comprehensive utilization of mineral resources.
- Domestic waste and other general waste are handled by licensed third-party service providers to ensure compliant disposal.

In Duchang, general waste primarily includes industrial materials such as empty waste oil drums. The following measures have been implemented to manage general waste:

- Industrial solid waste is strictly prohibited from being dumped or piled in the external environment.
- Disposal of industrial solid waste into domestic waste collection facilities is forbidden.
- Mixing hazardous waste with industrial solid waste during collection, storage, or transfer is strictly prohibited.
- Tailings are stored in the tailings storage facility. The Safety and Environmental Protection Department and the Ore Processing Department are required to manage areas such as tailings pipelines, sand pump stations, and return water pump stations in accordance with regulatory requirements to prevent any leakage.
- Waste rock is stored at the waste dump. The Mining Department is responsible for ensuring that waste dump management meets regulatory standards and that waste rock does not escape into the surrounding environment.

Advanced Materials Production

At the rare earth materials production base, general waste generated during operations primarily consists of industrial waste. We manage this waste through the following measures:

- Waste from each workshop is accurately sorted by category and placed into designated bins or storage areas. Recyclable materials are recovered and reused in a timely manner.
- The Safety and Environmental Protection Department is responsible for overseeing waste yard management, ensuring that all departments properly classify and store waste, and arranging for the regular disposal of domestic waste. Monthly inspections are conducted at all solid waste storage points to assess waste sorting and storage conditions.
- Domestic waste is handled by municipal sanitation service providers.
- Recyclable materials with resale value, such as metal drums and scrap iron, are sold through competitive bidding, while low-value materials such as wooden crates are collected by transport personnel as deductions against transportation fees.

At the battery materials production base, general waste primarily includes industrial materials such as discarded saggars, used bulk bags, cardboard, and pallets. The following management measures are in place:

- We maintain detailed management logs that record the type, quantity, destination, storage, utilization, and disposal of all general waste, ensuring full traceability and data transparency.
- All transportation, recycling, and disposal of general waste are carried out by qualified third-party service providers under legally binding contracts that clearly define environmental protection requirements.
- Designated storage areas for general waste are established within the facility. Pollution prevention measures are implemented, including controls to prevent scattering, runoff, and leakage.

Deep Processing

At the Tungsten and Molybdenum Wire Division in Xiamen, general waste generated during operations mainly includes scrap metal, plastic waste, and waste paper. We manage such waste through the following measures:

Plastic bottles, plastic cylinders, and spools are sent to manufacturers for recycling and reuse.

Miscellaneous plastic waste, waste paper (including newspapers and magazines), paperboard, cardboard packaging, paper trays, used beverage bottles, and aluminum cans are centrally collected and sold to recycling vendors for reuse.

Tungsten or molybdenum containing scrap materials and lime sludge from wastewater treatment are collected and sent to specialized manufacturers for recovery and treatment.

At the Alloy and Cutting Tools Division in Jiujiang, general waste primarily includes waste cardboard, discarded wooden pallets, wooden crates, and non-metallic materials. The following measures have been adopted:

Waste cardboard boxes must be flattened and stacked properly; directly dumping empty boxes into waste storage areas is strictly prohibited.

All woven bags must be securely tied or compacted before being placed in the waste storage area.

Waste wooden pallets, wooden crates, and other wood waste are collected by the responsible department and transported to designated storage areas for organized stacking.

Non-recyclable waste must be sorted and placed into garbage bags; direct dumping into the waste storage area is not allowed.

Construction waste generated by contractors must be cleaned up on the same day and must not be left on company premises or dumped in the waste storage area.

Hazardous Waste

We strictly comply with the "Basel Convention" and relevant national regulations on hazardous waste management. By implementing a "source reduction-process control-safe disposal" strategy, we have established a full-lifecycle hazardous waste management system. In accordance with the "Pollution Control Standard for Hazardous Waste Storage" and the "Hazardous Waste Transfer Management Measures," we carry out standardized classification, collection, storage, and labeling of hazardous waste based on its specific characteristics. Certified third-party institutions are commissioned to conduct harmless treatment and disposal. In addition, we continuously optimize production processes, replace hazardous raw materials, and regularly organize employee safety training and emergency drills to comprehensively reduce the environmental risks associated with hazardous waste discharge.

Mining Operations

At Ninghua Xingluokeng, hazardous waste generated during operations primarily includes used engine oil. The following measures are taken to manage hazardous waste:

- We promote cleaner production by adopting advanced technologies to minimize the generation of used oil and prioritize its comprehensive reuse, thereby reducing hazardous waste discharge.
- Used oil that cannot be reused is stored safely, with dedicated management records maintained.
- The unit that generates the hazardous waste is responsible for its collection, temporary storage, and daily management, while the Safety and Environmental Protection Department oversees supervision and commissions qualified third-party agencies to ensure compliant transfer and disposal.

In Duchang, hazardous waste mainly includes waste mineral oil, waste paint, oil filters, and laboratory waste liquids. The following measures are in place:

- Hazardous waste is centrally collected and transported to the hazardous waste storage facility, with strict in-and-out registration and comprehensive ledger records maintained for all waste storage and disposal activities.
- Regular self-inspections are conducted at hazardous waste storage sites. Department-specific responsibilities are clearly assigned, and ongoing improvements are made to ledger systems and related infrastructure.
- A new exhaust purification system has been installed in the hazardous waste storage area, enhancing environmental protection measures and improving the overall environmental management level of the facility.



Advanced Materials Production

During the tungsten smelting process, hazardous waste generated during operations mainly includes waste resin, waste mineral oil, wastewater sludge, paint waste, chemical reagent bottles, waste acid, and waste alkali. We manage such hazardous waste through the following measures:

- We maintain a hazardous waste management ledger, and the Safety and Environmental Management Department reports the type, quantity, time of generation, and destination of hazardous waste on a monthly basis to strengthen overall control.
- Waste acid, waste alkali, and wastewater sludge containing cobalt and nickel are subject to integrated recycling to improve resource utilization efficiency.
- Other types of hazardous waste are promptly transferred to the dedicated hazardous waste storage facility on-site for temporary storage and are ultimately disposed of by qualified third-party agencies.

At the rare earth materials production base, hazardous waste primarily includes waste mineral oil and empty packaging drums. We implement the following measures:

We strictly enforce internal regulations such as the "Environmental Protection Management Regulations" and the "Hazardous Waste Management Regulations" and have established a leadership team dedicated to the prevention and control of hazardous waste pollution to guide and oversee discharge management.

A specialized hazardous waste storage room has been constructed, where appropriate warning labels are clearly posted, and corrosion-resistant, anti-leakage measures are implemented.

Designated personnel are responsible for daily inspections and spot checks of the hazardous waste storage room to ensure safe and standardized storage conditions.

All hazardous waste is transferred and disposed of in full compliance with legal and regulatory requirements by certified third-party service providers.

At the battery materials production base, hazardous waste generated includes spent activated carbon, waste mineral oil, waste organic solvents, paint residues, and laboratory waste. We manage these materials through the following practices:

- A hazardous waste storage facility has been established for classified collection and storage. Isolation barriers are installed within the storage area, and protection measures such as windproofing, sun protection, rain protection, leak prevention, and fire safety are implemented. Surveillance cameras are installed inside the hazardous waste storage facility to monitor real-time conditions and ensure safe and secure storage.
- We organize regular hazardous waste management training sessions to improve employee awareness and handling capabilities.
- The Safety and Environmental Management Department exercises full-process supervision of hazardous waste management and periodically arranges for the transfer and treatment of hazardous waste through licensed third-party service providers.
- We adopt clean energy and raw materials and utilize advanced production equipment to reduce the generation of hazardous waste at the source.

Deep Processing

At the Alloy and Cutting Tools Division in Jiujiang, hazardous waste mainly includes waste paraffin, spent grinding fluid, asbestos waste, used oil drums, waste lubricating oil, and laboratory waste liquids. We manage this waste through the following measures:

A strict transfer protocol is followed: "collection by generating department → packaging and weighing → on-site confirmation by the Safety and Environmental Department → labeling with hazardous waste tags → warehouse transfer and handover," with detailed ledger records maintained for the entire process.

All personnel handling hazardous waste must wear appropriate personal protective equipment (PPE). Handling without protection is strictly prohibited, and measures are taken to prevent spills or leaks during transport to avoid environmental contamination.

Based on the characteristics of each type of hazardous waste, specialized containers are used for collection. Waste is temporarily stored in the workshop until a designated quantity is reached, at which point it is transferred in batches by designated personnel to the hazardous waste storage facility.

The hazardous waste storage area is equipped with measures for leak prevention, spill containment, rain and sun protection, and is secured with locks to prevent environmental contamination and ensure safe, stable storage.

All hazardous waste is disposed of by qualified third-party service providers. The entire transportation and disposal process is closely supervised to ensure that vehicles and personnel meet all legal and regulatory requirements, guaranteeing safe and compliant hazardous waste disposal.



Highlight | "Zero-Waste Factory"

At Jiujiang Golden Egret, the company uses lean manufacturing as a foundation to strengthen its production capabilities. By integrating automation, it improves the efficiency of large-scale product manufacturing and promotes standardized management of industrial solid waste. The use of automated packaging machines enables the reuse of packaging boxes, enhancing production efficiency while reducing waste generation. In recognition of its outstanding performance in the "reduction, recycling, and harmless treatment" of industrial solid waste, the company was awarded the honorary title of "Zero-Waste Factory" in 2024 by the Office of the Leading Group for the Construction of a "Zero-Waste City" in Jiujiang.

Secondary Resource Utilization

At GANPOWER, hazardous waste generated during operations primarily includes spent activated carbon. We implement the following measures to manage this waste:

In the extraction process, we use segmented washing and segmented back-extraction to reduce the oil content and COD in raffinate and final products, which decreases the consumption of activated carbon by over 35%. We also collaborate with activated carbon regeneration enterprises to enable multiple reuse cycles, thereby maximizing resource utilization.

Through process optimization at the front end, we have transformed the by-product of our wastewater treatment process from sodium chloride to ammonium sulfate. After implementing oil-removal upgrades, the by-product now meets agricultural fertilizer-grade standards and is sold to fertilizer manufacturers, enabling its recycling.

Ecosystem and Biodiversity Protection

We fully recognize the potential ecological impacts of mining activities and regard the protection of ecosystems and biodiversity as a key component of our environmental responsibility. We actively seek pathways for harmonious coexistence between business development and the natural environment.

During mine planning and extraction, we uphold the principle of "protection during development, and development under protection." We conduct thorough environmental impact assessments and optimize mining plans to minimize ecological disturbance. A comprehensive ecological restoration system has been established for our mining areas. We carry out timely reclamation and revegetation of mined-out and abandoned lands using native plant species to restore local ecological functions. We have designated ecological buffer zones around environmentally sensitive areas near mining sites and implemented targeted protection measures to mitigate the ecological footprint of our operations. In parallel, we continuously improve mining technologies and waste management practices to reduce the environmental burden from tailings, waste rock, and other solid waste. These efforts help prevent soil erosion and ecological degradation while supporting the coordinated development of mineral resource extraction and environmental protection. Our commitment to green transformation is reflected in the recognition of both the Xingluokeng Mine in Ninghua Xingluokeng and the Duchang Mine as national-level Green Mines.



At Ninghua Xingluokeng, we are implementing a sustainable mineral resource development strategy guided by the third-party-prepared plan titled the "Revised Plan for Geological Environmental Protection and Ecological Restoration of Ninghua Xingluokeng." Adhering to the principle of "ecology first, dynamic restoration," we advance full-lifecycle environmental management of the mine. Our mine rehabilitation work is divided into three key stages: current remediation, concurrent production and restoration, and post-closure reclamation. Targeted actions are implemented for each stage to achieve long-term ecological harmony between the mining area and its surrounding ecosystems.

Geological Environment Restoration and Remediation in Mining Area

Current Remediation Phase

Focuses on addressing existing geological and environmental issues caused by mining activities. Key actions include mitigating the impact of active mining on surrounding areas, implementing geological environment protection measures during mine construction, and reducing erosion risks through slope cutting and stabilization of exposed surfaces. Additional measures include improving drainage systems, reinforcing roads for transportation of tailings, planting vegetation along both sides of critical transport routes, and installing safety signage and protective barriers along village roads near tailings disposal areas.

Concurrent Remediation Phase

Entails implementing remediation measures alongside ongoing mining operations. Based on the progress and stages of mineral extraction, phased ecological restoration work is carried out while monitoring and maintaining the completed restoration zones. In response to actual site conditions, adaptive ecological measures are adopted to strengthen the prevention of geological hazards. These include stabilizing slopes to prevent landslides, collapses, or erosion, and controlling water loss and soil erosion from runoff, thereby achieving a coordinated balance between mine development and environmental protection.

Post-Closure Remediation Phase

Conducted within one year following the expiration of the mining license, focusing on comprehensive environmental restoration of closed mining sites. The work targets remediation of geological damage caused during the mining process, with a goal of complete ecological rehabilitation. This ensures visible improvement in the geological environment of the mining area and facilitates ecosystem restoration.

For key erosion-prone zones such as open-pit areas, waste rock dumps, and tailings storage facilities, we have implemented multiple ecological protection measures, including enhanced vegetation coverage, the construction of diversion infrastructure, and the optimization of sedimentation systems. These efforts significantly reduce the risk of soil erosion. Through careful design of multi-level stepped dumping systems, we ensure minimal active excavation areas and maximize space for revegetation. This supports the formation of a green operational model that follows a staged sequence of "topsoil stockpiling – waste rock compaction – topsoil covering – ground leveling – ecological revegetation." In doing so, we protect the environment while ensuring the responsible development of mineral resources.

During the reporting period, we carried out extensive ecological restoration work at Xingluokeng. Native species such as pine saplings, camellia trees, Chinese plum trees, Bauhinia, osmanthus, kudzu vine, and azalea were planted, covering a total revegetation area of approximately 95,918 square meters.



In Duchang, we integrated the "stripping–dumping–revegetation" approach into mine development from the initial construction phase. Adopting a "simultaneous mining and revegetation" model, we implemented site-specific ecological restoration measures for the waste rock dump, open-pit areas, dedicated mining roads, industrial sites, and the Hushan tailings storage facility. In line with environmental restoration requirements, we also carried out revegetation of the decommissioned Qipanshan tailings storage facility, ensuring a 100% greening rate across the entire mining area.

To minimize the potential ecological impacts of our operations, we have implemented comprehensive mine environmental management and monitoring measures:

We established and implemented an environmental monitoring system to conduct dynamic surveillance of ground deformation and geological hazards in the tailings storage facility, waste rock dump, and mining areas, ensuring early identification and effective response to potential environmental risks.



We enhanced stability monitoring at the Qipanshan tailings facility, incorporating it into our flood prevention inspections and monthly safety checks. In addition, we continuously track the performance of restoration measures for key mining platforms, pit slopes, and tailings containment areas.

Leveraging our automated tailings safety monitoring system, we conduct real-time online monitoring of the starter dam's surface displacement, internal (vertical) displacement, phreatic surface levels, pond water levels, dry beach areas, rainfall, pH levels, water quality, and site imagery. These data provide a scientific basis for safety management and decision-making for the tailings facility.

Environmental Compliance Management

We strictly comply with the "Environmental Protection Law of the People's Republic of China," the "Environmental Impact Assessment Law of the People's Republic of China," and all applicable environmental regulations in the regions where we operate. We have established a comprehensive environmental compliance management system to ensure that all business activities adhere to relevant environmental laws, regulations, and standards. Internally, we have issued the "Guidelines for Standardized Environmental Protection Management" and other related policies, which define clear requirements for environmental impact assessments, compliance monitoring, environmental risk control, and emergency management. We regularly monitor and identify changes in applicable environmental laws and regulations and promptly update internal management systems to ensure consistency with legal requirements. We have integrated environmental compliance obligations into our day-to-day operations and decision-making processes, with clearly defined environmental responsibilities at all organizational levels. Senior management is responsible for setting and implementing environmental management objectives, overseeing policy execution, and continuously improving our environmental management practices.

During the reporting period, we had 25 subsidiaries certified under the ISO 14001 Environmental Management System, covering 69% of our manufacturing entities. No major environmental incidents occurred during the year, and we did not receive any environment-related administrative penalties.

Environmental Risk Management

We place a high priority on managing environmental risks associated with our business operations. Adhering to the principles of "prevention first, full-process management, and continuous improvement," we have established a systematic and comprehensive environmental risk control mechanism to support sustainable corporate development.

We implement a tiered and categorized environmental risk management approach by scientifically assessing and identifying critical risk points. Key risk areas and high-risk operational processes are subject to heightened monitoring and control. An environmental risk early warning mechanism has been established with defined monitoring indicators and threshold values to enable the early identification and intervention of potential risks. A complete environmental emergency response system has been developed, supported by trained response teams, specialized equipment, and essential materials. Regular emergency drills are conducted to strengthen our ability to respond to unexpected environmental incidents. In our daily operations, we strengthen the management of environmental protection facilities by applying preventive maintenance and technical upgrades to reduce the risk of equipment failure. We also optimize production processes and the selection of raw materials to reduce environmental risk factors at the source.

We have instituted a comprehensive environmental risk accountability system that clearly defines responsibilities at all organizational levels and incorporates environmental risk management into our performance evaluation system. Through regular risk assessments and hidden hazard investigations, we continuously improve control measures and enhance our capacity to prevent environmental risks. Additionally, we emphasize communication and collaboration with surrounding communities and stakeholders. We have established information-sharing platforms and joint prevention and control mechanisms to build a coordinated regional environmental risk prevention network.

In terms of environmental emergency preparedness, we have formulated a series of contingency plans, including the "Comprehensive Emergency Response Plan for Environmental Incidents," and developed an annual environmental emergency drill schedule. During the reporting period, we organized multiple emergency drills across key safety-related facilities. Scenarios included wastewater pipeline leaks, hazardous chemical spills, environmental equipment failures or shutdowns, natural gas leaks, underground fuel tank leaks, unexpected ozone leaks, and solid waste spillage.

Highlight | Tailings Water Overflow Emergency Drill

On April 19, 2024, we conducted an emergency drill at Ninghua Xingluokeng simulating a tailings water overflow incident at the seepage collection pond. The scenario involved a rapid and sustained rise in water level, leading to untreated tailings water flowing into a downstream stream. During the drill, we activated our emergency response protocol, deployed emergency personnel to manage the situation swiftly, and conducted real-time monitoring of downstream water quality. Guided by our emergency response plan, departments coordinated closely, and the simulated incident was brought under effective control through orderly and efficient response actions.



Highlight | Hydrochloric Acid Leak Emergency Drill

On September 30, 2024, XTC Haicang Branch carried out a hydrochloric acid leak emergency drill. The scenario focused on the sudden release of hazardous chemicals. Each emergency response team acted swiftly according to the pre-established plan, successfully completing critical tasks including perimeter security and evacuation, material supply, medical aid, emergency monitoring, and hazard containment.



Environmental Protection Culture

We regularly organize environmental protection training programs to help employees gain a solid understanding of pollution prevention measures, environmental emergency response procedures, and the requirements of our environmental management system. Training sessions are delivered through case studies, scenario simulations, and hands-on drills to enhance practical application. In addition, we have established an environmental training effectiveness evaluation mechanism. Through assessments and feedback, we ensure that employees are well-versed in environmental compliance requirements and can effectively integrate them into daily operations.

At our battery materials production base, we implement the following measures to promote resource recycling:

- We have established a recycling system for precursor production scrap. Defective materials generated during the precursor manufacturing process are recovered for the extraction of reusable metal resources and transformed into standardized raw materials.
- We have implemented a comprehensive dust control project, installing dust collectors in workshops to capture and recycle material dust back into the production process.
- At Ningde production base, iron-containing discharge materials from the ternary materials manufacturing process are treated through a wet iron removal process to eliminate magnetic impurities. These materials are then reintroduced into production through a three-step calcination and mixing process for effective recovery.
- General industrial solid waste such as iron-contaminated materials, used filter cloths, and washed bulk bags are collected and sent to our materials company for centralized recovery and disposal.
- Bulk bags used in the production process are reused up to 30 times under guaranteed quality conditions, while those used in calcination processes can be reused up to 10 times.
- In partnership with third-party service providers, we have implemented a pallet leasing project. Plastic pallets are cleaned and reused, enabling circular use of pallets across the entire supply chain.

We are also increasing the proportion of recycled content in the raw materials used for lithium cobalt oxide (LCO) production. In alignment with our business sustainability goals, we have established recycled content targets for production materials. During the reporting period, our LCO materials received an ISO 14021 self-declared environmental claim for recycled content, with recycled cobalt content reaching $\geq 58.5\%$ and recycled lithium content $\geq 7\%$.

Deep Processing

At the Cutting Tool Division, we conduct the following measures to promote resource circularity:

- We collect and reuse tungsten-containing dust (sludge) from dust collectors and sedimentation tanks, as well as non-conforming products, defective blanks, and scrap materials, by reintroducing them into the production process.
- We recover materials such as waste cardboard, discarded woven and plastic bags, scrap iron, wood waste, and offcuts of expanded polyethylene foam to maximize resource utilization.
- We reuse automatic packaging boxes to reduce the consumption of packaging materials.
- Used graphite products are returned directly to the manufacturer for recycling.
- Grinding waste is sold to tungsten smelters for material recovery.

At the toolholder and tool body production base, we have introduced a cutting fluid circulation and filtration system. This system purifies used cutting fluid from machine tools, restoring it to production-grade quality for reuse. This reduces the purchase of new cutting fluid, lowers the water required for waste treatment, and decreases the discharge of hazardous waste, thereby mitigating negative environmental impacts.

Secondary Resource Utilization

We are committed to the development of technologies for recycling tungsten and other high-value metals such as cobalt, nickel, and rare earth elements. Through independent innovation, we have developed globally advanced, clean, and green recycling technologies for tungsten, including short-process, low-energy-consumption recycling solutions for spent batteries. We operate three major recycling bases, including our tungsten scrap recycling facility in South Korea, all equipped with world-class automated production lines. These bases recover valuable metals such as tungsten, cobalt, nickel, and rare earths to enhance the efficiency of primary mineral resource utilization and support sustainable development in the tungsten, new energy, and rare earth industries.

In the cascade utilization process, we recycle used battery packs through procedures including battery collection, charging and testing, and grading by pack type for second-life applications. The recovered battery packs are reused in products such as energy storage systems, backup power supplies, low-speed vehicles, solar-powered streetlights, and other power-related devices.

We have established a complete regeneration system for end-of-life power batteries, featuring dedicated lines for discharging, high-temperature pyrolysis, crushing and separation, leaching, solvent extraction, and evaporative crystallization. The system has an annual processing capacity of 10,000 tons, including spent batteries, battery scrap, cathode and anode waste, and nickel-cobalt residues.

At GANPOWER, we are committed to building an integrated and synergistic model for the lithium battery industry that promotes complementary strengths, interconnected resources, and shared growth across enterprises. Through equity-based partnerships, we have consolidated upstream and downstream industrial resources to form a vertically integrated supply chain system that spans "materials – batteries – new energy vehicle manufacturing – power lithium battery recycling." As a result, we have become a trusted service provider for numerous renowned domestic and international automakers and battery manufacturers. To further strengthen our recycling network, we have established collection sites in multiple provinces across China, covering East, Central, North, West, and South China. Each site operates with a flexible response mechanism, maintaining a 200-kilometer service radius. We ensure on-site battery collection within 3 days, transportation to processing centers within 7 days, and full battery data reporting within 15 days. All transportation vehicles are licensed for the transport of hazardous materials and are equipped with fire extinguishers and other safety and environmental protection systems. Dedicated custom-designed logistics containers are used to guarantee safe and environmentally sound transportation.

During the reporting period, our technical upgrade project for the battery crushing process was officially approved and publicly disclosed through the Environmental Impact Report issued by the Ganzhou municipal authorities. The project focuses on the front-end pretreatment of spent lithium batteries and does not involve downstream hydrometallurgical or comprehensive recovery processes. All additional feedstock for the expanded facility is sourced from retired lithium batteries that have already undergone cascade utilization by upstream enterprises, thereby further enhancing our processing capacity for end-of-life batteries.

Technical Upgrade Project for the Battery Crushing Process

- **New equipment installations**
We added an oxygen-free shredding and crushing system to the existing crushing workshop, with an annual processing capacity of 10,000 tons. The pretreatment workshop was upgraded with new equipment such as dual-shaft shredders, crushers, and grinders, increasing processing capacity by 5,000 tons per year. We also deployed two additional crushing and screening systems specifically for waste cathode and anode sheets, with a combined annual capacity of 3,000 tons.
- **Process improvements**
We introduced automated feeding systems and enclosed crushing and sorting lines. The upgraded process involves dual-stage crushing, screening, magnetic separation, and air classification to efficiently separate valuable components. The particle size of recovered electrode powder is controlled to below 1 millimeter to enhance product quality and recovery efficiency. The complete process includes disassembly, oxygen-free shredding, low-temperature drying, crushing and screening, grinding, and gravity-based separation, forming an efficient and closed-loop system for spent battery recycling.
- **Reinforced material recovery**
We apply scientifically sound methods to recover valuable materials such as metals and graphite, while properly handling membrane materials and electrolyte waste to minimize environmental impact.

03

Social

Rural Revitalization and Social Contributions

Innovation-driven

Suppliers and Clients

Employees





The sustainable development of a company is closely linked to the progress of society. We have always regarded fulfilling social responsibility as our mission, actively responding to the United Nations Sustainable Development Goals (SDGs), and creating lasting value for employees, partners, and communities through tangible actions. We actively address community needs by supporting education, empowering skills, and engaging in public welfare projects to help vulnerable groups develop, thereby promoting inclusive social growth. We place great importance on diversity, equality, and career growth for employees, offering an inclusive work environment, skill training, and ensuring employee rights and well-being. In supply chain management, we implement responsible procurement policies to ensure labor rights, safety standards, and ethical compliance. We also actively explore the application of technological innovation in key social areas to provide technological support for narrowing development gaps, fulfilling our long-term commitment to "business for good."

Social Matters	2024 Management Goals	Practical Measures
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Rural Revitalization and Social Contributions



- Strengthen community engagement, adhere to the FPIC principle, and ensure that all operational sites carry out local community engagement, impact assessments, and development planning.
- Enhance local hiring to promote regional employment and economic development, aiming for local employees to account for no less than 60% of the total workforce this year.
- Carry out philanthropic donations and volunteer activities, with a total of no less than 1,000 hours of volunteer service in 2024.
- Position the enhancement of social well-being as a core aspect of corporate social responsibility by responding to the national rural revitalization strategy. Leverage corporate resources to support localized employment, industrial assistance, educational funding, infrastructure development, and ecological protection through systematic actions that promote the coordinated development of rural and community economies, society, and the environment.
- Prioritize communication and collaboration with communities, respect local cultures, and encourage integration and interaction between employees and community residents to foster social harmony.
- Regularly conduct Social Impact Assessments (SIA) to comprehensively evaluate the effects of business operations on economic development, the environment, social well-being, and cultural integration, ensuring mutual prosperity between the company and local communities.

Innovation-driven



- Continue to increase R&D investment, with total R&D spending for the year no less than 1.4 billion RMB.
- Achieve a 100% completion and acceptance rate for key corporate-level R&D projects and internally commissioned R&D initiatives.
- Strengthen intellectual property protection, with no fewer than 200 new patent applications filed during the year and zero involvement in intellectual property dispute cases.
- Build a comprehensive and multi-level R&D and innovation system led by independent innovation and driven by market demand. Continuously enhance our independent innovation capabilities and global competitiveness through sustained R&D investment, strengthened research management, deeper collaborative innovation, talent cultivation, technological breakthroughs, and effective transformation of research outcomes.
- Place strong emphasis on intellectual property (IP) protection by formulating internal IP management policies, standardizing IP administration and safeguarding procedures. Establish a strict confidentiality mechanism for technical secrets, clearly defining access scope, usage rights, and approval processes for personnel involved in sensitive information.

Social Matters	2024 Management Goals	Practical Measures
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Suppliers and Clients



- Continuously improve supply chain management systems and strengthen ESG assessment and evaluation of suppliers.
- Deepen collaboration on sustainable development with suppliers by promoting joint ESG capability-building initiatives.
- Practice responsible procurement by consistently conducting due diligence on responsible minerals.
- Enhance customer satisfaction with zero violations related to health and safety of products and services, and no incidents of customer privacy breaches during the year.
- Strengthen information security management, achieving zero major information security incidents in 2024.
- Place high importance on the security and stability of the supply chain, regarding risk management and resilience building as core components of our global supply chain strategy. Through systematic risk control improvements, we ensure end-to-end supply chain security, while establishing long-term collaboration mechanisms with strategic suppliers to build a resilient and sustainable global supply network.
- Establish a responsible mineral management system encompassing policy formulation, supplier oversight, risk prevention, and emergency response. By continuously enhancing transparency in the mineral supply chain, we contribute to the sustainable development of the resource industry.
- Treat business partners of all sizes equally by creating a transparent supplier evaluation system that ensures fair competition opportunities for small and medium-sized enterprises during bidding processes.
- Regard product safety and quality as the cornerstone of our development. We have built a rigorous quality control system that spans the entire lifecycle—from R&D and production to delivery and after-sales—across our three core businesses: tungsten-molybdenum, new energy materials, and rare earths, ensuring compliance with safety standards and performance requirements at every stage.
- Uphold a customer-centric approach, emphasizing service excellence and satisfaction. We actively listen to customer feedback, optimize service processes, and enhance customer experience to provide reliable and secure products and services to clients worldwide.
- Actively contribute to the construction of a healthy industry ecosystem by participating in the formulation and revision of relevant industry standards. We maintain close partnerships with various industry associations and serve in key positions, offering professional insights and practical experience to promote the standardization and sustainable development of the industry.

Employees



- Communicated the company's Human Rights Policy and relevant labor laws and regulations to all employees.
- No administrative penalties were incurred during the year due to discriminatory employment practices.
- The training programs cover 100% of the workforce during the year.
- The occupational injury rate remained below 3% during the year.
- There were zero work-related fatalities among employees and external contractors.
- No major safety hazards identified by provincial or national safety inspections led to official supervision, suspension of operations, penalties for responsible personnel, or inclusion in the safety compliance "blacklist."
- Zero incidents occurred involving major safety accidents, major mechanical equipment failures, or significant fire accidents.
- We uphold the principle of equal employment and strictly comply with national labor laws and regulations. At every stage of recruitment, hiring, and promotion, the company firmly prohibits any form of discrimination, including but not limited to gender, age, ethnicity, religion, region, or physical condition, to ensure fair employment and development opportunities for all employees.
- We respect the human rights protections stated in the International Bill of Rights, the United Nations Guiding Principles on Business and Human Rights, and the ILO Declaration on Fundamental Principles and Rights at Work. Human rights due diligence has been incorporated throughout our operations. We have established systematic internal policies and a human rights impact assessment mechanism to regularly identify, prevent, and mitigate potential risks in business activities.
- A multi-level and multi-channel communication system has been established, including the trade union committee, employee representative congress, staff forums, harmonious labor relations committee, feedback collection, satisfaction surveys, democratic evaluations, and internal mailboxes. The company values open communication, respects, and safeguards the democratic rights of employees as granted by the Constitution and relevant laws.
- We place great importance on employee career development and are committed to providing comprehensive support for employee growth.
- A well-developed employee development system has been implemented to offer a variety of training and learning opportunities, helping employees improve their professional skills and overall capabilities.
- By considering employee performance and industry salary benchmarks, the company has built a compensation system that integrates value orientation with market standards.
- We attach great importance to occupational health and safety management. By adhering to the principle of safety first, prevention-oriented, and comprehensive management, we are committed to creating a safe and healthy working environment for employees, suppliers, contractors, and other stakeholders.

Rural Revitalization and Social Contributions

As a vital pillar of the national economy, state-owned enterprises bear the dual responsibility of demonstrating leadership and providing strategic support in rural revitalization. We always uphold the mission of being a "national pillar" and align our strategy closely with the national rural revitalization strategy, actively fulfilling our social responsibilities. Leveraging our advantages, we promote the modernization of agriculture and rural areas through multi-dimensional measures, including industrial support, talent development, and infrastructure construction. We place great emphasis on maintaining regular communication with local communities and actively engage in various volunteer and public welfare activities. By building a collaborative network involving the government, local residents, and enterprises, we ensure that our development is closely integrated with the creation of social value.

Community Engagement for Shared Prosperity

We view community communication and collaboration as an integral part of our operational development. By establishing multi-stakeholder dialogue mechanisms, we maintain positive interactions with stakeholders. In our daily operations, we open various communication channels, regularly collect and respond to suggestions from different parties, and enhance communication efficiency and inclusiveness. We adhere to the internationally recognized "Free, Prior, and Informed Consent" (FPIC) principle, respecting local cultures and community rights. Feedback from stakeholders is incorporated into our decision-making processes, ensuring that the voices of vulnerable and marginalized communities are fully heard, and we continue to promote collaborative development between our business and the community.

Community Interaction Mechanism

We place great importance on communication and collaboration with the community, respecting local culture, and promoting the integration and interaction between our employees and community residents to foster social harmony. In the process of project investment and construction, if there are issues related to land occupation, involuntary resettlement, or relocation of residents, we will maintain full communication with the affected communities. Together, we will negotiate and develop compensation or resettlement plans, and prioritize providing employment opportunities, among other measures, to minimize adverse impacts. At the same time, we will incorporate the opinions and concerns of community stakeholders into our business assessments and decision-making processes, transforming them into long-term risk mitigation and operational optimization measures.

On this basis, we have established a comprehensive community interaction mechanism, which includes the following elements:

- Diverse Feedback Channels** We have set up hotlines, emails, social media platforms, corporate websites, and on-site suggestion boxes to ensure that community residents can express their concerns at any time and receive prompt responses and resolution.
- Regular Communication Meetings** We organize community forums and public consultation sessions to introduce our business operations, environmental management, and sustainable development plans. These meetings allow us to gather community feedback, ensuring that stakeholder concerns are fully addressed and incorporated into our decision-making process.
- Transparent Communication and Cooperation** At each of our operational sites, we have established dedicated departments responsible for community communication. We maintain open and transparent communication channels with local governments, communities, and indigenous residents to foster information sharing, ensuring alignment between business development and community needs.
- Key Issue Management** We proactively and openly communicate on key community concerns such as noise, waste, water resource protection, and transportation. We regularly engage with surrounding communities, formulate reasonable response measures, and develop long-term development plans.
- Emergency Communication Mechanism** For major issues that could impact the community, such as new project construction, environmental changes, or production adjustments, we issue advance notifications and organize special discussion sessions, inviting community representatives to collaborate on response measures. This helps reduce uncertainty and enhances community participation.
- Grievance Mechanism and Continuous Improvement** Throughout the entire project process, we provide accessible and effective grievance channels. We encourage stakeholders to submit complaints regarding community concerns, operational impacts, and satisfaction. We ensure that the grievance handling process is fair, transparent, and complies with confidentiality requirements. Each project team regularly reviews the progress of community communication, evaluates the effectiveness of the grievance mechanism, and optimizes it based on community feedback, fostering efficient two-way communication and continuous improvement.



Social Impact Assessment

We regularly conduct Social Impact Assessments (SIA) to comprehensively analyze the economic, environmental, social welfare, and cultural integration impacts of our operations. This ensures that our development is mutually beneficial and symbiotic with the community. We adhere to the principles of fairness and trust, respecting the "Free, Prior, and Informed Consent" (FPIC) principle. During project planning and construction, we disclose relevant information at appropriate times and thoroughly examine the potential social impacts of our activities on the community, including environmental, health, safety, and residents' rights. We identify potential risks and implement corresponding mitigation and response measures. This approach helps ensure alignment of our business objectives with community development goals and fosters sustainable community relations.

Our social impact assessment work mainly includes the following:

- In terms of the environment, we assess the impact of mining, processing, and other production activities on local air, water, and soil quality, and adopt pollution prevention measures to ensure effective protection of the ecological environment.
- In terms of economy and employment, we analyze our contribution to the local economy, including the provision of job opportunities, support for the development of local businesses, and promotion of community residents' integration into the industrial value chain to achieve sustainable economic growth.
- In terms of society and health, we pay close attention to the impact of our operations on the health, safety, and quality of life of community residents, and develop risk prevention and health support plans, such as vocational skills training and free community health consultations, to enhance community well-being.

Social Support Services

We regard the enhancement of social well-being as a core component of our corporate social responsibility and are committed to promoting sustainable community development through systematic initiatives. In terms of economic development, we drive local employment and support regional growth by prioritizing local hiring. In the area of education, we continue to advance scholarship and financial aid programs, including the establishment of dedicated funds to support equitable access to education. On the environmental front, we advocate for green production and environmental protection while steadily improving local infrastructure to enhance residents' quality of life. We also encourage our employees to engage in volunteer services, offering practical support to community members. During the reporting period, our external donations totaled 5.49 million RMB, with a cumulative 2,644.50 hours of volunteer service and around 802 participants involved in volunteer activities.

Mutual Empowerment of Industry and Talent

We have built a multi-level support system centered on "industry-driven development, resource integration, and livelihood security" to inject multidimensional momentum into sustainable community development. We prioritize the employment of local residents and promote a dual approach that combines job creation with skill enhancement. This enables community members to improve their employability and fosters a growth pathway of "employment access – skill development – career advancement," thereby contributing to local employment and economic growth. During the reporting period, local employees accounted for 70.12 % of our total workforce.

Highlight | Xiamen Golden Egret Vocational Skills Appraisal Station

Upholding the concept of "teaching people how to fish," we have established a vocational skills appraisal station to provide a structured pathway for skills assessment. By involving social forces in the cultivation of skilled talent, we are building a standardized system for skills certification and training. This initiative supports workers in obtaining industry-recognized qualifications, advances their career development, promotes stable employment, and provides long-term support for sustainable community development. In 2024, Xiamen Golden Egret developed transitional appraisal plans for four job types under two occupations—Cemented Carbide Precision Machining Worker and Cemented Carbide Forming Worker—which were approved by the Fujian Provincial Department of Human Resources and Social Security and the Xiamen Municipal Bureau of Human Resources and Social Security.



Community Education Support

We focus on the development of community education by implementing measures such as scholarship support and investment in campus facilities, aiming to improve local teaching conditions and education standards, while safeguarding the healthy growth of children.

Highlight | Scholarship Program

In 2024, Duchang Jinding carried out a "Golden Autumn Scholarship" donation event in Yangfeng Township and Tutang Town, providing scholarships totaling RMB 68 thousand to 19 university freshmen, along with study and living supplies. Meanwhile, XTC Haicang Branch donated scholarships to students in Haicang Village, Qingjiao Village, Qun Yao Village, Wencuo Village, and other areas under Haicang Subdistrict, encouraging students to grow and succeed.



Highlight | Campus Supplies Donation

In 2024, XWXN (Sanming) donated 3 air conditioners and 27 electric fans to Yanqian Middle School in Sanming City, improving the ventilation conditions in classrooms. Malipo Haiyu Tungsten donated RMB 50 thousand for the renovation of the playground at Panlong Primary School in Mali Town and contributed teaching materials and supplies worth RMB 18.30 thousand, enhancing the campus teaching environment.



Highlight | Caring for Children and Adolescents

In 2024, XWXN (Xiamen) organized employees to volunteer in Haicang Community, Xiamen, participating in winter camps, summer tutoring programs, and other community services. The volunteers provided homework assistance, educational crafts, waste sorting awareness, storytelling about revolutionary history, and movie guidance, working together to support the growth of local youth.



Highlight | Caring for Children of the Stars

Since 2022, Xiamen Honglu has established a long-term philanthropic partnership with the Jimei District Special Education School, continuously carrying out volunteer services and paired assistance activities to provide care and companionship for children with autism—often referred to as "children of the stars." On World Autism Awareness Day in 2024, Xiamen Honglu participated in the launch event of the "Joining Hands with Children of the Stars, Lighting Up the Night Sky of Life" medical assistance initiative, co-organized by Jimei District Special Education School and West China Xiamen Hospital of Sichuan University. At the event, the company made a targeted donation of RMB 30 thousand dedicated to supporting integrated treatment involving medical care, rehabilitation, and education for children with autism, helping enhance their self-care and social adaptation abilities, and jointly illuminating a brighter future for these special children.



Collaborative Environmental Management

We collaborate with the local community to promote co-construction of the ecological environment. Through environmental protection campaigns, green public welfare activities, and other initiatives, we encourage residents to actively participate in environmental protection and enhance their awareness of sustainability. Additionally, we continuously monitor the surrounding environmental quality and strive to improve the regional ecology.

Highlight | Flood Prevention Support

In 2024, due to continuous heavy rainfall and upstream water inflow, the water level at Poyang Lake Duchang Station rose rapidly, creating a severe flood prevention situation. Duchang Jinding organized personnel to visit the flood prevention embankment at the Tutang Township Government and the flood prevention duty points at the Yangfeng Township Government. They visited frontline flood prevention staff and provided them with relief supplies such as instant noodles, bottled water, and eight-treasure porridge, offering practical support for flood prevention efforts.



Highlight | Beautifying the Community Environment

In 2024, Bobai Judian organized company employees to carry out a road beautification charity event, creating a cleaner and healthier living space for the community.



Diversified Community Volunteer Services

Carrying out public welfare volunteer activities is an important way for the company to fulfill its social responsibility. We actively organize employees to engage in various volunteer services within the community, such as health clinics, volunteer services, holiday visits, and cultural support, building a bridge of love between the company and the community, and spreading warmth and positive energy.

Highlight | Caring for Elderly Residents

In 2024, 40 members of the Communist Party from XWXN (Xiamen) visited the New Era Civilization Practice Station in Haicang Community to carry out a volunteer service themed "Party Members Enter the Community, Warming the Hearts of the Elderly." They personally taught elderly residents how to use smartphones, organized suitable recreational activities for them to help improve mobility, enhance reaction abilities, and enrich their daily lives. During the Double Ninth Festival, XWXN (Xiamen) held the "Warm Autumn, Sending Care, Double Ninth Festival Comforts the Heart" themed event. Employees brought daily necessities and visited elderly residents facing difficulties in their lives, delivering holiday greetings directly to their homes.



Highlight | Employee Voluntary Blood Donation Activity

In 2024, Luoyang Yulu responded to the voluntary blood donation call from Luanchuan County and organized employees to participate in the blood donation activity. At the donation site, employees completed the registration, health inquiry, physical examination, and testing procedures in an orderly manner under the guidance of staff. Those who met the conditions proceeded with the blood donation. Many of the participating employees expressed their intention to continue supporting public welfare and actively participate in various social service activities within their capabilities.



Industrial Support for Rural Revitalization

We actively respond to the national Rural Revitalization Strategy, fully leveraging our resource advantages, and promote rural revitalization through a multi-dimensional approach. This includes systematic measures such as industrial support, educational assistance, infrastructure development, and ecological protection, aimed at fostering the coordinated development of rural economy, society, and environment.

Highlight | Procurement Support for Agricultural Product

In 2024, Jiujiang Golden Egret supported local agricultural cooperatives by directly procuring grapes from the Runyu Ecological Planting Cooperative in Pailou Village, Chaisang District, Jiujiang City, helping expand their sales channels. Luoyang Yulu continued to purchase local soybean products from Luanchuan County, providing long-term material assistance and life support to a struggling family, helping them improve their living conditions.



Highlight | Support for Rural Infrastructure Improvement

In 2024, Duchang Jinding donated a total of RMB 1.13 million in funds and materials to local towns and village committees, supporting projects such as road reconstruction, public square paving, streetlight installation, drainage system optimization, bridge construction, and infrastructure improvements around schools, addressing the daily transportation and living convenience needs of villagers. Ninghua Xingluokeng invested RMB 1.808 million in multiple towns for infrastructure construction and disaster-damaged facility repairs, contributing to the restoration and enhancement of rural infrastructure.



Highlight | Support for Beautiful Countryside Construction

In 2024, Mapoli Haiyu Tungsten donated RMB 20 thousand through the Malipo County Charity Association to support the renovation of the Nanfeng Xiaozhai Village Activity Center, aiming to improve the usability of rural public spaces. An additional RMB 20 thousand was donated to the Makun Village Committee of Donggan Town to support the construction of a "Beautiful and Green Countryside" with a focus on ecological restoration and the enhancement of rural aesthetics. Bobai Judian made a designated donation of RMB 10 thousand toward the construction of the "Bobai Mingxian" Park, supporting improvements to the rural ecological environment and the development of recreational spaces for local residents.

Innovation-driven Development

Technological innovation is the core driving force behind our sustainable development. We continue to improve our research and development innovation system, creating a comprehensive and multi-level framework that is guided by independent innovation and oriented toward market demand. This system continuously enhances our independent innovation capabilities and global competitiveness. We are committed to building ourselves into a hub for talent, technological innovation, and industrial development, aiming to be a leader in technological innovation within the industry.

◎ R&D and Innovation System

We focus on the XTC Technology Research Center as the core, with subsidiary and division-level research institutes as key components. We have formed close alliances with leading enterprises, research institutes, and universities in the industry. In line with national strategies and market demands, we continuously invest in research and development, strengthen research management, deepen cooperative innovation, cultivate innovative talent, and promote technological breakthroughs and the transformation of results. These efforts enable us to continuously enhance our R&D innovation capabilities, driving the high-quality development of our company.

We have set up China National R&D Center for Tungsten Technology, National and Local Union R&D Center for High-end Energy Storage Material, and the Fujian Province Rare Earth Materials and Applications Engineering Research Center. By steadily advancing integrated product development (IPD) and international advanced manufacturing (IAM) system construction, we fully leverage the role of these three centers. Our R&D innovation focuses on areas such as hard alloys, refractory metals, optoelectronic crystalline materials, permanent magnetic materials, and their applications, continuously enhancing our R&D capabilities. This provides strong technical support for our business development and industrial chain layout.

Integrated Product Development

To enhance our continuous product innovation capability and build a world-leading frontier core technology platform, we have introduced and implemented the Integrated Product Development (IPD) system. This system is designed through five strategic initiatives: "Concept Reshaping, System Construction, Organizational Optimization, Capability Improvement, and High-Quality Product Creation," aimed at constructing an innovative ecosystem to achieve scientific and efficient forward development. Our goal is to transition from "catching up" to "keeping pace" and ultimately to "leading." The five strategic initiatives are as follows:



Our IPD system covers all business units and subsidiaries involved in R&D activities, combining industry-academia-research collaboration and joint technological breakthroughs for industry-wide synergy. Through open collaboration, we have strengthened our innovation capabilities. During the reporting period, we focused on advancing the IPD 2.0 pilot tasks, actively establishing product line organizations. These organizations serve as the core business units, with clear boundaries of authority and responsibility, integrating resources across R&D, marketing, and sales, improving cross-departmental collaboration efficiency and product line management capabilities. We also emphasized the development of operational talent, implementing special programs to enhance the professional skills of product managers and systems engineers. Furthermore, through demonstration projects, we have deepened the application of IPD, strengthened market insight, and ensured that product innovations have both economies of scale and sustained competitive advantages.

Responsible Research and Development

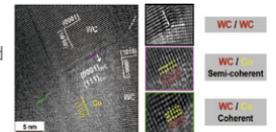
Responsible research activities are central to mitigating the risks of non-compliance or infringement, promoting the effective conversion and application of research results, and enhancing market competitiveness and influence. During the reporting period, we developed the "Guidelines for Responsible Research Behavior," setting principles for research activities, including "advancing human well-being, respecting the rights to life, adhering to fairness and justice, managing risks appropriately, and maintaining openness and transparency." We require researchers to strictly follow scientific ethics, research integrity standards, and relevant legal provisions when conducting research activities. The guidelines outline specific conduct requirements for research topics and implementation, data management, literature application, authorship, research publication, ethical review, academic exchanges and collaborations, and intellectual property protection.

R&D and Innovation Collaboration

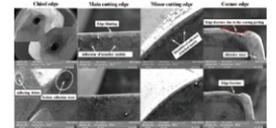
We actively promote close collaboration between industry, academia, research, and application by establishing joint laboratories and off-campus training bases. We strengthen collaborative research with overseas research institutions and leading domestic scientific research institutes in areas such as fundamental research and cutting-edge technologies. We work closely with universities such as Xiamen University, Fuzhou University, Wuhan University of Technology, Beijing University of Technology, Guangdong University of Technology, and Huaqiao University to carry out project cooperation. We have also taken the lead in several national major research projects, including the National Key R&D Program, National Science and Technology Major Projects, and the Technology Innovation Guidance Program. During the reporting period, we carried out 20 R&D cooperation projects.

Highlight | Collaborative R&D Projects

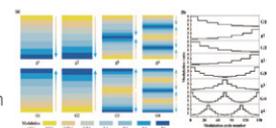
"Interfacial Regulation and Mechanical Performance Enhancement of Ultrafine-Grained WC-Co Cemented Carbides": In collaboration with Beijing University of Technology, this project focuses on understanding the mechanical behavior, deformation, and failure mechanisms of ultrafine-grained cemented carbides under various loading conditions. It aims to determine the microstructural characteristics and evolution of the hard phase, binder phase, and interfaces under different loads, thereby providing guidance for the design and preparation of high-performance cemented carbides.



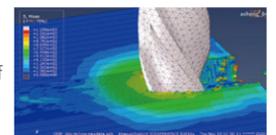
"Mechanism Study on Composite Material Machining and Optimization of Hole-Making Tool Structure": Partnering with Shanghai Jiao Tong University, this project explores the mechanisms affecting the cutting performance of composite material tools. It focuses on optimizing the structure of hole-making tools used in aerospace composite materials to address drilling defects in composite and laminated structures during actual machining applications in the aerospace sector.



"Interfacial Micro/Nanostructure Regulation and Application of Gradient Coatings": Conducted in collaboration with Wuhan University of Technology, this project targets the development of coatings for cutting tools. It investigates the formation mechanisms, phase composition, and structural effects of gradient coating interfaces on microstructure and performance. The project aims to systematically understand the intrinsic relationship between interface characteristics and coating performance, and to develop high-performance gradient coatings for typical milling applications.



"Design and Development of High-Efficiency and High-Precision Tools for High-Speed Machining": In collaboration with Xiamen University, this project focuses on the design of cutting tools for high-speed machining of hard-to-machine materials such as superalloys and titanium alloys. By integrating artificial intelligence algorithms with production trials, the project establishes performance and life prediction models for tools. It examines the impact of tool structure and material parameters on tool performance and proposes new design methodologies for high-speed cutting tools, supporting the development and application of efficient and precise tooling solutions.



Technology Talent Cultivation

We attach great importance to the cultivation of technical talent and continuously build a high-quality, high-level technical team. For the technical research and development team, we rely on research institute platforms and strengthen the basic skills and R&D capabilities of our personnel through project-based research and development. For the technical management team, we focus on the company's strategic positioning and global perspective. We adopt a problem-oriented approach and use various training methods, such as group coaching and case analysis, to enhance their technical management capabilities.

We have developed key competency packages for technical talent development to solidify the foundation of talent cultivation, continuously improving the technical talent system and echelon construction. This provides strong talent support for our innovative development. During the reporting period, we developed 15 key task learning packages focused on intellectual property capabilities and organized multiple technical talent training programs:

We held **7** training sessions for R&D project managers, with **282** participants, all of whom passed the R&D project manager certification.

We held **1** training session for exceptional systems engineers, with **10** participants, all of whom passed the systems engineer certification.

We held **1** training session for IPD advocates and practitioners, with **35** participants.



R&D Project Managers Training

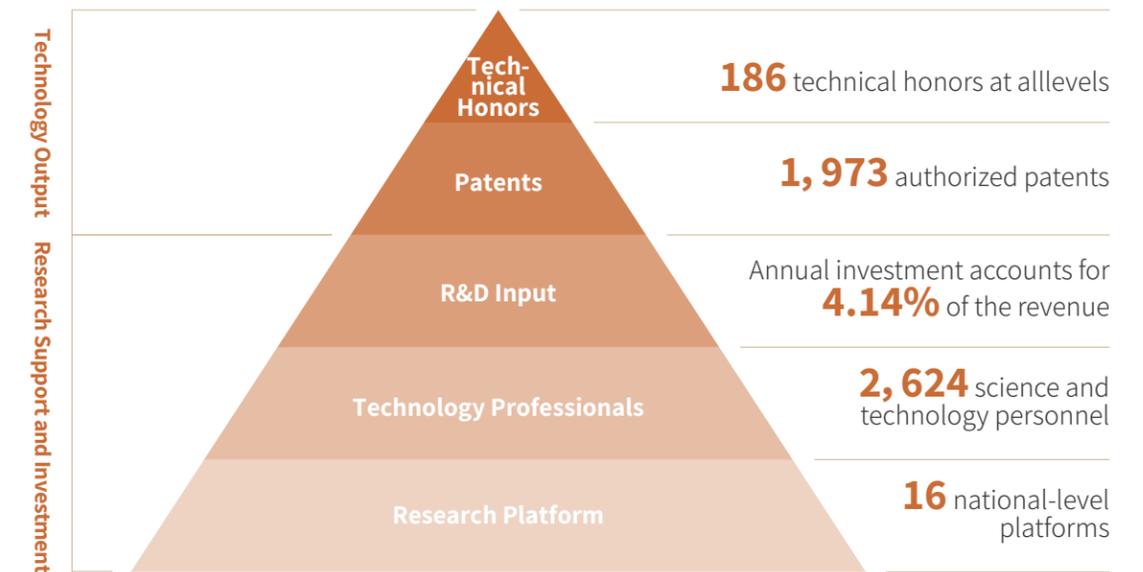
R&D and Innovation Incentives

To continuously stimulate innovation, we have established and improved the R&D innovation incentive mechanism. Through diversified incentive measures, we effectively motivate technical personnel, enhancing their enthusiasm and creativity, which injects continuous talent-driven power into our R&D innovation efforts and drives technological innovation and the transformation of research achievements. Specific incentive measures include:

We have developed and continuously improved the "Science and Technology Innovation Reward Management Measures," setting up Science and Technology Innovation Achievement Awards and Outstanding Scientific Talent Awards. R&D personnel are rewarded based on the level of technological innovation and economic benefits after a rigorous evaluation process.

We have developed and continuously improved the "New Product Management Measures," implementing a research outcome conversion revenue-sharing mechanism. For projects successfully converted, 10% of the net annual revenue generated within three years will be allocated as innovation rewards for the R&D team or individuals.

R&D and Innovation Achievements



Technical Honors 17 national-level science and technology honors 97 provincial and ministerial-level science and technology honors 72 municipal-level science and technology honors	Patents 1,689 national patents 284 international patents 1,016 invention patents 845 utility model patents 112 design patents	R&D Input 2024 R&D expenses are 1,456.15 million RMB
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Technology Professionals 5 experts with special allowances from the State Council 12 professional level chief engineers 15 talents at the provincial and ministerial level 41 individuals with doctoral degrees 471 individuals with master's degrees	Research Platform National Enterprise Technology Center National Tungsten Materials Engineering Research Center National and Local Joint Engineering Research Center for High-end Energy Storage Materials 2 National Technology Innovation Demonstration Enterprise 5 Postdoctoral Research Workstations 2 National CNAS Laboratories National Specialized Innovation Space for Rare Metal Application International Cooperation and Exchange Base National Torch Xiamen Tungsten Materials Featured Industry Base Xiamen Huli District Demonstration Base for the Transformation and Upgrading of Foreign Trade in Non-ferrous Metal Materials
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- R&D Platforms** During the reporting period, we were newly approved for one municipal-level R&D platform, the Xiamen Advanced Electrochemical Energy Storage Technology Innovation Consortium. As of the end of the reporting period, we operate a total of 59 R&D platforms, including 16 national-level platforms, 17 provincial-level platforms, 23 municipal-level platforms, and 3 district-level platforms.
- R&D Projects** During the reporting period, we undertook a total of 83 R&D projects at various levels, including 49 at the national and provincial levels, such as major projects from the Ministry of Industry and Information Technology, the National Key R&D Program, provincial "Leading in the 'Battlefield' by Announcing" projects, and major municipal science and technology projects. Additionally, 11 were group-level major projects.
- Scientific Awards Honors and Qualifications** During the reporting period, we and our subsidiaries received 11 scientific and technological awards at various governmental levels, including 7 at the provincial level, 3 at the municipal level, and 1 at the industry level. We were also recognized with 21 honors and qualifications, including National Green Factory, National Excellent Smart Manufacturing Scenario, and Fujian Provincial Leading Enterprise in Manufacturing.
- Intellectual Property** During the reporting period, we filed 410 new patent applications, including 246 for invention patents, 137 for utility models, and 27 for design patents. We were granted 325 new patents, including 190 invention patents, 115 utility model patents, and 20 design patents. Additionally, we filed 46 new trademark applications, obtained 66 new trademark registrations, and registered 11 new copyrights. As of the end of the reporting period, we held a total of 1,973 patents, including 1,016 invention patents, 845 utility model patents, and 112 design patents. We also held 765 registered trademarks and 117 registered copyrights.
- Standard Formulation and Revision** During the reporting period, we and our subsidiaries led or participated in the formulation or revision of more than 10 standards.

2024 Awards for R&D Achievements

Projects	Awards
Development of High-Performance Ceramic Balls for Mining and Key Low-Carbon Grinding Technologies	First Prize for China Nonferrous Metals Industry Science and Technology Award
Design, Development and Application of High-Efficiency Flotation Reagents for Typical Critical Mineral Resources	First Prize for Hunan Province Scientific and Technological Progress
Key Technologies and Industrialization of High-Performance Tungsten Carbide and Cemented Carbide New Materials	Second Prize for Henan Province Scientific and Technological Progress
Particle Size Gradient Cemented Carbide Prepared by Liquid Phase Infiltration and Its Preparation Method (ZL201410669898.1)	Second Prize for Fujian Province Patent Award
Multi-Component Composite Oxide Material and Its Industrial Preparation Method (ZL201410208349.4)	Third Prize for Fujian Province Patent Award
Key Technologies and Industrialization of Enhanced Fine Tungsten Ore Hydrophobic Agglomeration Flotation Using Metal-Based Colloidal Collectors (Collaborative Project)	Second Prize for Scientific and Technological Progress in Fujian Province
Key Technologies and Industrialization of High-Strength Molybdenum Alloy Wire for EDM (Collaborative Project)	Third Prize for Scientific and Technological Progress in Fujian Province
Localization of Cutting Tools for Efficient Machining of Critical Aircraft Components	Second Prize for Fujian Province Science and Technology Achievement Transformation
Development and Industrialization of Binder-Free Tungsten Carbide-Based Cemented Carbide for Ultra-Precision Optical Molds (Collaborative Project)	First Prize for Scientific and Technological Progress in Xiamen City
Key Technologies and Industrialization of High-Strength Molybdenum Alloy Wire for EDM (Collaborative Project)	First Prize for Scientific and Technological Progress in Xiamen City
Precision Simulation Design, Software Development and Engineering Application of High-Performance Cutting Tools (Collaborative Project)	Third Prize for Scientific and Technological Progress in Xiamen City

2024 Main R&D and Innovation Honors and Qualifications

Accredited Entity	Honor/Accreditation Title	Level
XTC	Fujian Provincial Leading Enterprise in Manufacturing	Provincial
	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal
Golden Dragon Rare-earth	8th Fujian Provincial Government Quality Award	Provincial
Ninghua Xingluokeng	Innovative SME of Fujian Province	Provincial
Jiujiang Golden Egret	National Green Factory	National
Luoyang Golden Egret	Henan Province Single Champion Enterprise in Manufacturing	Provincial
	Provincial Green Factory of Henan Province	Provincial
Haicang Golden Egret	"Top 100 Enterprises in Luoyang" awarded by the Luoyang Enterprise Confederation and the Luoyang Entrepreneurs Association	Municipal
	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal
Xiamen Honglu	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal
Basic Electronic Material	National High-tech Enterprise	National
Chengdu Dingtai	The "2024 Fifth China Nonferrous Metals Innovation Excellence Program Team" awarded by the Nonferrous Metals Society of China	Sub-provincial
	"Top 100 Manufacturing Enterprises in Chengdu" awarded by the Chengdu Enterprise Federation	Municipal
XWXN	Excellent Smart Manufacturing Scenario	National
	8th Fujian Provincial Government Quality Award	Provincial
	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal
XTC(Hydrogen)	National High-tech Enterprise	National
	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal
XWXN (Ningde)	Provincial Specialized and Sophisticated "Little Giant" Firm	Provincial
XTC(Jinglu)	Enterprise under the Advanced Manufacturing Industry Multiplication Plan	Municipal

Standards Formulated by Company and Subsidiaries (as Editor-in-Chief or Co-Editor) in 2024

Standard Name	Standard Number	Type	Entity Serve as Editor-in-Chief or Co-Editor
Hardmetals—Determination of contents of metallic elements—X-ray fluorescence spectrometry	GB/T 26050-2024	National level	XTC (Co-Editor)
Methods for chemical analysis of hardmetals—Part 5:Determination of tantalum and niobium content—Inductively coupled plasma emission spectrometry	GB/T 5124.5-2024	National level	XTC (Co-Editor) Xiamen Golden Egret (Co-Editor)
Hardmetals—Metallographic determination of microstructure—Part 1:Photomicrographs and description	GB/T 3488.1-2024	National level	Xiamen Golden Egret (Editor-in-Chief) XTC (Co-Editor)
Grades of cemented carbide—Part 2:Grades of cemented carbide for rock drilling and engineering	GB/T 18376.2-2024	National level	Xiamen Golden Egret (Editor-in-Chief)
Chemical analysis methods of mixed rare earth oxide of ion-absorption rare earth ore—Part 4: Determination of iron trioxide content—Inductively coupled plasma atomic emission spectrometry	GB/T 18882.4-2024	National level	Golden Dragon Rare-earth (Editor-in-Chief)
Chemical analysis methods for non-rare earth impurities of rare earth metals and their oxides—Part 20: Determination of minor amounts of fluorine and chlorine in rare earth oxides—Ion chromatography method	GB/T 12690.20-2024	National level	Golden Dragon Rare-earth (Co-Editor)
Determination of compacted density of lithium-ion battery cathode material powder	GB/T 44330-2024	National level	XWXN (Editor-in-Chief)
Methods for chemical analysis of lithium cobalt oxide Part 1: Determination of cobalt content EDTA titration and potentiometric titration	GB/T 23367.1-2024	National level	XWXN (Co-Editor)
New Energy Vehicle Worn-out Power Battery Logistics Service Quality Evaluation Indicators	WB/T 1140-2024	Industry level	GANPOWER (Editor-in-Chief) XTC (Co-Editor)
Determination of cobalt, copper and manganese content in crude cobalt hydroxide - Wavelength dispersive X-ray fluorescence spectrometry (fused cast bead method)	SN/T 5625-2024	Industry level	XWXN (Editor-in-Chief)
Technical specification for green-design product assessment - Lithium ion battery	T/CESA 1327—2024	Group level	XWXN (Editor-in-Chief)
Technical requirements for zero-carbon factory evaluation of lithium-ion battery cathode materials	T/DZJN 274—2024	Group level	XWXN (Editor-in-Chief)

© Intellectual Property Protection

We place a high value on intellectual property protection and have established clear guidelines through the formulation of the "Patent Management Measures," which address patent ownership, application, utilization, and rewards. These measures are in alignment with internal management systems related to intellectual property, including the "New Product Management Measures," "Technology Innovation Management Implementation Guidelines," and "Commercial Secret Management Regulations," ensuring the standardized management and protection of intellectual property. Furthermore, we have developed the "Five-Year Intellectual Property Development Outline (Trial Version)" and established an intellectual property management model to provide strategic direction for the management of intellectual property at our headquarters and subsidiaries. We have also created the "High-Value Patent Cultivation Guidelines" to offer clear guidance and standards for the cultivation of high-value patents at both our headquarters and subsidiaries. During the reporting period, we did not face any intellectual property disputes.

To effectively protect the company's trade secrets from leakage or theft, we have established a strict confidentiality mechanism for technical secrets. This includes categorizing trade secrets into different levels, with strict restrictions on the scope of knowledge, custody, usage rights, and approval processes for confidential personnel. We reward individuals who promptly report incidents of leakage or take proactive measures to mitigate or reduce losses. On the other hand, personnel who violate confidentiality regulations will be penalized, and legal responsibilities will be pursued in accordance with the law.

We place great emphasis on the professional development of our technical research and development personnel in the area of intellectual property. During the reporting period, focusing on the learning and growth of intellectual property within the group's technical sequence, as well as training practices and assessment management requirements, we developed the Group's "Intellectual Property Certification Implementation Plan for Various Levels of Technical Sequence." This plan includes multiple normative documents and training materials, such as the "Intellectual Property Learning Guidelines for Technical Sequences" and the "Intellectual Property Capability Training and Assessment Practice Guide." These resources aim to enhance the awareness of intellectual property risk prevention among our R&D personnel and improve their ability to manage and serve intellectual property matters.

In addition, we actively promote the development of an intellectual property culture. Led by the company's technology center and in collaboration with our affiliated enterprises, we have continuously organized the "XTC Intellectual Property Awareness Week." This initiative includes a series of activities such as the "IP Torch Relay" lectures, knowledge competitions, skill contests, themed salons, and mock court sessions. These activities are designed to strengthen the awareness and education of intellectual property protection, enhance the intellectual property protection consciousness of all employees, and establish the philosophy of "respect for knowledge, admiration for innovation, integrity and compliance, and fair competition." We aim to create a positive corporate environment that respects and protects intellectual property.



Highlight | Trade Secret Mock Court

On April 24, 2024, our Technology Center, in collaboration with the People's Court of Huli District and the Huli District Market Supervision Administration, organized a trade secret mock court. The mock trial simulated a technical secret infringement dispute based on a real case. Key employees from our subsidiaries, including Xiamen Golden Egret, Xiamen Honglu, XWXN, as well as our legal team, attended the trial. After the session, we engaged in discussions with the judges on legal issues related to trade secrets, gaining deeper insights into the practical aspects of trade secret protection.



Suppliers and Clients

We adhere to the development strategy of "advance steadily, endeavor to enhance the market share, and focus on long-term interests," focusing on building a customer-demand-oriented supply chain management system to provide top-quality products and services. We have established long-term strategic partnerships with core suppliers, continuously enhancing the overall competitiveness of our supply chain through joint research and development, technology sharing, and process optimization. At the same time, we actively listen to customer feedback and integrate it quickly into the supply chain improvement process. By deepening supply chain collaboration and innovation, we work with our suppliers and customers to build a sustainable industrial ecosystem.

Supply Chain Security and Resilience

We place great emphasis on the security and stability of our supply chain, making risk management and resilience building key elements of our global supply chain strategy. Through systematic risk management improvements, we ensure that the entire supply chain process remains secure and controllable. We continuously optimize our global supply chain layout to effectively mitigate potential risks arising from geopolitical factors and unforeseen events. At the same time, we establish long-term collaboration mechanisms with strategic suppliers to create a global supply network that is both resilient and sustainable.

Responsible Sourcing

We have established a strict Supplier Code of Conduct, setting clear requirements for our partners in areas such as human rights protection, labor standards, environmental protection, and business ethics. Additionally, we have developed a systematic evaluation and monitoring mechanism to ensure that the principles of sustainable development are integrated throughout the procurement process, continually improving our responsible sourcing system.

Supplier Admission

During the qualification review phase, we systematically collect data on the reputation, product quality, and compliance records of potential partners, prioritizing those with environmentally friendly practices. Suppliers undergo comprehensive evaluation prior to collaboration through sample testing, material production line verification, development entry audits, and on-site validation. We also focus on the suppliers' quality and environmental management systems (such as ISO 45001, ISO 14001, ISO 9001, IATF 16949), as well as certifications such as RoHS, HF, SVHC, CNAS, and CMA.

We require all qualified suppliers to sign agreements, including the Supplier Agreement, Business Ethics Agreement, Supplier Integrity Commitment, and Quality Assurance Letter, committing to comply with our standards on business ethics, environmental protection, occupational safety and health, labor rights, and product quality. We also continuously monitor suppliers' ESG performance through a dynamic tracking system.

Supplier Evaluation

We have established a comprehensive supplier evaluation system that covers multiple dimensions, including quality performance, operational efficiency, environmental management, and social responsibility. We assess suppliers through self-evaluation submissions, desk evaluations, and on-site audits. The evaluation considers key performance indicators such as incoming material acceptance rate, management systems, delivery capability, price levels, after-sales service, environmental management systems, and R&D capabilities, while also focusing on the environmental and social impact of the suppliers' products and services.

Based on the evaluation results, we implement a supplier grading system. Suppliers who do not meet the standards are required to take corrective actions, and those with unsatisfactory corrective measures may face downgrading, reduced orders, or elimination. Additionally, we have established a supply chain reserve and emergency management mechanism, with a list of qualified and backup suppliers, and defined emergency response procedures to reduce the risk of supply chain disruptions and enhance supply chain resilience.

Highlight | Supplier Multi-Dimensional Evaluation and Tracking

XWXN implements a multi-dimensional supplier evaluation and tracking mechanism. Based on the selection and evaluation results, supplier profiles are established, focusing on factors such as corporate management, the effectiveness, compliance, and sustainability of quality management systems, environmentally friendly production practices, and after-sales service quality. Suppliers are required to provide complete supply chain maps to ensure material batch traceability. Annual supplier reviews and monthly performance tracking are conducted, utilizing surveys, on-site audits, and third-party feedback. Suppliers are regularly evaluated across multiple dimensions, including quality, delivery, price, service, and business growth. Suppliers who severely fail to meet agreements or receive an annual evaluation score below 60 points will be eliminated.

Highlight | Emergency Drill for Material Supply Disruption

In 2024, Golden Dragon Rare-earth conducted an emergency drill for a tin metal supply disruption, simulating a scenario where the original supplier's supply was interrupted due to a lack of inventory. During the drill, Golden Dragon Rare-earth swiftly activated its emergency response mechanism, communicated the urgent procurement needs, and organized relevant departments to develop an emergency plan. They also expedited the sourcing of materials from backup suppliers and coordinated logistics resources to ensure timely delivery of the emergency materials. Based on issues identified during the drill, such as insufficient safety stock, Golden Dragon Rare-earth improved its safety stock settings and adjusted supplier supply share allocations, further enhancing the supply chain's emergency response capabilities.

Supplier Training

We have established a regular and diversified supplier communication mechanism through site visits, email communication, industry forums, and on-site audits, fostering long-term and stable partnerships with our suppliers. Additionally, we regularly conduct supplier capability-building training to help our partners improve their ESG management practices, working together to build a responsible supply chain ecosystem.

Highlight | ESG Special Training

In 2024, Golden Dragon Rare-earth conducted a special ESG training for the supply chain, focusing on defining responsibility management objectives, interpreting regulatory elements, and analyzing supplier codes of conduct and cooperation agreement terms. This training aimed to communicate the company's social responsibility and green supply chain management requirements to suppliers. By developing a standardized training system, we helped suppliers precisely understand sustainable development demands, significantly improving their awareness of responsibility and their compliance management capabilities. This initiative facilitated the deep integration of ESG governance, transforming it from a concept into practical operations.



◎ Responsible Mineral Management

We adhere to responsible business principles throughout the entire mineral procurement process. We follow guidelines such as the United Nations Guiding Principles on Business and Human Rights, China's Guidelines for Social Responsibility in Outbound Mining Investments, Chinese Due Diligence Guidelines for Mineral Supply Chains, and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. We are committed to respecting human rights and avoiding support for conflict. We explicitly oppose any activities or actions that may fund or potentially fuel conflicts and ensure that our supply chain is free from conflict minerals or mining practices that violate human rights. Currently, we have established a responsible mineral management system that covers aspects such as policy development, supplier management, risk prevention, and emergency response. Through continuously enhancing transparency in the mineral supply chain, we promote the sustainable development of the resource industry.

Mineral Supply Chain Management

We follow the requirements of the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas" and have established the "Supply Chain Due Diligence Management System." We regularly communicate responsible mineral and supply chain-related policies to upstream suppliers and incorporate due diligence requirements into legally binding agreements. For suppliers potentially involved in conflict minerals, they must sign the "Responsible Supply Chain Commitment" after obtaining qualification before establishing formal cooperation. We organize annual visits to major suppliers and incorporate responsible mineral management requirements into the assessment process to avoid potential risks arising from the procurement of minerals that may directly or indirectly fund armed groups or involve serious human rights violations.

Highlight | Tungsten Product Supply Chain Due Diligence

XTC Haicang Branch actively builds a responsible mineral management system. The branch has appointed a Supply Chain Due Diligence Manager responsible for overseeing the tungsten product supply chain due diligence management system. This role ensures that all aspects of the supply chain, from supplier development, raw material procurement, logistics and warehousing, production, to delivery, comply with supply chain due diligence management requirements, promoting the in-depth implementation of due diligence management for tungsten products.

Highlight | Mineral Supply Chain Due Diligence Training

In 2024, XWXN organized a specialized training on mineral supply chain due diligence management. The training covered topics such as the international mineral due diligence management framework, supply chain risk identification, compliance requirements, and due diligence processes. It aimed to help employees gain a deep understanding of the key elements of mineral supply chain management, enhance compliance and control capabilities in practical business operations, and further strengthen the foundation of mineral supply chain management to ensure alignment with industry standards and international sustainable development requirements.



Responsible Minerals Due Diligence

We refer to the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas" and the "Chinese Due Diligence Guidelines for Mineral Supply Chain" for framework and implementation steps. We systematically carry out supply chain due diligence, building a risk management system that covers the entire procurement cycle. This helps deepen supplier compliance reviews and traceability management to ensure the security of the mineral supply chain.

The responsible mineral due diligence work carried out in relevant business segments includes:

In the tungsten smelting production process

we have developed a tungsten supply chain due diligence process and created relevant documents such as the "Responsible Mineral Verification Process Assessment Manual," "Due Diligence Supplier Questionnaire/On-site Investigation Report," and "Identification of Conflict-Affected and High-Risk Areas (CAHRA) Process." These documents are used to assess whether the supply chain contains conflict-affected and high-risk areas (CAHRA) defined by the OECD guidelines and in line with RMAP standards, and to define the risks associated with the countries of origin and the types of risks involved. Once high-risk factors are identified, we will conduct enhanced due diligence, participate in upstream verification mechanisms recognized by RMI, and work with relevant parties to develop risk mitigation plans. If the supplier's performance does not improve within the agreed reasonable time frame, or the risks are not mitigated or eliminated, we will activate the risk warning mechanism, temporarily halting or suspending cooperation with upstream suppliers. Additionally, we compile an annual "Responsible Mineral Supply Chain Due Diligence Management Report" every 12 months and disclose it externally.

we conduct qualification reviews for all materials containing lithium, nickel, and cobalt, as well as their corresponding supply chain suppliers involved in mining, supplying, purchasing, or processing. Potential suppliers are assessed through the Responsible Cobalt Initiative (RCI), which includes due diligence on environmental and ethical compliance. We implement traceability management to monitor the supply process and the origin of mineral resources, including transportation routes and mining locations. This is to ensure that cobalt raw material suppliers are not involved in human rights violations such as child labor or poor working conditions. During the reporting period, our battery material production sites issued Responsible Mineral Supply Chain Declarations to partnered suppliers and collected signed confirmations from them. The completion rate reached 100%, and no responsible mineral supply chain risks were identified.

In the battery material production segment

In addition, we have established a transparent grievance mechanism for procurement to better receive complaints and suggestions from stakeholders regarding mining, trading, processing, exporting, and responsible minerals. This mechanism safeguards the legitimate rights and interests of all stakeholders. Upon receiving a grievance, our relevant departments initiate a series of procedures including identification, investigation, and corrective actions, while strictly protecting the confidentiality of the complainant's identity.

◎ Equal Treatment to Small and Medium-sized Enterprises

We are committed to treating business partners of all sizes equally. By establishing a transparent supplier evaluation system, we ensure that small and medium-sized enterprises (SMEs) have fair opportunities to compete during the bidding process. We provide SMEs with reasonable payment terms and equitable order allocation mechanisms, avoiding discriminatory thresholds or overly burdensome commercial conditions, thereby safeguarding their legitimate rights and fostering a fair and inclusive supplier partnership ecosystem.

In dealing with SME suppliers, we strictly uphold our commitment of "no extension of payment terms, no delayed payments," ensuring timely fulfillment of payment obligations. We have also implemented an accounts payable monitoring mechanism, whereby the procurement and finance departments of each affiliated entity regularly review and audit payment reports, closely track payment progress, and effectively ensure the financial stability of SMEs through timely fund recovery.

◎ Safety and Quality of Products and Services

We have always regarded product safety and quality as the lifeline of our business development. Centered on our three core business segments, namely tungsten and molybdenum, new energy materials, and rare earths, we have established a stringent quality control system that covers the entire process from research and development, production, delivery to after-sales service. This ensures that each stage meets safety standards and performance requirements. Guided by customer needs, we focus on improving customer service and satisfaction, actively listen to feedback, optimize service procedures, and are committed to providing safe and reliable products and services to customers around the world.

Product Quality Management

We have always upheld the principle of "quality first and continuous improvement," in strict compliance with the Law of the People's Republic of China on Product Quality and other relevant laws and regulations. We have established scientific quality standards and implemented standardized, streamlined, and refined management across the entire product lifecycle, including R&D, manufacturing, final delivery, and after-sales services, to enhance overall quality control. We continuously promote lean production and smart manufacturing, embed green and low-carbon concepts into production processes, and strengthen our quality control and risk prevention mechanisms. By actively responding to customer needs, we strive to earn market trust through reliable products and high-quality services.

We are driven by market demand and actively develop new products to continuously enhance our competitiveness. We are advancing the International Advanced Manufacturing (IAM) project with the guiding principles of "Customer-centric, goal-driven, self-critical, people-oriented, and continuous improvement." Our goal is to create a manufacturing system that is "Scientific management with structured approach; upscale products with stability; strong profitability with sustainability." We focus on five key areas: production processes, production equipment, quality management, lean production, and health, safety, and environmental management. With lean production and Six Sigma as our main approaches, we are comprehensively enhancing our manufacturing capabilities. At the corporate headquarters, we have prepared documents such as the "XTC IAM System Planning Guide" and the "XTC IAM Automation Implementation Guide." We also organize annual IAM planning development and reviews to provide guidance for manufacturing units to implement IAM-related work. During the reporting period, our headquarters organized the product division and manufacturing bases to develop the annual IAM plan, review it, and track the implementation of improvement plans. We have upgraded IAM evaluation standards and conducted regular evaluations to promote manufacturing improvements. Furthermore, we have launched and continuously optimized the IAM project management system, and developed the IAM digital implementation guide to assist the product division and manufacturing bases in effectively implementing project management.

Highlight | Fujian Government Quality Award

The Fujian Provincial Government Quality Award is the highest honor in the field of quality set up by the The People's Government of Fujian Province in 2009. In 2024, Golden Dragon Rare-earth and XWXN were honored with the 8th Fujian Provincial Government Quality Award for their outstanding quality management practices. Golden Dragon Rare-earth drives its strategy of "high-quality development in rare earth industry through five modernization" by integrating supply chain resources to achieve complementary advantages and collaborative cooperation. It has established a "Dual I, Dual Full, Dual Innovation" quality management model to comprehensively enhance its overall competitiveness. XWXN adheres to the philosophy of "innovation-driven, quality-first" and focuses on the research and production of new energy materials. With the mission "To provide advanced material solutions for carbon neutrality," the company has continuously driven technological innovation and management optimization, building a unique quality management paradigm. Both companies are committed to excellence, providing higher-quality products and services to customers, building the Fujian brand, contributing to the creation of a quality-strong province, and setting higher quality benchmarks for the industry.

Highlight | National Key New Products and Famous Brand Products of Fujian Province

We have received recognition for several of our products, including the "Jinlu" brand tungsten alloy, "Honglu" brand tungsten-molybdenum wires, and various tungsten oxide products, which have been recognized as national key new products and Fujian provincial famous products.

Highlight | XTC Quality Month Activities

We actively responded to the 2024 provincial "Quality Month" campaign, focusing on the goal of "enhancing quality awareness and improving management levels." We meticulously planned and coordinated various activities, tailoring them to our specific needs. These initiatives encouraged active employee participation, strengthened quality responsibility awareness, and solidified the foundation of quality management. Our efforts effectively promoted quality improvement and ingrained a strong quality culture, laying a solid foundation for our high-quality development.

Material Safety Management

We continuously strengthen our raw material quality control and testing system to ensure that purchased materials fully comply with relevant quality, safety, and environmental standards. During the production process, we prioritize the use of environmentally friendly materials and clean production processes, ensuring that the entire production process complies with regulations on hazardous substance control, relevant laws, and industry standards. We strictly prohibit the use of low-quality or harmful substances to reduce the occurrence of quality issues and safety risks. Additionally, we enhance the management of raw materials by reviewing suppliers' raw material testing reports and commissioning third-party organizations for sampling inspections, thereby improving product quality and safety levels.

Highlight | Golden Dragon Rare-earth Testing Center

Golden Dragon Rare-earth has established a comprehensive testing center that covers the entire process from rare earth raw ores to downstream products. The testing center conducts a wide range of analyses, including chemical composition, magnetic properties, mechanical properties, thermal properties, powder properties, environmental reliability, microanalysis, and non-destructive testing. In 2015, the testing center received accreditation from the China National Accreditation Service for Conformity Assessment (CNAS) and strictly follows the ISO/IEC 17025 international laboratory management system standards. This standardized and scientific testing approach provides strong technical support for material safety management, ensuring the safety and quality of the supply chain products from the source.



Customer Rights Protection

We adhere to a customer-centric approach and have established a comprehensive customer service system. Through a multi-channel customer feedback mechanism, we ensure that customer demands are responded to promptly and properly handled. We regularly conduct customer satisfaction surveys and use the results as a key basis for improving product and service quality. A standardized response process and a professional team have been set up for handling customer complaints, aiming to provide efficient solutions to customer issues. At the same time, we focus on learning from customer feedback to continuously optimize service processes and improve overall service quality.

Highlight | Customer-Centric Service

Xiamen Golden Egret is committed to providing professional, efficient, and sincere services to its customers. Driven by the 8D quality method, the company relies on structured problem analysis and a closed-loop improvement mechanism to continuously enhance quality management efficiency and customer service quality.

In terms of customer service, Xiamen Golden Egret adheres to the "Customer Management Measures" and improves service quality and efficiency through customer segmentation and targeted differentiated services. The company also uses the CRM system to strengthen dynamic customer information management, deepens the localization of the service network, and establishes solution service centers to provide quick responses, customized delivery, and comprehensive technical support, ensuring precise alignment with customer needs. Additionally, Xiamen Golden Egret regularly conducts customer satisfaction surveys to understand customer evaluations of products, services, and customer activities, and promptly adjusts any service deficiencies based on the feedback.

In terms of dealer services, Xiamen Golden Egret dynamically updates the "Dealer Management System" based on market trends and business needs. The company implements relevant incentive policies to empower dealers to carry out market penetration plans and promote new products. By organizing dealer business development plans and providing support in sales and marketing, the company strengthens dealer service capabilities. Xiamen Golden Egret also enhances product flow control, curbing the circulation of counterfeit goods, and ensuring a healthy market ecosystem and the consolidation of brand value.

Highlight | Enhancing Customer Satisfaction

XWXN continuously improves its customer service mechanism by conducting regular customer visits and satisfaction surveys. Based on feedback from market customers, the company compiles and forms the "Customer Satisfaction Survey Report," which serves as an important basis for driving product quality optimization and improvements. In 2024, the company conducted an annual satisfaction sampling survey for key customers, with an effective response rate of over 60%. Additionally, the company has established a standardized complaint handling mechanism, committing to a 24-hour response and a three-day feedback promise, ensuring timely and effective resolution of complaints. In 2024, the 8 customer complaints received by XWXN were all properly handled, achieving a customer satisfaction rate of 86.67%.

Data Security and Customer Privacy Protection

We are committed to safeguarding information security and protecting the privacy of employees, customers, and other stakeholders. We strictly adhere to relevant laws and regulations, including the Cybersecurity Law of the People's Republic of China, the Data Security Law of the People's Republic of China, and the Personal Information Protection Law of the People's Republic of China. We have established a comprehensive information security management system and implemented multi-layered protection mechanisms, including data encryption, access control, and real-time monitoring, to ensure the security and integrity of business systems and customer data. By regularly conducting information security risk assessments, we continuously optimize our protective measures and provide security awareness training for all employees to strengthen their responsibility for data protection. We have also established a robust emergency response mechanism for security incidents, ensuring that any abnormalities can be quickly addressed to minimize potential impacts. During the reporting period, no information security incidents or violations of customer privacy occurred.

Information Security Management

We have formulated and implemented internal systems such as the "Group Information Security Management Measures," "Group Information System Management Regulations," "Group Information System Data Management Measures," and "Group Information System Development and Operation Maintenance Management Measures." Based on the subdivision of information security management, we have clarified the management structure and responsibilities at each level to standardize the information security management work at our headquarters and subsidiaries. Specifically:

In terms of information security management and information system management:

Our executive team serves as the highest decision-making body, the IT center is responsible for guiding and supervising information security management and information system construction, and each subsidiary implements the daily work of information security management and the implementation and operation of information systems within its organization.

Our headquarters has established an operations and maintenance coordination team responsible for the operation, maintenance, and auditing of basic data in the information systems. At the same time, each business department and subsidiary sets up dedicated personnel for data auditing according to their actual situation.

In terms of data management:

To implement information security management responsibilities and ensure the effective execution of information security work, we link information system downtime incidents caused by security issues to the performance of relevant personnel. Additionally, we regularly conduct internal control evaluations on the operation and effectiveness of our information systems and commission external professional institutions to conduct IT audits. Furthermore, we strengthen information security management by installing security protection equipment, such as network firewalls and vulnerability scanning systems, in the data center, as well as through a series of technical safeguards to prevent information security risks and ensure the security of data information.

Customer Privacy Protection

We place great emphasis on customer privacy protection and strictly adhere to the requirements of the "Personal Information Protection Law of the People's Republic of China" and other relevant laws and regulations. We have established a comprehensive customer information management system. Our headquarters has formulated the "Headquarters Business Secret Management Guidelines," which define the scope of business secrets, management structure and responsibilities, protection measures, and reward and punishment policies, and have established a top-down management structure, from the Confidentiality Management Committee and Confidentiality Work Group to each functional department. Each of our subsidiaries, based on their own operations and business realities, has also developed relevant regulations such as the "Customer Management Measures" and "Business Secret Management Measures." Through standardized operational processes and technical protection measures, we create a safer and more reliable data protection environment for our customers.

We ensure customer information is protected through organizational safeguards, policy enforcement, and control measures such as permission-based approval, hierarchical management of confidential personnel, system and device encryption, and the signing of confidentiality agreements. We also implement the principle of least necessity, collecting only the personal information required for business operations, ensuring that customer information is not misused or leaked.



◎ Promoting Industry Development

We actively participate in the construction of the industry ecosystem, proactively engage in the formulation and revision of industry-related standards, and maintain close cooperation with multiple industry associations, holding important positions. We provide professional advice and practical experience to promote the healthy development of the industry and are committed to advancing the industry's standardization and regulation. The professional associations the company and subsidiaries have joined primarily include:

Engagement of Associations		
Enterprise	Participated Association	Position
XTC	International Tungsten Industry Association	Member, Member of Technical Committee of Tungsten Consortium
XTC	TI-CMC (Tungsten Industry - Conflict Mineral Council)	Director
XTC	Xiamen Technology Innovation Association	President
XTC	Xiamen New Materials Industry Association	President
XTC	China Tungsten Industry Association	Vice President
XTC	Association of China Rare Earth Industry	Vice President
XTC	Xiamen Intellectual Property Association	Vice President
XTC	China Mining Association	Executive Director
XTC	Fujian Metallurgical Industry Association	Executive Director
XTC	Fujian Provincial Silicate Society	Executive Director
XTC	China Nonferrous Metals Industry Association	Director
XTC	Strategic Alliance for Technological Innovation of China's Renewable Resources Industry	Director
XTC	Strategic Alliance for Technological Innovation of China's Nonferrous Metals Industry	Director
XTC	Fujian Mechanical Engineering Society	Director
XTC	Fujian Technology Innovation Association of Graphene Industry	Director
XTC	Powder Metallurgy Industry Council	Director
XTC	Metallic Functional Materials Council	Director
XTC	Cemented Carbide Association in CTIA Cemented Carbides Journal	Director
XTC	Journal of Materials China	Director
XTC	Fujian Metallurgical and Metallurgy Society	Vice Director
XTC	Strategic Alliance for Technological Innovation of Compulsory Resource Recycling Industry of China Resources Recycling Association	Board of Supervisors
XTC	The Chinese Society of Rare Earths	Unit in Charge of the Board of Directors

Enterprise	Participated Association	Position
XTC	The Nonferrous Metals Society of China	Member
XTC	National Nonferrous Metals Standardization Committee	Member
XTC	Materials Branch of the Chinese Mechanical Engineering Society	Member
XTC	Fujian Industry and Education Integration Promotion Association	Member
XTC	Technology Market Association of Xiamen	Member
XTC	Xiamen International Talent Exchange Association	Member
Golden Dragon Rare-earth	National Rare Earth Standardization Technical Committee	Member
Xiamen Honglu	National Nonferrous Metals Standardization Technical Committee	Member
Xiamen Golden Egret	China Metal Cutting Tool Engineering Association	Vice Chairman
Xiamen Golden Egret	Tool Branch of China Machine Tool & Tool Builders' Association	Executive Director
Xiamen Golden Egret	National Technical Committee for Standardization of Cutting Tool	Member
Chengdu Hongbo Molybdenum	Molybdenum Branch of China Nonferrous Metals Industry Association	Vice President
Chengdu Hongbo Industrial	China Electronics Materials Industry	Executive Director
Chengdu Hongbo Industrial	Chinese Association of Vacuum Electronic Industry	Executive Director
Tianjin SofTool	China Metal Cutting Tool Engineering Association	Director
Tianjin SofTool	Tool Branch of China Machine Tool & Tool Builders' Association	Member
XWXN	China Industrial Association of Power Sources	Director
XWXN	Cobalt Branch of China Nonferrous Metals Industry Association	Director

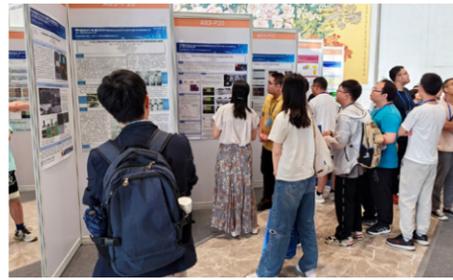
To promote industry collaborative innovation, we regularly participate in organizing or co-organizing industry summits and specialized forums, creating an open and shared platform for communication. By acting as a bridge, we work hand-in-hand with our partners to build a positive industry ecosystem, contributing to the high-quality development of the industry.

Highlight | 2024 China Tungsten Industry Development Conference

We participated in co-organizing the 2024 China Tungsten Industry Development Conference, hosted by the China Tungsten Industry Association and the Shanghai Futures Exchange. The conference aims to implement the "Development Plan for China Tungsten Industry (2021-2025)," providing a platform for communication between government, industry, academia, research, and application sectors to promote exchange and cooperation in the tungsten industry. Our CEO, Wu Gaochao, attended the conference and engaged in discussions with industry professionals on innovations in the tungsten market mechanism, working together to promote the high-quality development of China's tungsten industry and create an internationally influential tungsten industry cluster.

Highlight | China Materials Conference 2024 & The 2nd World Materials Conference

We participated in the China Materials Conference 2024 & The 2nd World Materials Conference, hosted by the Chinese Materials Research Society and co-hosted by the European Materials Research Society. The conference focused on cultivating new forms of productive forces and building a strong materials nation. It brought together top scholars and industry representatives from around the world to discuss advancing material micro-reconstruction and low-carbon technology innovations. The aim was to accelerate the penetration of scientific and technological achievements into industry and deepen international cooperation between industry, academia, and research, strengthening consensus on the research and development of strategic materials.



Highlight | The 5th China Advanced Material Industry Development Conference - Powder Metallurgy Advanced Materials and Manufacturing Technology Sub-Conference

We participated in The 5th China Advanced Material Industry Development Conference - Powder Metallurgy Advanced Materials and Manufacturing Technology Sub-Conference, hosted by the Chinese Materials Research Society and organized by Central South University State Key Laboratory of Powder Metallurgy and Central South University National Engineering Research Center for Powder Metallurgy. During the conference, we engaged with industry experts and academic scholars to discuss cutting-edge topics such as green preparation technology for powder metallurgy, innovative applications of additive manufacturing, and the development of high-performance alloys. We shared the latest scientific research achievements, industry trends, and innovative ideas, contributing practical insights to promote the transformation and upgrading of materials science and technology.



Highlight | In-depth Collaboration with the French Orano Group

2024 marks the 60th anniversary of the establishment of diplomatic relations between China and France, with cooperation in the new energy sector becoming a hallmark of bilateral relations and leading the way for future collaborations. Driven by French President Macron and senior government officials from both countries, XWXN signed an agreement with the French Orano Group to establish a comprehensive strategic partnership in the battery industry. The two companies also jointly formed the Neomat joint venture, marking the beginning of in-depth collaboration in the battery industry chain integration and carbon neutrality fields. XWXN and Orano jointly participated in the 2024 France "Amazing Factory" exhibition, showcasing innovative products such as lithium-rich manganese-based materials and 5V high-voltage materials. This demonstrated XWXN's forward-looking layout and technological advantages in the new energy materials sector, highlighting its strength in technological innovation and market competitiveness, and providing innovative solutions for the technological iteration of the new energy materials industry.



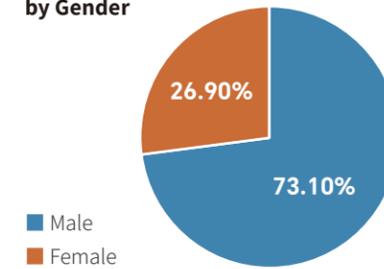
Employees

Guided by our principle of "putting people first," we regard our employees as the most valuable asset of the company and actively promote a corporate culture that embraces diversity and inclusion. In terms of safeguarding employee rights, we strictly comply with labor laws and regulations, and have established comprehensive systems for compensation, benefits, and occupational health management. We continuously enhance our management practices based on regular employee satisfaction surveys. To support talent development, we have built a multi-channel career development system that offers tailored training programs, including professional skills development and management training. We also provide internal promotion and job rotation mechanisms to foster long-term career growth. Through these efforts, we enable each employee to achieve personal fulfillment while sharing in the company's success.

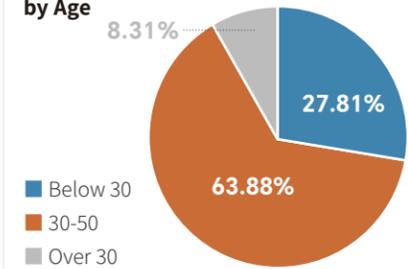
Equal Employment

We adhere to the principle of equal employment and strictly follow national labor laws and regulations. In every stage of recruitment, hiring, and promotion, we resolutely eliminate all forms of discrimination, including but not limited to gender, age, ethnicity, religious beliefs, geographic origin, and physical condition, to ensure fair employment and development opportunities for all employees. Based on actual circumstances, we and our affiliated enterprises have formulated policies such as the "Human Rights Protection Guidelines" and the "Corporate Social Responsibility Manual," and conduct periodic reviews of employment policies and practices to ensure alignment with international standards and best practices.

Employee Composition by Gender



Employee Composition by Age



Human Rights Protection

We respect the human rights provisions outlined in international standards such as the "International Covenant on Human Rights", the "United Nations Guiding Principles on Business and Human Rights", and the "International Labour Organization Conventions". We have integrated human rights due diligence into all aspects of our operations, formulated systematic internal regulations, and established a human rights impact assessment mechanism to regularly identify, prevent, and mitigate potential risks in our business activities.

We prohibit all forms of forced labor, child labor, employment discrimination, workplace violence, and harassment. We ensure that employees are entitled to fair compensation, a safe and healthy working environment, and the right to freedom of association. We also provide regular human rights training to enhance compliance awareness among employees and management. In addition, we promote awareness of human rights protection throughout our value chain by implementing a Supplier Code of Conduct, conducting on-site supplier audits, and organizing training programs for our partners.

Topic	Management Systems	Company Commitment	Management Practices
Equal Employment	<ul style="list-style-type: none"> "Human Rights Protection Guidelines" "Corporate Social Responsibility Manual" "Anti-Violence, Anti-Discrimination, Anti-Sexual Harassment, and Anti-Drug Policy" "Employee Protection Code" "Anti-Discrimination Management Guidelines" 	<ul style="list-style-type: none"> We oppose any form of employment discrimination. Career development is not affected by gender, age, ethnicity, nationality, religion, region, or physical condition. 	<ul style="list-style-type: none"> We actively conduct human rights training and communicate anti-discrimination policies to all managers. These policies are linked to performance evaluations for effective supervision. We regularly assess social responsibility risks related to human rights and systematically improve internal management practices. Quarterly anti-discrimination audits are conducted across recruitment platforms, hiring processes, training, promotions, and compensation to ensure that all employees are treated equally throughout the employment lifecycle.
Protection of Female Employees	<ul style="list-style-type: none"> "Job Risk Assessment Guidelines for Pregnant Employees and New Mothers" 	<ul style="list-style-type: none"> We strictly comply with the "Law of the People's Republic of China on the Protection of Women's Rights and Interests," ensuring equal opportunities and a safe, respectful work environment for all female employees. We are committed to gender equality in recruitment, compensation, promotion, and training, and firmly oppose any form of gender discrimination or workplace bias. 	<ul style="list-style-type: none"> We fully implement national protections for maternity, including pregnancy, maternity leave, and breastfeeding periods. We provide "Mother's Rooms" and nursing rooms to support female employees during special stages. We organize health and legal seminars for female employees, provide professional medical consultations, and promote comprehensive care. We raise awareness of legal protections by hosting women's rights law seminars, empowering employees with knowledge of their rights and self-protection.
Anti-Violence and Forced Labor	<ul style="list-style-type: none"> "Anti-Violence, Anti-Discrimination, Anti-Sexual Harassment, and Anti-Drug Policy" "Public Security Management Regulations" "Human Rights Protection Guidelines" 	<ul style="list-style-type: none"> We pledge not to support or use forced labor, indentured labor, corporal punishment, detention, or any form of violence or abuse, including bullying, threats, or intimidation. 	<ul style="list-style-type: none"> We enforce strict labor contract procedures, ensuring all employment relationships are voluntary. Practices such as confiscation of identity documents, restricting personal freedom, or economic coercion are strictly prohibited. We maintain open, confidential grievance channels to allow employees to safely voice concerns. All reports are handled promptly and fairly. External experts are invited to deliver training on "workplace violence, discrimination, sexual harassment, and drug abuse."

Topic	Management Systems	Company Commitment	Management Practices
Anti-Harassment	<ul style="list-style-type: none"> "Anti-Violence, Anti-Discrimination, Anti-Sexual Harassment, and Anti-Drug Policy" 	<ul style="list-style-type: none"> We are committed to prohibiting any threats or inhumane treatment of employees, including but not limited to overt or covert verbal abuse and harassment, psychological harassment, mental and physical coercion, and sexual harassment. 	<ul style="list-style-type: none"> We provide workplace harassment prevention training to all employees. We maintain a zero-tolerance policy toward any form of harassment or abuse. All employees are required to comply with the anti-harassment and anti-abuse policy, and we take all reasonable measures to prevent such behavior from occurring in production areas or any other workplace settings. We invite external experts to deliver training on topics such as "workplace violence, discrimination, sexual harassment, and substance abuse." We have established a formal reporting mechanism and confidential grievance channels to encourage employees to report inappropriate behavior they experience or witness. We are committed to conducting fair investigations of all complaints and protecting the privacy and legal rights of whistleblowers.
Prohibition of Child Labor	<ul style="list-style-type: none"> "Child and Juvenile Labor Management Guidelines" "Child Labor Remediation Procedures" "Protection Guidelines for Child Labor, Juvenile Workers, and Female Employees" 	<ul style="list-style-type: none"> We prohibit the employment of child labor and generally do not hire underage workers. 	<ul style="list-style-type: none"> We implement strict procedures to avoid child labor, including ID verification to confirm applicant age. HR departments conduct regular checks to prevent accidental hiring of underage workers. Clear remediation procedures are in place to address any violations, and we strictly prohibit irresponsible dismissal of child laborers.
Freedom of Association	<ul style="list-style-type: none"> "Freedom of Association Policy" 	<ul style="list-style-type: none"> We respect and protect employees' rights to freedom of association' and collective bargaining, in full compliance with national laws and relevant international labor standards. 	<ul style="list-style-type: none"> We have legally established trade unions and regularly communicate with employee representatives to listen to feedback and integrate reasonable suggestions into company management. We pledge not to interfere with, discriminate against, or suppress employees' legal rights to form or join organizations. We also provide resources and support to ensure they can exercise their rights in a fair and secure environment.



Engaging Activities for Female Employees



Training for Labor Dispute Mediators

Employee Communication

We have established a multi-level and multi-channel communication system that includes the labor union committee, employee representative meetings, employee forums, harmonious labor relations committee, opinion collection, satisfaction surveys, democratic evaluations, and internal mailboxes. We respect and protect the democratic rights granted to employees by the Constitution and the law. Through collective agreements such as the "Collective Contract", the "Enterprise Collective Wage Agreement", and the "Special Collective Contract for the Protection of Female Employees' Rights and Interests", labor union representatives sign on behalf of employees. These agreements clearly define terms related to employee compensation levels, wage payment, workplace safety, occupational health protection for female employees, and leave and benefits.

In daily operations, we promote direct dialogue between employees at all levels and the management team through regular labor union committee meetings, employee representative meetings, employee forums, harmonious labor relations committee meetings, and democratic life meetings. We also provide convenient channels for employees to express their opinions through internal mailboxes and internal social platforms, ensuring that each piece of feedback receives a timely and appropriate response. In addition, we regularly conduct employee satisfaction surveys to evaluate the effectiveness of communication and continuously improve our mechanisms, supporting mutual growth between employees and the company.



Employee Satisfaction Surveys

To stay attuned to evolving employee needs and effectively support the development of corporate culture and management practices, we regularly carry out employee satisfaction surveys. These surveys aim to gain a comprehensive understanding of employees' perceptions of the work environment, career development, compensation and benefits, and corporate culture. The insights gathered serve as an important reference for management decision-making.

Employee Development

We have established a diversified career development system, designing personalized development paths for employees at different levels. In the implementation process, we emphasize aligning individual development goals with organizational needs, and ensure the effectiveness of development plans through regular evaluation and feedback mechanisms. We continuously optimize training resources and provide a variety of training and learning opportunities to help employees enhance their professional skills and overall competencies. We are committed to building XTC into a talent hub that supports the company's high-quality development with strong intellectual capital.

Career Development

We have established a comprehensive set of internal policies to support career development, including the "Guiding Principles for Building the Group's Job Qualification System," the "Implementation Guidelines for Job Qualification Systems in Subsidiaries," the "Job Qualification Management Measures for XTC Headquarters," and the "Promotion and Demotion Management Measures of the Group." We conduct job competency evaluations (talent assessments) to assess employees' capabilities and performance in a holistic manner. Each subsidiary develops differentiated promotion pathways tailored to its operational context, fostering a merit-based culture where capable individuals are given opportunities to advance. Through a combination of job level certifications, promotion and demotion evaluations, and open competition for leadership roles, we continue to open and optimize career pathways for our people.

Highlight | Talent Pipeline Development

Golden Dragon Rare Earth has introduced policies such as the "Management Regulations on Talent Pipeline Development" and the "2024 Job Qualification Certification Guidelines," which clearly define the certification procedures, implementation requirements, and review standards for both operational and non-operational job tracks. These efforts aim to create transparent and structured career development pathways for employees. Through targeted talent selection programs, job rotation initiatives, internal secondments, on-the-job coaching, and structured training plans, we are continuously strengthening the development of high-potential talent. By reinforcing our talent reserves for key positions and systematically identifying, developing, and cultivating our talent pool, we are improving the self-sustaining capabilities of our pipeline and providing robust human capital support for the company's long-term sustainable growth.

Performance Management

We have established a strategy-driven performance management system that covers the entire organization and ensures strong alignment between corporate objectives and individual performance. Guided by the Balanced Scorecard (BSC) framework, we utilize strategic cascading tools to break down high-level goals across five management levels—Group, subsidiary, business division, department, and position. This system integrates five dimensions: financial, customer, internal process, learning and growth, and social responsibility, ensuring close alignment between strategy and execution. Our system is designed with a systematic and closed-loop approach. We follow the SMART criteria—Specific, Measurable, Achievable, Relevant, and Time-bound—to ensure that performance indicators are well-defined and feasible. The PDCA (Plan-Do-Check-Act) cycle enables us to dynamically optimize our performance management process. Meanwhile, we enhance data-driven analysis so that performance evaluations serve not only as the basis for compensation adjustments, promotions, and incentives, but also as a vital reference for business process improvement and organizational effectiveness enhancement.

To improve the accuracy of performance process management, we have built a performance management platform that supports regular business reviews, deviation warnings and interventions, and coordinated resource allocation. This enhances the timeliness and relevance of performance management and helps business units achieve performance breakthroughs. We encourage employees to continuously improve their performance in a fair and transparent environment, using performance to drive growth and achieving mutual advancement of personal value and corporate development.

Employee Training

We have established a strategy-driven talent development system that integrates our four core management cultures: comprehensive budget management, performance-based goal management, integrated product development (IPD), and international advanced manufacturing (IAM). Guided by this framework, we have formulated a series of training policies, including the "XTC Talent Development and Training Management Measures," the "IAM Talent Development Program for International Advanced Manufacturing," the "IPD Talent Development Program for Integrated Product Development," the "Rising Talent Training and Development Program," the "Unified Training Program for Newly Recruited High-Potential Graduates," and the "Talent Exchange Management Measures." These programs cover the entire training lifecycle, encompassing the job qualification system, talent development pathways, points-based management, learning maps, and course frameworks.

Relying on the XTC Training Academy platform, we focus on the development of both managerial and professional talent through a tiered and categorized training system that includes:

Managerial Talent Development

We offer programs such as the General Manager Class, the Rising Talent Class (reserves for general managers), the Flying Dragon Class (for deputy general managers), the Flood Dragon Class (for department managers), the Hidden Dragon Class (for supervisors), and the Team Leader Class. These programs aim to systematically enhance leadership and business decision-making capabilities at all levels of management.

Professional Talent Development

We provide specialized training programs in areas such as quality management, marketing, finance, human resources, and safety to strengthen professional skills and support business growth.

Personalized Learning for All Employees

We have launched a job qualification system upgrade initiative, implementing a company-wide job level initialization and matching corresponding course packages. Employees are encouraged to engage in personalized learning according to their own development paths.

Highlight | "Rising Talent Program"

Launched in January 2021, the "2021 Rising Talent Program" ran for four years and included six training modules: strategic planning, budgeting, workplace safety, performance management, IAM & IPD system construction and application, and team leadership. A total of 22 participants completed the program. The initiative has played a vital role in meeting current and future talent needs for key positions and strategic projects, while also establishing a benchmark and providing valuable experience for the cultivation of future high-potential leaders.

Highlight | 2024 Group HR Empowerment Program

In 2024, we launched the Group Human Resources Empowerment Program, attended by over 70 HR managers and key personnel from our subsidiaries. The program featured lectures by seasoned HR experts, themed exchange sessions, and production line visits. These activities provided participants with real-world case studies and practical methodologies for translating HR theory into action. The average satisfaction score from participants reached 9.745 out of 10.

Highlight | IPD Product Innovation Management Workshop

In 2024, Golden Dragon Rare Earth organized an IPD Product Innovation Management Workshop attended by 70 core business personnel from business divisions and functional departments. We invited external experts to provide in-depth training on topics such as customer needs analysis, full product lifecycle management, and building long-term competitive advantages. Through self-assessment exercises, participants clarified role responsibilities and competency requirements within the IPD innovation system. This workshop enabled a deeper understanding of product innovation management, bridging theory and practice.



Highlight | "Refined Excellence, Rising Talents" Reserve Talent Development Program

In 2024, Xiamen Golden Egret launched the "Refined Excellence, Rising Talents" Reserve Talent Development Program, designed to systematically train recent graduates as future managerial reserves. We optimized the onboarding training system and conducted eight in-person public courses. Through a combination of theoretical learning, mentorship, and rotational practice, trainees gained hands-on experience and applied knowledge. A total of 45 reserve talents completed their final assessments in 2024, unlocking their potential and improving the effectiveness and efficiency of our human capital leverage.



University-Enterprise Collaboration

We actively promote university-enterprise collaboration by establishing long-term partnerships with leading domestic universities and research institutes. Together, we engage in joint research, technological innovation, internship programs, and talent development, building an integrated platform that connects industry, academia, and research. This approach drives the coordinated advancement of both technology and talent.



Campus Recruitment

To attract young talent, we continuously refine our campus recruitment model. Each year, we organize campus presentations, internship programs, and open house events at top universities across the country, aiming to identify and recruit high-potential graduates. For new graduates, we provide systematic training, mentorship, and job rotation opportunities to help them quickly adapt to the workplace, enhance their professional skills, and improve their overall competencies.



Highlight | XTC 2025 Campus Recruitment in Beijing

In 2024, we hosted the "XTC 2025 Campus Recruitment in Beijing," where we introduced our corporate profile, development strategy, technological innovations, and talent development system. The event provided graduating students with valuable face-to-face interaction opportunities with company executives and technical experts, offering a platform to gain industry insights and broaden their career perspectives in the high-tech sector.



Highlight | Xiamen University Youth League Members Visit XTC

In 2024, a group of Youth League members from Xiamen University visited our company to experience cutting-edge manufacturing technologies and a fully integrated industrial chain. They attended expert-led lectures and learned about our development journey, technological innovation, and corporate culture. The visit also fostered in-depth dialogue between the university and our company on topics such as employment trends, campus talent markets, and corporate hiring needs.



Employee Compensation and Benefits

We have established a series of compensation-related policies, including the "Total Wage Management System," the "Special Items List and Separate Personnel Management Measures for Total Wages," the "Reward Regulations for Government-Subsidized Bonuses," and the "Guidelines on Annual Salary Implementation Plans for Business Division Leadership Teams." These systems are built on employee performance and benchmarked against industry salary levels to form a value-driven and market-aligned compensation mechanism. Based on the 3P model (Position, Proficiency, and Performance), we have developed a diversified compensation system. The core component is position-based skill pay, supplemented by piece-rate and market-based negotiation pay structures. Our compensation framework includes base salary, performance bonuses, allowances and subsidies, special incentives, and overtime pay. We ensure that all compensation is paid in full and on time each month, complies with government-mandated minimum wage standards, and adheres to legal requirements for overtime pay to guarantee both fairness and compliance in compensation distribution.

We apply a variety of performance evaluation methods to continuously enhance our performance management system. We also improve our reward mechanisms for scientific and technological achievements and increase technical incentives. Through ongoing performance discussions and coaching, we stimulate employee innovation and initiative, effectively attracting and retaining talent. Key practices include:

Balanced Scorecard

We differentiate goals across the Group level, subsidiary level, and business division level, establishing a five-dimensional objective framework tailored to each business unit's characteristics.

360-Degree Evaluation

We conduct annual competency assessments for management teams and develop individualized training and self-improvement plans based on the results.

Management by Objectives

We cascade corporate and business division performance targets down to departments and individual roles, with monthly or quarterly assessments as needed. Project-based performance indicators are broken down into monthly targets and tracked continuously.

Equity Incentives

We encourage our employees to fully leverage their individual strengths, drive innovation through creativity, and generate value through innovation. By implementing corporate restructuring initiatives, we have established a long-term incentive and constraint mechanism based on shared benefits and shared risks. This approach enables outstanding employees and key talent to participate in equity ownership, significantly enhancing their motivation and engagement. Through this system, we aim to build a high-caliber team with strong independent innovation capabilities, providing robust talent support for the achievement of our strategic development goals.

During the reporting period, the unlocking conditions for the third vesting period under our 2020 Restricted Stock Incentive Plan were met. Accordingly, we proceeded with the procedures for lifting the sales restrictions for eligible incentive recipients. A total of 3,358,200 restricted shares were released from lock-up, accounting for 0.2115% of our total share capital as of the unlocking date.

Employee Benefits

In addition to fully complying with legal obligations such as contributions to medical and social insurance, housing provident funds, and statutory leave entitlements, we provide a comprehensive range of employee benefits, including enterprise annuities, accident insurance, birthday gift vouchers, and various forms of care and support.

XTC Signature Canteen

Our "XTC Signature Canteen" offers employees high-quality, affordable, nutritious, and diverse meal options, ensuring convenient access to dining services near their workplace. We continuously innovate our meal offerings to enrich employees' culinary experiences. At the same time, we are committed to improving dining environments and strictly managing food safety and hygiene to ensure healthy eating for all staff.

Employee Housing Support

The Group and its subsidiaries provide housing benefits tailored to local conditions and operational needs by formulating appropriate welfare policies.

- In Xiamen, we provide several employee dormitories and offer public rental housing to eligible employees.
- In Jiujiang, we provide free housing to outstanding employees and key personnel, and offer complimentary single apartments to recent graduates.
- In Changting, Longyan, we have introduced the "Welfare Support Measures for Non-Local Talent," which prioritizes dormitory arrangements for eligible employees.

Financial Assistance Program

To support employees in need, we have implemented a financial assistance program. We also provide scholarships to the children of disadvantaged employees who demonstrate academic excellence, helping them pursue their aspirations of higher education.



"Summer Cooling Care" Heatwave Relief Initiative



Employee Birthday Celebration



Summer Childcare Program for Employees' Children

Occupational Health and Safety

We place great importance on occupational health and safety management, upholding the principle of "safety first, prevention foremost, and comprehensive management." We are committed to creating a safe and healthy working environment for all stakeholders, including employees, suppliers, and contractors. We strictly comply with relevant national laws and regulations, including the "Prevention and Control of Occupational Diseases Law of the People's Republic of China," the "Regulations on Work Safety Licenses," the "Regulations on Supervision and Administration of Coal Mine Safety," the "Regulations on the Safety Management of Hazardous Chemicals," the "Law of the People's Republic of China on the Prevention and Control of Occupational Diseases," and the "Regulations on Work-Related Injury Insurance," as well as all applicable laws and regulations at our operating locations. We continuously improve our safety management systems, with the "Basic Specifications for Work Safety" and the "Group Safety Supervision and Management Regulations" serving as our core frameworks to ensure that safety work is carried out in accordance with the law. In addition, we have formulated the "XTC Three-Year Action Plan for Fundamental Work Safety Improvements (2024–2026)" in line with national, Fujian provincial, and governing entity's safety requirements, detailing specific measures and responsibilities for safety management.

As of the end of the reporting period, a total of 24 of our affiliated entities had obtained ISO 45001 Occupational Health and Safety Management System certification, covering 67% of our major production entities. Additionally, 9 subsidiaries have been certified as Level 2 Safety Standardization Enterprises, and 18 as Level 3 Safety Standardization Enterprises.

Occupational Health and Safety Management Structure

We have established a comprehensive occupational health and safety (OHS) management structure to effectively control risks throughout our production and operations. The Work Safety Committee serves as our supervisory and administrative body, chaired by the Chairman of the Board and composed of senior management members. This committee is responsible for organizing safety inspections, overseeing the implementation of safety protocols, and formulating safety-related management systems and emergency response plans. To ensure the effective advancement of safety management, we have also assembled an internal and external team of experts to form a Professional Work Safety Committee. This group is tasked with promoting and reviewing the company's work safety standards, providing professional recommendations, and proposing improvement measures. Under the guidance of the Group Work Safety Committee, each of our subsidiaries has established its own work safety committee, which operates under the supervision and management of the Group-level committee.

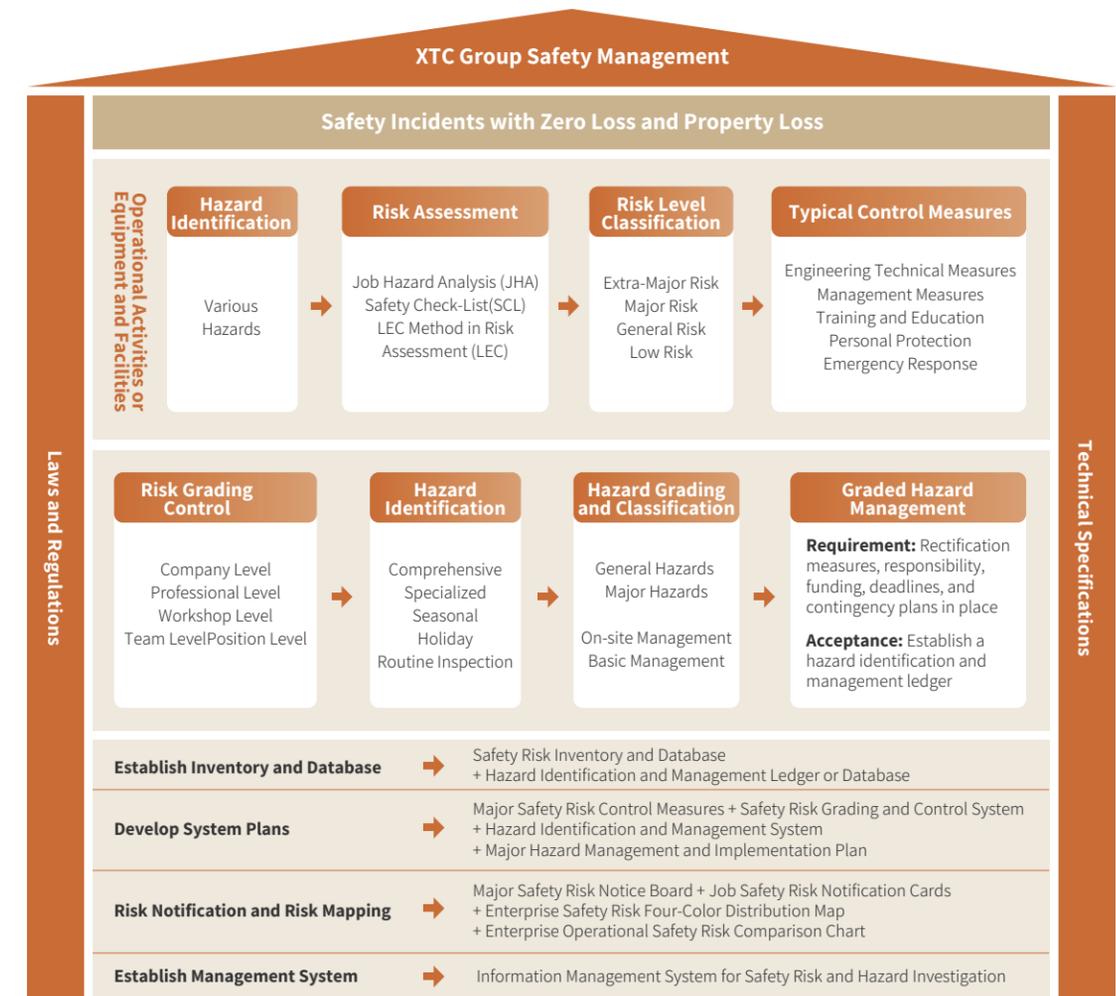
Occupational Health and Safety Management Structure



We incorporate occupational health and safety performance into the annual key performance indicators (KPIs) of senior management and relevant position holders, linking performance results directly to compensation. All employees are required to sign the "Occupational Health, Safety, Environmental Protection, and Fire Safety Responsibility Statement" based on their respective job responsibilities. This document clearly defines the responsible person, area of responsibility, performance objectives, safeguards, and evaluation methods. The safety management departments at our headquarters and subsidiaries are responsible for annually setting and updating both outcome-based and process-based indicators related to occupational health and safety. These indicators are implemented by department heads and direct supervisors. Additionally, we track and compile monthly statistics on each subsidiary's safety performance, assess progress toward safety objectives, and provide improvement suggestions based on evaluation results. During the reporting period, a total of 17,899 "Occupational Health, Safety, Environmental Protection, and Fire Safety Responsibility Statements" were signed, covering 100% of our employees.

Occupational Health and Safety Risk Management

We strictly adhere to the "Group Safety Supervision and Management Regulations" and apply methods such as Job Hazard Analysis (JHA) and Safety Checklist (SCL) to identify risk points and potential hazards throughout the production process. Risk evaluations are conducted using the Likelihood-Exposure-Consequence (LEC) method. After identifying and classifying occupational health and safety risks by type and severity, we actively carry out hazard inspections and corrective actions and formulate annual inspection plans. We have developed and implemented a dual prevention mechanism that integrates "graded risk control and hazard identification and remediation," thereby strengthening our ability to manage various work safety risks.



During the reporting period, we took the following proactive measures to reduce occupational health and safety risks in our production and operational activities:

- Prepared a system diagram for graded risk control and hazard remediation, identified and assessed potential hazards in the production process, and implemented practical and effective control measures;
- Introduced advanced technologies and equipment to improve production efficiency and reduce the likelihood of safety incidents;
- Carried out a dedicated program to improve on-site safety performance, for identified hazards, we set clear deadlines for closure and assigned personnel for follow-up supervision to ensure timely and quality completion of corrective actions.

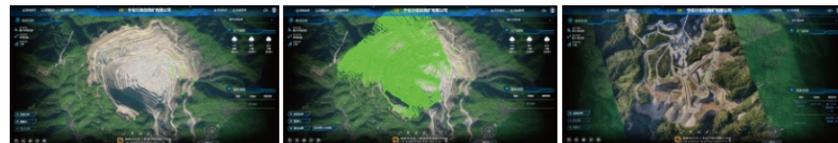
Intelligent Safety Management

We actively promote intelligent safety management by leveraging advanced information technologies to improve the efficiency of our safety operations. Through the development of a digital safety management platform, we have integrated functions such as monitoring, data analytics, and risk warning systems. This platform enables real-time monitoring of safety conditions throughout the production process, allowing us to accurately identify potential risks and take immediate action to ensure employee safety and operational stability.



Mining Operations

At Ninhua Xingluokeng, we continue to improve infrastructure to ensure comprehensive monitoring of data such as water levels, phreatic lines, dry beach conditions, and rainfall. A dedicated network has been established to guarantee smooth data transmission to government regulatory platforms. We have set early warning thresholds that trigger real-time audio, visual, and message-based alerts when anomalies are detected. Radar monitoring equipment has been installed at mining sites to achieve full coverage of slope displacement monitoring. At the waste dump area, we have replaced the traditional total station and prism system with GNSS (Global Navigation Satellite System) technology to avoid abnormal monitoring results caused by extreme weather conditions such as heavy rain or fog.



At our site in Duchang, we strictly follow the "Checklist for Routine Safety Standardization Tasks" to implement safety standardization practices across open-pit mines, ore processing plants, and tailings pond. We have actively promoted the application of the mine safety standardization information system, significantly improving the digitalization of our safety management processes. During the reporting period, we successfully passed the re-evaluation for open-pit mine safety standardization compliance.

At Luoyang Yulu, we have upgraded systems related to the intelligent management of hazardous chemicals and remote operation in high-risk areas, thereby reducing the risks associated with frequent manual operations. We also make full use of the mine safety standardization information system to digitally manage safety inspections, safety training, pre-shift meetings, shift handovers, and permit-to-work processes. This has enhanced the efficiency of our safety management and provided valuable data support for the development of our future safety evaluation systems.



Advanced Materials Production

At our tungsten smelting base in Longyan, we utilize automated process control throughout production. Specifically:

- In terms of hardware configuration, we have installed pneumatic valves, and use online flow meters, temperature sensors, pressure sensors, and other instruments to collect real-time data on key parameters such as flow rate, temperature, and pressure directly at the production site.
- The on-site production processes are controlled through PLC (Programmable Logic Controller) programming. All parameters are connected in real time to the process monitoring center, enabling centralized, real-time monitoring of every stage in the production workflow.

We have also equipped the production site and surrounding plant boundaries with a range of critical alarm systems. These include an ammonia concentration alarm system, as well as real-time monitoring and over-limit alarms for other safety-related parameters such as steam pressure and compressed air pressure. In addition, we monitor and collect real-time data on key operational indicators such as current and temperature, allowing us to detect equipment anomalies in advance and carry out timely maintenance to ensure work safety.



Deep Processing

At our Cutting Tool Division in Haicang, we have implemented a visible smoke and flame early warning system on surveillance cameras positioned at key locations across the plant. In the event of an abnormal situation, the system immediately alerts the area supervisor and the safety and environmental protection department, enabling early intervention to contain and extinguish fires in their initial stages and prevent further spread. We have engaged third-party agencies to install smoke-temperature composite detectors in accordance with national standards, with all alarm signals connected to the fire control center to enhance the plant's early fire detection capabilities. Alarm signals are also linked to the extrusion and mixing control room to ensure immediate response in the event of hazardous chemical leaks. In addition, we invited a professional lightning protection company to upgrade the lightning protection system for the hydrogen storage cabinets. Dedicated grounding devices have been installed to significantly improve the safety of the facility against lightning strikes.

Workplace Safety Inspections

Our Work Safety and Environmental Protection Department of Operations Management Center at headquarters works closely with the safety management departments of all subsidiaries to jointly carry out safety inspections in accordance with the annual inspection plan. Through regular inspection and supervision activities, we aim to identify and eliminate potential safety hazards in a timely manner, ensuring that safety risks during production are effectively controlled. Key activities include:

- Weekly self-inspections conducted by each production team at all manufacturing sites;
- Periodic comprehensive inspections conducted by the safety management departments, along with pre-holiday, seasonal, "Safety Month/Season" campaigns, and other special inspections;
- Unscheduled spot checks by the headquarters Operations Management Center on the safety performance of subsidiaries, including joint on-site inspections with third-party professional agencies.

For any safety hazards identified during inspections, we follow the principle of localized management and implement a closed-loop corrective process. Based on the severity of the hazard, we define corresponding corrective measures and timelines, while maintaining a detailed hazard identification and rectification log to ensure all issues are addressed promptly and effectively. We also encourage employees to use mobile phones, cameras, and other devices to take photos and document safety hazards in the workplace. This information is uploaded to our "EHS" (Environment, Health, and Safety) management information system. The EHS system immediately notifies the responsible departments and tracks the progress of corrective actions to ensure timely completion. This approach promotes convenient, efficient, and company-wide participation in safety management, ensuring a safe and stable work environment across all operations.



Construction Site Safety Inspection

Plant Safety Inspection

Highlight | Safety Inspections in Mining Areas

At Ninghua Xingluokeng, we deeply understand the importance of safe production and have established a systematic safety management system. We have formulated a set of management rules and procedures, including the "Hazard Identification and Rectification Management System," the "Graded Safety Risk Control Management System," and the "Hazard Identification and Risk Assessment Management System." A dual-prevention mechanism has been implemented to ensure effective risk identification and control across all operational levels. In practice, we conduct regular comprehensive inspections and special safety checks ahead of flood seasons, typhoon events, and other key risk periods. These inspections cover transportation, open-pit slope stability, fire safety, outsourced projects, and more, aiming to fully identify and mitigate risks in the working environment. Additionally, we have conducted a full-scale risk assessment of our tailings pond, equipment, and work activities. A total of 585 hazard sources were identified, including 7 major risks, 50 significant risks, 179 general risks, and 349 low-level risks—all of which have now been rectified. These efforts have significantly improved our overall safety management and established a benchmark for refined, high-standard mine safety practices.



In accordance with the notice issued by the National Mine Safety Administration titled "Criteria for Identifying Major Safety Hazards in Metal and Non-Metal Mines" (Mine Safety [2022] No. 88), Duchang Jinding conducted a detailed self-assessment against the standards for open-pit mines and tailings pond to ensure stable and safe mining operations. Ahead of the flood season, we carried out risk identification and special safety inspections at the tailings dam and commissioned the Maanshan Institute of China Steel Group to perform pre-flood discharge calculations. We implemented pre-flood water level reductions and, during the flood season, ensured 24-hour shift coverage by both managers and tailings personnel. Strict water level control measures were enforced to meet safety elevation, dry beach length, and flood control capacity standards. We also conducted systematic inspections of reservoir areas, drainage structures, sub-dams, dam bodies, and online monitoring systems. Discharge operations and sub-dam construction were closely monitored to ensure that the tailings pond operated safely and steadily throughout the year.

Highlight | Safety Inspection in Haicang Golden Egret

To ensure workplace safety, Haicang Golden Egret carried out specialized inspections covering areas such as work resumption, electrical safety, fire protection, major hazard sources, machine equipment safety devices, mechanical injury prevention, equipment grounding, special equipment, hazardous chemicals, gas cylinder storage and use, personal protective equipment, safety signage, dust and vacuum collector cleaning, and emergency exits and firefighting equipment. The company's Safety and Environmental Protection Department worked jointly with departmental safety officers to form inspection teams of 3 to 4 people, who conducted on-site walkthroughs and risk identification. For any issues identified, the inspection team immediately required the responsible departments to develop corrective action plans and monitored the full implementation process to ensure that all issues were rectified within the prescribed timelines.

Occupational Health and Safety Incident Management

We adhere to the principle of "safety first, prevention foremost" and have built a comprehensive safety incident management system to ensure timely response and effective control of accidents. All employees are required to report incidents immediately upon occurrence. Each incident is investigated by a designated investigation team, which analyzes the causes, sequence of events, and responsibility, and formulates corrective measures. Depending on the severity of the incident, we handle the responsible parties in accordance with laws and regulations. We also provide appropriate support to injured employees and promptly submit applications for work-related injury recognition to the relevant authorities, thereby safeguarding the legal rights and interests of our employees. We regularly assess our work safety incident management performance and continuously improve related policies and procedures to enhance our capabilities in both accident prevention and emergency response. During the reporting period, there were 21 persons with work-related injuries across the company and subsidiaries, with a total of 21 work-related incidents. No fatalities were reported.

Emergency Management and Drills

We continuously improve our emergency management system and strictly implement the "Group Safety Supervision and Management Regulations," the "Group Emergency Response Plan Management Guidelines," and the "Emergency Plan for Extreme Weather Events." Both our headquarters and subsidiaries develop risk-specific prevention measures, emergency response plans, and handling procedures to ensure swift and effective responses in the event of emergencies. We organize regular emergency drills to raise employee safety awareness and enhance emergency response capabilities, striving to achieve our safety goal of "safety awareness for all, emergency readiness for everyone."

During the reporting period, in alignment with the Work Safety Month theme, we conducted specialized work safety training on emergency management to further strengthen employee preparedness. Together with our subsidiaries, we held a total of 1,152 emergency drills, covering fire safety, natural gas boiler leak response, anti-terrorism and anti-riot scenarios, and nighttime evacuation exercises.



Emergency Drills



Fire Drills

Occupational Health and Safety Training

We place a high priority on occupational health and safety training and strictly comply with the requirements outlined in the "Group Safety Supervision and Management Regulations" and the "Basic Specifications for Work Safety." We continuously promote safety education to enhance safety awareness across the organization. During the reporting period, we developed and implemented an annual work safety training plan covering topics such as work safety standardization, the work safety accountability system, work safety management regulations, and emergency response plans. We conducted targeted training programs in areas including chemical management, electrical safety, working at heights, confined space operations, energy isolation, and lockout-tagout procedures and fire safety, as well as emergency management training. These efforts have significantly improved employee safety awareness and operational skills. Additionally, we established a Safety Culture Research Group to conduct surveys and gain deeper insights into employees' understanding and perceptions of safety culture. These findings provide a strong foundation for promoting and embedding safety culture across the company. We also strengthened safety training for contractors to reinforce compliance with safety regulations and raise awareness of safe work practices. During the reporting period, we organized multiple safety training sessions, with a total of 81,793 participants.



Highlight | "Work Safety Month" Campaign

We actively organized activities in celebration of "Work Safety Month." During the campaign, we displayed themed posters and roll-up banners, conducted company-wide safety training sessions, encouraged employees to participate in safety knowledge quizzes on the LianGongBao platform, and promoted the viewing of the "Emergency Escape Training Camp" video series on LittleRedBook. These initiatives further enhanced employees' safety awareness and preparedness.



Highlight | Mining Safety Education and Training

At Ninghua Xingluokeng, we have promoted improvements in mine safety management through a structured and systematic approach to building a strong safety culture. We developed an annual work safety education and training plan and issued the "2024–2027 Safety Culture Development Guidelines" to provide a standardized and systematic framework for advancing safety culture across operations. In daily work safety training, we consistently organize targeted safety awareness and education programs. These include job-specific risk prevention training and pre-task KYT (Kiken Yochi Training, or Hazard Prediction Training) to enhance employees' ability to identify potential risks. For mechanical maintenance teams, we implement a "one theme per month" program to strengthen job-specific safety skills. During daily pre-shift meetings, we include a "three-minute safety" session to study policy documents and accident case warnings, reinforcing safety awareness at all levels. We also bring in external expertise by inviting safety culture experts from the Ministry of Emergency Management's Public Education Department to conduct policy briefings. Additionally, we organize discussion sessions to analyze weaknesses in our work safety management practices and identify key directions for enhancing our safety culture. Through these comprehensive initiatives, the Xingluokeng Mine has built a solid foundation for a collaborative, company-wide work safety management culture that emphasizes participation at all levels.



At Luoyang Yulu, we follow the guiding principle of "safety first, prevention foremost, and comprehensive management" by organizing a range of activities, including the "Everyone Talks Safety—Let Me Speak" short video competition, the "Everyone Is Emergency-Ready—Let Me Practice" emergency drill contest, CPR and AED operation skill competitions, emergency escape training camps, and safety knowledge competitions on the LianGongBao platform. These programs help strengthen both safety awareness and practical skills among employees. In addition, we launched a traveling lecture series in Luanchuan County focusing on safety education for non-coal mines. The program featured video lectures covering key topics such as mine work safety management requirements, mine safety supervision and emergency response, and interpretation of criteria for identifying major mine hazards. These efforts further enhanced employees' understanding and attention to mine safety.



Highlight | Diversified Safety Culture Initiatives

In 2024, XTC Haicang Branch continued to deepen the development of a strong safety culture by organizing four key safety-themed events: The Environmental Protection and Safety Day, the "Prevention and Control of Occupational Diseases Law of the People's Republic of China" Safety Advocacy Week, the Work Safety Month, and the Fire Safety Month. Through a combination of EHS system-based training and assessments, on-site Q&A sessions, case analysis, themed activities, site visits, and employee pledges, we evaluated employees' understanding of fundamental safety knowledge. These activities significantly enhanced awareness of environmental protection, improved work safety consciousness, and strengthened employees' operational safety skills.



Contractor Occupational Health and Safety Management

We continue to improve the "Supplier Code of Conduct," which clearly defines the requirements for suppliers and contractors in areas such as emergency preparedness and response, chemical management, and infectious disease prevention and control. These measures strengthen work safety oversight and help ensure that potential safety hazards are identified and eliminated in a timely manner. We require all suppliers and contractors to establish measurable goals such as zero accidents and zero fatalities, continuously improving their occupational health and safety performance. Together, we aim to build a safe, healthy, and sustainable supply chain system. Some of our subsidiaries have implemented robust measures for managing outsourced contractors, including qualification reviews, safety management agreement signing, routine supervision and inspection, and monthly safety evaluations. Special safety inspections are conducted for outsourced activities, which are managed under a "site entry approval–safety agreement–safety briefing–safety training" protocol. These efforts help minimize the risk of work safety incidents involving external contractors. During the reporting period, all outsourced units were effectively managed, and no work safety incidents occurred.

Tailings Pond Safety Management

As a critical component of mining operations, the safe and stable operation of tailings pond is directly linked to ecological security and the well-being of surrounding communities. We strictly comply with domestic laws and regulations such as the "Environmental Protection Law of the People's Republic of China," the "Safety Technical Specifications for Tailings Pond," the "Guidelines for Safety Standardization in Metal and Non-Metal Mines," and the "Implementation Guide for Tailings Pond in Safety Standardization of Metal and Non-Metal Mines." We have established a full-lifecycle management system covering the design, construction, operation, maintenance, monitoring, closure, and post-closure phases of tailings pond. In addition, we actively adopt international standards and best practices, including the "Global Industry Standard on Tailings Management" (GISTM), to implement standardized and modernized management of our tailings pond. By applying high-standard anti-seepage systems, monitoring and early warning infrastructure, and optimized drainage and flood control designs, we ensure the structural integrity and operational safety of each facility. We deploy specialized teams for 24-hour online monitoring and utilize intelligent sensor technologies to track key parameters such as dam displacement, phreatic levels, and pond water levels in real time. We also conduct regular safety assessments and risk inspections to proactively eliminate potential hazards. Furthermore, we are committed to advancing research and development in tailings resource utilization technologies. By exploring new processes for tailings volume reduction and environmentally friendly treatment, we aim to minimize environmental risks. Through ecological restoration initiatives and the establishment of emergency response mechanisms, we continuously strengthen our capacity for environmental risk prevention and control, providing a strong foundation for the sustainable development of our mining operations.

Tailings Pond Safety Monitoring System

We have established a highly responsive and efficient tailings pond safety monitoring system that integrates network, measurement and control, and communication technologies. This system forms a comprehensive end-to-end monitoring network covering both "front-end real-time monitoring" and "back-end data management." The system consists of a real-time front-end monitoring and early warning subsystem and a back-end data analysis and sharing platform. It enables automated monitoring of key indicators such as surface displacement of the starter dam, internal vertical displacement, phreatic line levels, pond water levels, dry beach conditions, rainfall, pH levels, water quality, and site imagery across the tailings pond.

Safety and Environmental Risk Inspection

We implement comprehensive safety oversight of tailings pond, including routine patrols and monitoring, flood safety checks, dam structure inspections, and general site inspections. A 24-hour on-duty monitoring system is in place to ensure daily inspections and records of the facility. Each workshop conducts weekly inspections of TSF safety, flood control structures, online monitoring systems, emergency supplies, and communication infrastructure. In addition, monthly risk assessments are carried out at both the departmental and company levels. Ahead of the flood season, we intensify special inspections and strictly enforce a 24-hour leadership duty roster to ensure timely and effective resolution of safety and environmental hazards.

Safety Emergency Management

We continuously improve our emergency response mechanisms and regularly update specialized emergency plans for dam failure, environmental emergencies, and on-site incident handling procedures. We actively organize safety emergency drills and incorporate emergency preparedness into our annual priority work plans and performance evaluations.

Highlight | Emergency Drill at Wangtongkeng Tailings Pond

In 2024, we conducted an emergency drill at the Wangtongkeng Tailings Pond of Ninghua Xingluokeng. The drill simulated an emergency scenario in which continuous rainfall caused the collapse of a flood diversion channel, leading to a rising water level in the tailings pond and the risk of overtopping. In response, we promptly activated our emergency response plan. Rescue teams were mobilized to clear the collapsed diversion channel, remove debris around the drain shaft, reinforce the phreatic surface, excavate additional drainage ditches, and successfully evacuate residents from downstream villages. These measures eliminated the overtopping risk and restored normal operations at the facility. This exercise verified the operability, coordination, and effectiveness of our emergency response plan and significantly improved the responsiveness and incident-handling capabilities of our emergency teams.



Highlight | Emergency Drill for Alarmed Water Level at Hushan Tailings Pond

In 2024, Duchang Jinding conducted a high-alert water level emergency drill at the Hushan Tailings Pond. The drill simulated a flood overtopping risk caused by sustained heavy rainfall and tested the company's emergency response and rescue protocols under such conditions. We organized eight coordinated task groups: Emergency Command, Communications, Supplies and Logistics, Alert and Evacuation, Medical Aid, Rescue Operations, Pollution Control, and Incident Documentation. Together, these teams successfully executed the full cycle of emergency response—from risk reporting and emergency plan activation to on-site mitigation actions including ditch excavation, drainage installation, and clearing of drainage wells. The exercise enhanced employees' understanding of incident reporting and emergency response procedures. It also improved their familiarity with the emergency plan and strengthened their practical response skills. Lessons learned from the drill helped identify and address shortcomings, further increasing the scientific rigor, practicality, and operability of our emergency response system.



Highlight | Emergency Drill for Open-Pit Mine Slope Collapse and Landslides

In 2024, Duchang Jinding organized an emergency drill simulating slope collapse and landslide scenarios at an open-pit mining site. The primary objectives were to assess the effectiveness of the emergency response plan, enhance the emergency response capabilities of personnel under crisis conditions, clarify the roles and responsibilities of departments and individuals involved in emergency management, and strengthen coordination and collaboration across teams.



Tailings Pond Closure Management

To ensure the long-term safety and stability of tailings pond, we carry out structured closure and remediation work for facilities scheduled to be decommissioned. These efforts ensure that the flood control capacity and dam stability of the facilities meet national legal and regulatory requirements. For the Qipanshan Tailings Pond, which has already been closed, we conduct regular inspections focused on flood prevention and work safety, implement ongoing stability monitoring, and continuously track the effectiveness of remediation measures. For the Wangtongkeng Tailings Pond at Ninghua Xingluokeng, we initiated closure planning even before the facility reached its design storage height. The closure design includes comprehensive plans for dam reinforcement, drainage system upgrades, and ecological restoration. This proactive approach aims to establish a full life-cycle safety management loop for the facility. Following the completion of the closure design, we carry out construction in strict accordance with relevant national laws and regulations. Upon completion, a formal acceptance inspection is conducted to ensure compliance and long-term safety.

Occupational Health

We strictly comply with national occupational health and safety regulations and, based on industry characteristics and our operational realities, have developed a series of occupational health management systems and operating procedures to continuously improve our occupational health management framework. In terms of infrastructure, we consistently invest in improving the workplace environment. We provide standard-compliant protective equipment and regularly monitor occupational hazard factors such as noise, dust, and toxic or harmful substances in the work environment. Employees are equipped with personal protective equipment (PPE) that meets occupational health requirements to ensure both the safety and comfort of their working conditions. In the area of health management, we have established a comprehensive occupational health surveillance system that includes health checks for employees before, during, and after employment. We also maintain individual occupational health records for all employees. Regular training sessions on occupational health knowledge are conducted to enhance employees' self-protection awareness and capabilities. For employees in high-risk positions, we implement focused monitoring and personalized health management plans to ensure a safer and healthier work environment for all.

Prevention of Occupational Disease

We strictly implement the "Basic Specifications for Work Safety" and have established a systematic health monitoring and prevention protocol. We proactively identify, assess, and manage occupational health hazards, and have standardized procedures for investigating and handling occupational disease-related incidents. These efforts are aimed at preventing potential work-related or occupational injuries and health issues. Key occupational disease prevention measures include:

- Employee Health Examinations**

We closely monitor employee occupational health status. For employees in positions involving occupational hazards, we conduct pre-employment, on-the-job, and exit occupational health check-ups. Examination results are documented and archived, and we adjust job assignments as necessary based on employees' health conditions.
- Hazard Assessment**

We engage qualified third-party institutions to carry out regular and comprehensive occupational health risk assessments for subsidiaries involved in mineral extraction and processing. These assessments cover production processes, equipment layouts, sanitation conditions, the presence and severity of occupational hazards, protective and emergency response facilities, health monitoring practices, use of personal protective equipment (PPE), and occupational health management. We continuously improve practices based on assessment results.
- Occupational Hazard Warnings**

For departments and workplaces involving occupational hazards, we place warning signs at prominent locations at entry points to alert individuals before entering the area. New employees are required to sign an occupational hazard acknowledgment form to ensure they fully understand potential occupational disease risks and prevention requirements associated with their roles.
- PPE Distribution and Use**

In strict accordance with national laws and the "Regulations on the Management of Personal Protective Equipment," we provide employees with certified, job-appropriate labor protection gear. Clear signage is placed in relevant areas to guide employees on the correct and standardized use of PPE.
- Occupational Health Education**

We regularly conduct occupational health and safety training sessions or seminars to encourage employees to adopt healthy workplace habits. These sessions promote awareness of occupational hazards and preventive measures, fostering a proactive approach to occupational health management.
- Hazard Reduction**

We continuously upgrade equipment and optimize production processes to reduce occupational risks. By introducing advanced technologies and improving the work environment, we lower exposure to harmful factors and minimize potential hazards.
- First Aid and Healthcare**

We have implemented the "Infirmary Management Regulations" and the "First Aid Management Regulations," established on-site infirmaries, and strategically installed medical kits and automated external defibrillators (AEDs) in workplaces. These resources are regularly inspected and maintained.

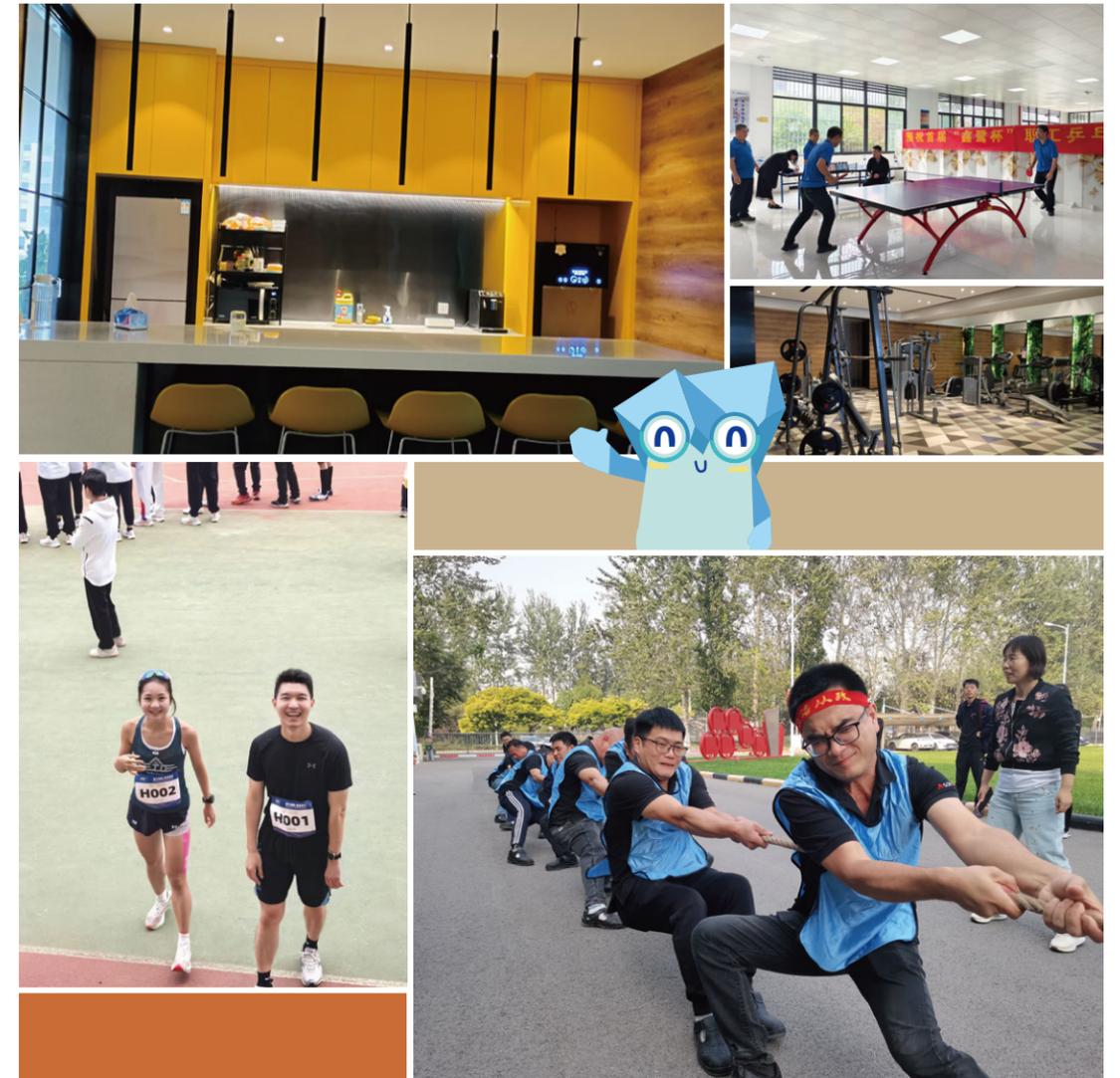
Highlight | AED: Help Within Reach

In 2024, Luoyang Yulu optimized its on-site emergency response infrastructure by strategically installing Automated External Defibrillators (AEDs) across the facility, ensuring that all employees can access emergency equipment within three minutes. We also conducted training sessions and skills competitions on "Cardiopulmonary Resuscitation (CPR) + AED Operation." Proficiency in CPR and AED usage has been incorporated into employee performance evaluations and compensation adjustment criteria, underscoring our strong commitment to employee health and workplace readiness.



Physical and Recreational Activities

To support employees' physical and mental well-being, we provide facilities such as badminton courts, basketball courts, football fields, and fitness centers. In addition, we organize a variety of sports and recreational activities to enrich employees' leisure time and foster a vibrant workplace culture.



04

Governance

Risk Management

Internal Control and Compliance

Commercial Behaviors

We have always regarded improving corporate governance as an important guarantee for achieving sustainable development. By building a modern governance system aligned with international standards, we actively practice the United Nations Sustainable Development Goals (SDGs), especially Goal 16, which focuses on building effective, accountable, and inclusive institutions. Adhering to the corporate philosophy of "pay attention to details, strive for progressive technology, advance steadily, endeavor to enhance the market share, and focus on long-term interests," we continuously establish and improve a comprehensive enterprise risk management system, striving to achieve a dynamic balance between risk prevention and value creation. The company abides by the highest standards of business ethics, ensuring compliance and integrity in operations to solidify the foundation for corporate development. Additionally, through supply chain management and industrial collaboration, we extend good governance practices across all links of the value chain, promoting the sustainable development of the entire business ecosystem.

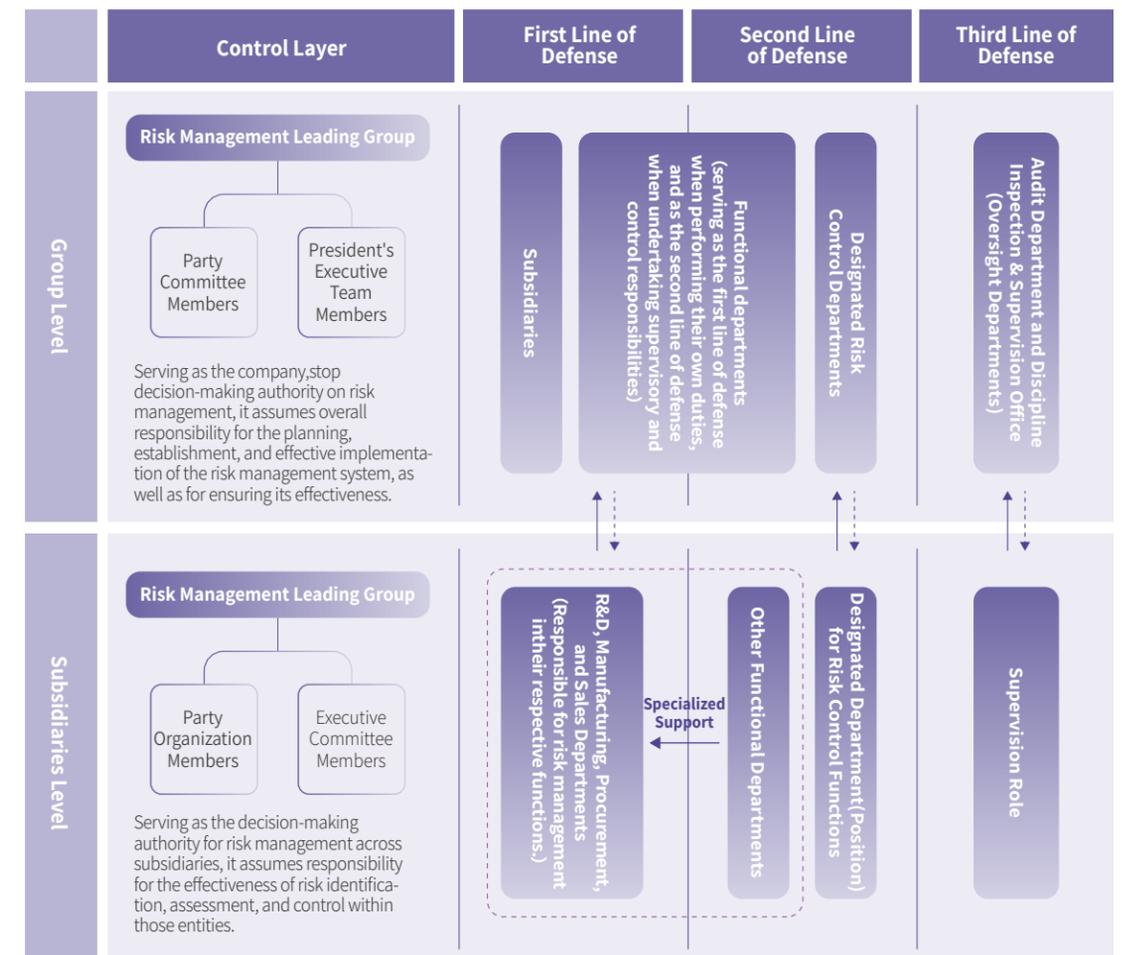
Governance Matters	2024 Management Objectives	Practical Measures
Risk Management 	<ul style="list-style-type: none"> Promote the development of the company's comprehensive risk management system and gradually expand the scope of pilot projects to include affiliated enterprises. 	<ul style="list-style-type: none"> Establish and improve a comprehensive risk management system "centered on business units and goal-oriented," continuously optimizing risk management policies and processes. Through dynamic control covering the entire operation and business activities before, during, and after events, improve the level of risk management. Continuously improve the company's risk management mechanism by establishing and optimizing a closed-loop management process that includes risk identification, risk analysis, risk response, risk tracking and reporting, supervision, and continuous improvement.
Internal Control and Compliance 	<ul style="list-style-type: none"> Establish and improve the internal control system, continuously enhancing internal control policies and processes 	<ul style="list-style-type: none"> Focus on business objectives, align with the company's management model and business practices, and continuously improve the internal control system, driving the development of internal control policies and processes. Deepen the implementation of internal inspection and supervision mechanisms through internal management audits, internal control evaluations, and other methods, promptly identify issues, and implement corrective actions to improve internal controls and enhance business management levels.
Commercial Behaviors 	<ul style="list-style-type: none"> Eliminate any conflicts of interest Eliminate any insider trading incidents Eliminate any unfair competition practices Eliminate any involvement in money laundering activities Actively conduct integrity education activities to ensure 100% employee participation Adhere to legal tax payment and ensure no tax-related violations occur 	<ul style="list-style-type: none"> Always uphold high-standard business ethics as the fundamental principle and code of conduct in business operations. Adhere to honest and compliant operations, and establish a "Code of Business Conduct" to guide and regulate the behavior of all employees in the company and its affiliated enterprises at all levels. Improve a horizontal collaborative supervision mechanism, build a comprehensive integrity supervision network, and establish and improve mechanisms for cross-checking supervision, work exchange, special supervision, and integrity risk prevention tests, continuously strengthening the prevention and control of integrity risks. Strictly comply with Chinese laws and regulations, as well as relevant tax laws, regulations, and policies in each business location. Adhere to compliance, honest tax payment, and transparent management principles in tax matters, actively prevent and manage tax risks, and ensure tax compliance. Establish and improve a complaint and reporting mechanism, encouraging all stakeholders to report any violations of business ethics or raise concerns and suggestions regarding business ethics, human rights protection, and other matters. Implement a series of whistleblower protection measures to safeguard the legal rights and interests of whistleblowers.

Risk Management

A comprehensive risk management system is the foundational support for the long-term and stable development of an enterprise. We have established a risk management system that covers all business areas, centered around business units and guided by the achievement of goals, based on our actual business operations and development. In alignment with the ISO 31000 risk management framework standards, we have developed the "Comprehensive Risk Management System" and the "Operational Guidelines for Comprehensive Risk Management," integrating risk management requirements deeply into daily business decisions and processes. We cultivate a risk management culture that involves all employees, ensuring that business activities are carried out in an orderly manner under the premise of manageable risks, thereby building a solid defense for the sustainable growth of the enterprise.

◎ Risk Management Structure

We have established a clear risk management structure and incorporated the effectiveness of risk management into the annual performance evaluation system to effectively implement risk management responsibilities. In cases where significant risks arise due to decision-making errors, management negligence, inappropriate actions, or other reasons, resulting in losses to the company, we will hold the responsible individuals accountable in accordance with internal regulations.



Risk Reporting

We have established and implemented a risk reporting mechanism to continuously monitor the risk landscape across various areas, track the effectiveness of risk response plans, and summarize risk management activities in a timely manner. Additionally, through emergency drills, we assess the effectiveness of risk emergency plans, analyze and summarize the plans, and improve our risk response and recovery capabilities. The specific management measures of the risk reporting mechanism include:

Affiliated enterprises must report risk management status in a timely manner through regular reports, annual reports, special reports on major risks, and risk event reports, as required.

When a major risk event occurs, the department where the risk arises must report it to the Risk Management Leading Group immediately, assess the outcome of the event, and develop a response plan. The Risk Management Department will then coordinate with relevant departments to implement risk response measures. In addition, major risk events of a special nature must also be reported in a timely manner to the corresponding functional management departments and the Legal and Risk Management Department at headquarters, in accordance with the specified time requirements.

We regularly conduct self-assessments on the implementation of risk management in our affiliated enterprises and accept supervision from the risk management functional departments. This allows us to identify and address any gaps in risk management, continuously improving our risk management capabilities. The Audit Department, in conjunction with annual audits and special audits, supervises and evaluates whether each affiliated enterprise is conducting risk management in compliance with regulations and the effectiveness of their risk management efforts. The findings are then reported to the Risk Management Leading Group.

© Risk Control and Compliance Education

We place great emphasis on cultivating risk awareness among all employees and consider risk management an important part of employee training. We have established a "Group Policy Portal" platform to release newly added or revised risk management and internal control-related policies in real-time. We also regularly organize specialized risk management training sessions, case studies, and experience-sharing activities to help employees understand the importance of risk management and master basic skills in risk identification and prevention. We actively foster a corporate culture that values risk management, encouraging employees to proactively identify and report potential risks in their daily work to ensure the stable operation of the company. During the reporting period, we conducted 17 sessions of comprehensive risk management training and coaching sessions in pilot companies.



Internal Control and Compliance

We continuously improve our internal control system in align with our operational goals, management model, and business practices. We advance the development of internal control policies and procedures, strengthen the verification and supervision mechanisms, and enhance internal controls to effectively mitigate major operational risks. The Board of Directors has established an Audit Committee responsible for overseeing and reviewing the internal control system and the implementation of our internal control framework. Our Audit Department supervises and reviews the development and execution of internal control systems across our company and our subsidiaries, and follows up on necessary rectifications. The Audit Department reports to the Audit Committee and provides regular updates.



We reinforce internal oversight by conducting special audits, internal control evaluations, targeted reviews of major matters, and routine inspections. These efforts help identify operational risks and any weaknesses or deficiencies in the internal control system in a timely manner, prompting relevant units to take corrective actions. Together, these actions contribute to the continuous improvement of internal controls, enhancement of management efficiency, and prevention of risks.

© Special Audit

Focusing on key aspects of operations and business activities, we carry out special audits of our subsidiaries to promptly identify shortcomings in management and ensure corrective actions are implemented. These efforts serve to intensify oversight, enhance the management capabilities of subsidiaries, and improve their ability to manage risks. During the reporting period, we conducted the following special audit activities:

Special Audit on Inventory Management	We conducted special audits on inventory management at 19 subsidiaries, reviewing the soundness of inventory management systems and the effectiveness of their implementation. The audits aimed to strengthen demand planning, inbound and outbound approval processes, warehouse operations, and the control of obsolete or slow-moving inventory, thereby improving asset utilization efficiency.
Special Audit on Project Management	We conducted special audits on project management for two subsidiaries, focusing on project investment planning, early-stage project development, process control during implementation, the formulation and enforcement of project management policies, payment procedures, final settlement execution, asset authenticity, and project effectiveness. These audits aimed to enhance subsidiaries' project management capabilities.
Special Audit on Internal Management	We conducted special audits on internal management at two subsidiaries, evaluating the design and implementation of internal control systems. Based on the findings, we provided guidance was provided to improve approval procedures and internal processes, further standardizing subsidiary operations and enhancing risk mitigation capabilities.
Accountability Audit	We conducted accountability audits at seven subsidiaries, aiming to promote improvements in business operations and support the achievement of strategic objectives.

© Internal Control Evaluation

During the reporting period, we conducted internal control reviews and evaluations at our headquarters and 12 subsidiaries. These evaluations covered key business areas, including procurement, sales, contract management, asset management, and cash flow operations. The process enabled the timely identification of deficiencies in both the design and implementation of internal controls, with corrective measures promptly carried out. These efforts helped strengthen our internal control framework and enhance overall risk management capabilities.

Commercial Behaviors

We regard integrity as a fundamental principle of our operations and have established a high-standard "Code of Business Conduct" to serve as the foundational guideline for business practices and behavioral expectations. This code defines clear ethical boundaries for all business activities. In conducting our operations, we adhere to the principles of transparency and fairness, fostering long-term partnerships based on mutual trust. We have also put in place effective supervision mechanisms and reporting channels to ensure that ethical standards are rigorously upheld. By regularly promoting ethics awareness and conducting case-based warning education, we strengthen employees' ethical awareness and sense of self-discipline. A culture of integrity is deeply embedded in our values, helping shape a trustworthy brand image and earning the trust and respect of stakeholders.

⊙ Anti-Commercial Bribery and Anti-Corruption

We maintain a zero-tolerance policy toward all forms of corruption and bribery. We have established the "Management Regulations on Anti-Corruption and Anti-Bribery," which clearly define prohibited conduct, including accepting or offering bribes, soliciting any direct or indirect benefits from individuals or organizations, and misappropriating company assets by taking advantage of one's position. All employees are strictly required to comply with our standards of integrity and self-discipline.

We have established a four-tier disciplinary supervision structure composed of the Communist Party of China (CPC) Disciplinary Committee of Xiamen Tungsten Co., Ltd. (hereinafter referred to as the "XTC Disciplinary Committee" or "Disciplinary Committee"), regional disciplinary inspection teams, company-level disciplinary bodies, and disciplinary inspection commissioners at the grassroots level. Innovatively, we have developed a vertically integrated supervision mechanism known as "Office-Team-Enterprise" (referring to the Disciplinary Inspection and Supervision Office at XTC headquarters, regional inspection teams, and disciplinary officers at subsidiaries). Meanwhile, we continue to improve our horizontally coordinated supervision system. Led by the XTC Disciplinary Committee, this system integrates the efforts of the Disciplinary Inspection and Supervision Office, the Audit Department, functional departments, and relevant positions at subsidiaries, forming a comprehensive integrity supervision network. A series of institutional mechanisms have been put in place, including cross-inspection mechanisms, communication and coordination mechanisms, thematic supervision mechanisms, and walkthrough testing for integrity risk control. These efforts aim to further integrate discipline inspection with our development and strengthen supervisory oversight.

We have formulated the "Accountability Management Measures," establishing procedures for holding individuals accountable for violations of integrity requirements across both our headquarters and subsidiaries. The measures set out detailed provisions for accountability in areas such as internal management and risk control, labor discipline and behavioral standards, procurement and sales oversight, safety and environmental protection, and self-discipline in integrity. Violations are handled strictly in accordance with relevant regulations and disciplinary rules. For individuals held responsible, we may, in accordance with the regulations, impose disciplinary actions including, but not limited to, public criticism, admonition, suspension, job reassignment, demotion, removal from office, deduction or recovery of performance-based compensation or term-based incentive income, and the clawback of medium- to long-term incentive benefits.

During the reporting period, we continued to improve our disciplinary supervision system by revising the "Administrative Measures for Regional Discipline Inspection Team Leaders" and the "Work Procedures for Quarterly Thematic Walkthrough Testing on Integrity Risk Control." Through coordinated "Office-Team-Enterprise" supervision, walkthrough testing on integrity risk control, and efficiency inspections, we urged relevant functional departments and subsidiaries to further refine their operational management systems. In addition, we launched a group-wide information system for reviewing and tracking feedback on Party conduct and integrity. During the year, a total of 1,124 responses were issued regarding internal promotions of cadres at subsidiaries.



Integrity Risk Management

We have established a sound mechanism for identifying and assessing integrity risks, conducting a comprehensive review of all operational processes. The scope covers 19 business modules, including financial budgeting, corporate governance, procurement management, sales management, manufacturing, and operations management. For each module, we have identified potential integrity risk points in key areas and critical steps, and formulated corresponding preventive and control measures. These efforts are consolidated into the "XTC Integrity Risk Prevention and Control Manual." Based on actual operational conditions, we conduct integrity risk identification and assessments on an ad-hoc basis and continuously review and update the "XTC Integrity Risk Prevention and Control Manual" accordingly.

Our Disciplinary Committee continues to improve the audit and oversight mechanism for integrity risk prevention and control, further deepening its implementation. Through pre-event supervision, the Company enhances control over "Major decision-making, major personnel appointments and dismissals, major project investment decisions, and large fund utilization" decision-making matters at both the Company and its subsidiaries. Relevant functional departments and disciplinary inspection officers at subsidiaries incorporate the implementation of this audit mechanism into their routine inspections to ensure effective execution and prevent potential integrity risks. During the reporting period, disciplinary inspection officers attended a total of 495 important meetings at various subsidiaries related to the above matters. A total of 643 self-assessment audit checklists were completed, with corrective measures implemented for identified issues. These efforts contributed to the ongoing standardization and refinement of related decision-making procedures and authority, further improving the precision and effectiveness of oversight.

Our Disciplinary Committee has established and refined key oversight mechanisms, including the "1+X" Special Inspection Measures for Implementing the Central Eight-point Guidelines and the Quarterly Thematic Walk-through Testing Measures for Integrity Risk Prevention and Control. These mechanisms are rigorously enforced to strengthen targeted inspections and walk-through testing focused on integrity risks. We continuously improve our supervision methods and strategies by organizing regional disciplinary inspection team leaders to carry out supervision and inspection activities within their respective jurisdictions. These efforts aim to promptly identify issues in business operations and potential corruption risks, while urging relevant units to enhance internal systems, optimize workflows, and reinforce oversight execution. Through these measures, we proactively prevent integrity risks and help avoid violations and corrupt practices.

Special Supervision

"1+X" Special Supervision

We conducted "1+X" special supervision at 29 subsidiaries, issued 22 rectification recommendation letters, identified 239 issues, and followed up to ensure corrective actions were implemented.

Holiday Inspections

We conducted focused inspections during major holidays—including New Year's Day, Spring Festival, Labor Day, Dragon Boat Festival, Mid-Autumn Festival, and National Day—at 8 subsidiaries through both announced and unannounced visits, as well as "Office-Team-Enterprise" joint supervision supporting Higher-level Disciplinary Committee. A total of 36 issues were identified and fully rectified.

Supervision of Construction Projects

In response to irregularities in engineering bidding and procurement, we launched special rectification actions. A total of 73 subsidiaries conducted self-inspections jointly with relevant functional departments. Thirteen issues were identified and fully rectified.

Labor Employment Rectification Projects

We conducted special supervision on labor employment practices at 21 subsidiaries. Nineteen rectification notices were issued, 58 issues were identified, and corrective actions were implemented.

Rectification on Gifts and Gift Money

We required subsidiaries to establish and improve approval and registration systems for gift procurement and use. The giving or receiving of gifts or monetary gifts in official activities or between internal hierarchical levels was strictly prohibited.

Efficiency Supervision on Supplier Selection and Project Bidding

We conducted efficiency supervision on supplier selection and project bidding processes, identifying 124 issues that were all rectified. A total of 27 internal regulations were introduced across subsidiaries to ensure compliance in material procurement and project execution.

Overseas Project Rectification

We conducted a special inspection on commissions and intermediary fees related to overseas projects at 10 subsidiaries, identifying and rectifying 30 issues. We also carried out a targeted inspection on prominent overseas corruption risks, with 8 overseas entities reviewing five key areas including unauthorized investment and malicious competition. These efforts strengthened our overseas integrity risk control.

Walkthrough Testing on Integrity Risk Control

During the reporting period, we conducted "one theme per quarter" walkthrough testing on integrity risk control, covering 15 topics such as overseas project commissions and intermediary fees, labor employment, bidding management, and scrap material handling. A total of 64 subsidiaries were included in the testing, with 240 issues identified. We issued 58 rectification notices, required subsidiaries to implement corrective actions, and facilitated the revision and improvement of 26 internal policies. These efforts effectively promoted standardized management across subsidiaries.



Supplier Integrity Management

We have formulated and publicly released the "Supplier Code of Conduct", requiring all suppliers to uphold principles of honesty and integrity. Suppliers are strictly prohibited from engaging in any form of corruption, extortion, bribery, coercion, embezzlement, or other improper conduct involving undue benefits.

To mitigate integrity risks in the supply chain, we continue to strengthen supplier management and ethics promotion. Based on actual business needs, our subsidiaries conduct credit risk assessments on potential suppliers and require newly engaged suppliers to sign integrity commitments or agreements. We clearly communicate expectations regarding ethical conduct and integrity, and actively distribute materials such as the "Supplier Management Manual," "Supplier Code of Conduct" to reinforce our standards of business ethics.

Integrity Culture Development Management

We continue to advance the development of an integrity-driven culture, providing strong disciplinary support for high-quality corporate development. Our Disciplinary Committee has issued the "Implementation Measures for Integrity Education" and the "Management Measures for Integrity Education and Promotion." By establishing branded programs for integrity education and consistently conducting activities such as awareness campaigns, Party discipline learning sessions, cultural promotion, training seminars, and case-based warning education, we ensure full coverage of integrity education and have further embedded integrity awareness throughout the organization.

During the reporting period, we carried out a series of integrity culture education initiatives, including:

Ongoing awareness and education campaigns

- Distributed warning education materials to subsidiaries at key timepoints, and published 81 case-based warning examples and 10 integrity-themed posters via the official WeChat account "Clean XTC," guiding all employees and managers to learn from real-life cases.
- Organized the writing of internal warning case reflections and released short integrity-themed videos. By highlighting "people around us" and "things around us," we encouraged employees and managers to strengthen their integrity awareness.

Party discipline learning and education

- A dedicated "Party Discipline Learning" section was launched on our "Clean XTC" WeChat account, and key content such as the "Regulations on Disciplinary Actions of the Communist Party of China" was distributed through various channels, including WeChat groups and LED display screens, to help Party members and officials understand boundaries and uphold discipline.
- In collaboration with subsidiaries' Party, labor union, and youth league organizations, we carried out themed activities such as reading sessions, educational site visits, and knowledge competitions. Examples include a youth forum and Party discipline learning reading class held by the XTC New Energy Disciplinary Committee, and the "Dialogue with Honesty, Act with Integrity" warning education event organized by the Chengdu Hongbo Disciplinary Committee. These efforts ensured full coverage and participation in discipline learning activities.

Integrity Promotion Month themed "Empowering with Integrity, Advancing with Clarity"

- Multi-platform outreach: Ten internal models of diligence and integrity were selected and featured on the "Clean XTC" WeChat account. Six thematic posters on typical "profiteering from the enterprise" cases such as—"Improper Interference? Absolutely Not!" and "Related-Party Transactions? Absolutely Not!"—were produced and widely disseminated to create a strong culture of integrity.
- Training and education activities: A total of 51 on-site educational sessions themed "Reflecting on Integrity" were held, reaching 1,388 participants. A bidding system guide was compiled and distributed, and 712 key personnel received targeted training.
- Engaging activities for integrity promotion: Hosted various themed activities such as knowledge quizzes, family letter writing campaigns, and integrity-themed video contests to foster a culture that values and upholds integrity.
- Case-based warning education: Published "Integrity in Practice - Warning Cases Vol. 2" and organized 59 case study sessions for key personnel, with a total of 1,407 attendees.

Featured brands for integrity education

- We launched three dedicated sections on our "Clean XTC" WeChat account—"Integrity Rhythms," "Figures of Integrity," and "Letters of Integrity to Family"—to showcase employee- and family-created integrity-themed cultural works. These efforts promote the concept of "family-enterprise synergy empowered by integrity," extending integrity education beyond working hours into employees' personal lives.
- We integrated the "Discipline Classroom" with our specialized procurement training programs to reinforce integrity awareness in procurement practices. The platform also serves to enhance cross-functional coordination by focusing on topics such as the use of Party and union-related funds, providing guidance and support to subsidiaries.



⊙ Anti-unfair Competition

We strictly comply with the "Anti-Unfair Competition Law of the People's Republic of China," the "Anti-Monopoly Law of the People's Republic of China," and other applicable laws and regulations in both domestic and overseas markets where we operate. We firmly oppose all forms of unfair competition. We have established the "Code of Business Conduct" that sets out clear requirements and declarations regarding antitrust and anti-unfair competition practices. We advocate for free and fair competition, strictly prohibit the use of improper means to obtain competitors' trade secrets, the fabrication or dissemination of false information, and any form of fraudulent or illegal conduct that disrupts market order. We are committed to maintaining a healthy and orderly competitive environment. During the reporting period, we were not involved in any unfair competition practices and did not face any litigation or major administrative penalties related to such conduct.

⊙ Tax Compliance

We strictly abide by China's tax laws and regulations, as well as the applicable tax policies and regulations in all regions where we operate. We adhere to the principles of compliant operations, honest taxation, and transparent management, fulfill our obligations as a taxpayer in accordance with the law, and are committed to becoming a model of integrity in tax compliance, contributing to a fair and orderly tax environment. During the reporting period, we paid a total of 1,296.20 million RMB in taxes and did not experience any tax-related violations.

We identify, assess, and manage tax risks in a systematic manner by establishing and maintaining a sound internal control system and adhering to internal control procedures. We take a proactive approach to the prevention and management of tax-related risks. In our day-to-day tax management, we continuously monitor and follow updates and changes in tax laws and policies. We also maintain communication and engagement with tax authorities both at our headquarters and in the regions where our subsidiaries operate. We regularly consult tax authorities to obtain timely and accurate information on applicable tax policies and operational standards, thereby ensuring full tax compliance.

We organize and participate in internal and external tax compliance training sessions on an ad-hoc basis to enhance the compliance awareness of tax personnel and improve their professional knowledge and practical capabilities. In addition, we actively participate in research activities conducted by national and local tax authorities regarding tax policies that support technological innovation and the development of the manufacturing industry, the impact of tax policies on the company's "going global" strategy, and the effects of global minimum corporate tax rules. We have contributed insights and recommendations in areas including tax policy optimization, implementation of tax incentives, and tax cost management, thereby contributing to improved tax governance with practical insights.



⊙ Complaint Mechanism and Whistleblower Protection Competition

We value feedback from both internal and external stakeholders and encourage employees, customers, suppliers, local communities, and other stakeholder groups to continuously monitor our conduct and report any violations of laws, regulations, company rules, or business ethics. We also welcome suggestions and concerns from stakeholders regarding business ethics, human rights protection, environmental responsibility, and occupational health and safety.

Complaint Mechanism

We have established and continuously improved our complaint and reporting mechanisms, providing stakeholders with multiple accessible channels. We adhere to the principles of fairness and impartiality, strictly following established procedures for accepting, investigating, and handling complaints, and provide timely feedback to complainants on investigation outcomes and corrective actions taken.

Complainants may submit real-name or anonymous reports regarding any individuals or entities suspected of duty-related violations, criminal misconduct, or non-compliant business or investment activities through the following channels:

Complaint and Reporting Hotline: +86-592-3351752

Complaint and Reporting Email: XWJJ@CXTC.COM

Mailing Address: 21st Floor, Tefang Portman Fortune Center Tower A, No. 81 Zhanhong Road, Siming District, Xiamen, Fujian Province, China

In addition to the publicly disclosed channels mentioned above, we also provide employees with clear and direct reporting mechanisms through internal platforms such as the OA system and corporate WeChat, enabling them to submit complaints and suggestions. Subsidiaries have likewise disclosed complaint channels via their official websites and internal networks to receive complaints and reports from stakeholders. In mining areas where we operate, signage displaying complaint and reporting contact information is clearly posted. We also conduct periodic visits and outreach to local residents to receive their feedback and complaints, ensuring timely responses to their concerns.

In addition, to encourage and support stakeholders in reporting concerns to us, a whistleblower reward policy has been established. Complainants whose reported issues are substantiated will be granted a monetary reward based on the extent of direct economic losses avoided. Business partners who proactively report or provide critical information may also be eligible for rewards, subject to case-specific evaluation.

Whistleblower Protection

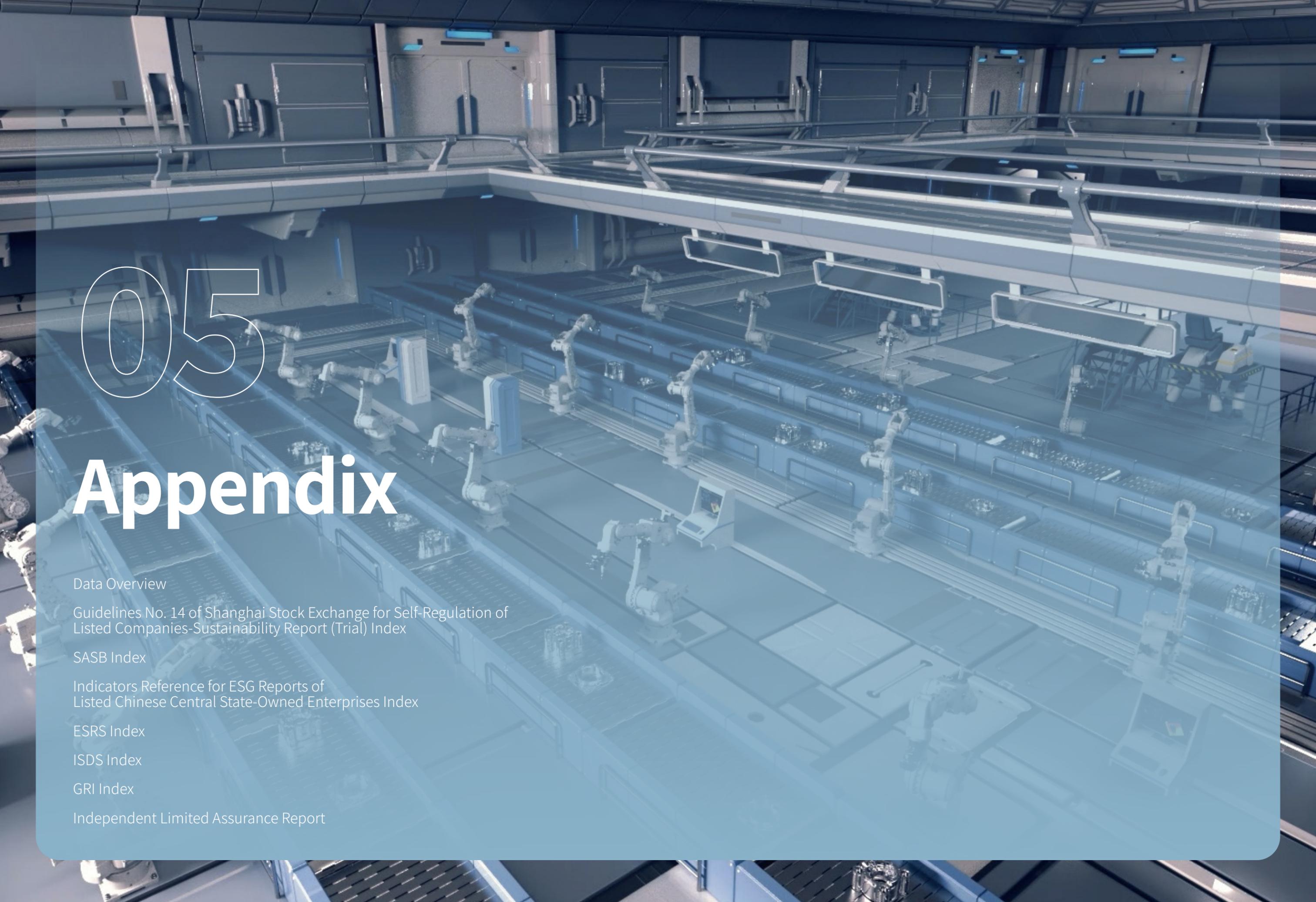
We comply with relevant laws and regulations, as well as internal regulatory documents such as the "Guidelines for Handling Disciplinary Inspection and Supervision Leads" and the "Code of Conduct for Disciplinary Inspection Personnel." In particular, we have formulated the "Whistleblower Protection and Reward Measures" to safeguard the legitimate rights and interests of complainants.

We have implemented the following key measures to protect complainants:

1. Anonymous reporting is allowed, and any attempt to obstruct or suppress lawful complaints and reports under any pretext is strictly prohibited.

2. Strict confidentiality protocols are enforced, with rigorous management of materials and personal information obtained during the handling, registration, storage, and investigation of complaints.

3. Serious consequences are imposed for violations, including the disclosure of complaint-related information or retaliation against complainants. Individuals involved will be held legally accountable in accordance with applicable laws and regulations.



05

Appendix

Data Overview

Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies-Sustainability Report (Trial) Index

SASB Index

Indicators Reference for ESG Reports of Listed Chinese Central State-Owned Enterprises Index

ESRS Index

ISDS Index

GRI Index

Independent Limited Assurance Report

© Data Overview / Environmental

Indicator	Unit	2021	2022	2023	2024
Emissions and Discharge					
GHG Emissions^[1]					
Scope 1 – Direct GHG emissions	tCO ₂ e	63,697.92	92,374.09	119,050.49	127,813.04
Scope 2 – Indirect GHG emissions from purchased energy (market-based)		506,048.41	466,589.87	555,939.33	662,836.03
Total GHG emissions (Scope 1+ Scope 2)		569,746.33	558,963.96	674,989.82	790,649.07
Scope 3 – Other indirect GHG ^[2] emissions		/	/	1,426,485.46	5,761,436.35
Emission intensity	tCO ₂ e / hundred-million RMB of operating revenue	1,788.72	1,159.13	1,713.26	2,246.39
Air Pollutants					
NOx emissions	Ton	15.19	15.56	18.22	14.79
SOx emissions		3.43	3.93	3.10	3.19
PM emissions		81.76	34.82	29.06	25.70
Non-methane total hydrocarbon emissions		/	/	2.57	4.74
Ammonia emissions		/	/	6.15	5.45
Cobalt and its compounds emissions		/	/	0.02	0.03
Nickel and its compounds emissions		/	/	0.02	0.06
Manganese and its compounds emissions		/	/	0.01	0.01
Sulfuric acid mist emissions		/	/	0.94	1.82
Volatile organic compounds emissions		/	/	0.45	0.76
Hydrogen chloride emissions		/	/	2.51	1.39

[1] The total greenhouse gas emissions of the company increased compared to 2023, mainly due to the growth of the company's business during the reporting period.

[2] The increase in Scope 3 emissions in 2024 is mainly due to adjustments in the Scope 3 calculation boundaries and the inclusion of additional emission types. This change is primarily a result of improved reporting boundaries, rather than a significant increase in actual emissions. The company's scope 3 greenhouse gas (GHG) emissions data is calculated based on widely accepted industry methodologies. As scope 3 emissions involve multiple external stakeholders in the value chain, some data is limited by the disclosure level of suppliers or third parties. Therefore, indirect estimations using industry average data, models, or reasonable assumptions are employed, which may introduce a degree of uncertainty in the calculation results. The company will continue to optimize data collection methods and promote supply chain collaboration to enhance transparency.

Indicator	Unit	2021	2022	2023	2024
Wastewater and Wastewater Pollutants					
Wastewater discharge volume	m ³	3,036,337.34	3,657,304.47	4,546,637.26	4,370,095.44
Ammonia nitrogen discharge	Ton	19.64	18.76	19.22	19.33
Chemical oxygen demand discharge		237.15	181.17	229.10	245.83
Total nitrogen discharge		/	/	25.06	20.55
Total lead discharge		/	/	0.06	0.14
Total arsenic discharge		/	/	0.41	0.30
Total nickel discharge		/	/	0.17	0.08
Total chromium discharge		/	/	0.03	0.02
Total cadmium discharge		/	/	0.01	0.04
Total cobalt discharge		/	/	0.45	0.24
Total molybdenum discharge		/	/	0.03	0.03
Total zinc discharge		/	/	0.05	0.04
Total copper discharge		/	/	0.01	0.04
Total manganese discharge		/	/	0.29	0.18
Total phosphorus discharge		/	/	2.26	2.05
Total iron discharge		/	/	0.01	0.03
Hazardous Waste					
Transfer and disposal volume of hazardous waste	Ton	/	1,444.53	1,419.52	1,319.14
General Waste					
Industrial waste generated ^[3]	Ton	/	/	84,091.64	85,269.69
Industrial waste recycled		/	/	38,441.26	41,948.27

[3] The amount of industrial waste generated by the company increased compared to 2023, mainly due to the growth of the company's business during the reporting period.

Indicator	Unit	2021	2022	2023	2024
Tailings Slag					
Annual waste rock volume	Ton	/	/	8,645,260.20	9,775,323.13
Annual tailings volume		/	/	3,350,299.09	6,421,962.45
Total slag volume		/	/	11,995,559.28	13,155,357.35
Total recycled slag volume		/	/	1,701,500.93	2,297,597.35
Used tailings pond capacity		/	/	45,034,672.11	47,523,639.40
Resource Consumption					
Energy Consumption					
Electricity consumption ^[4]	kWh	1,320,019,912.25	1,306,800,564.19	1,631,612,744.27	1,828,341,666.09
Including: Green electricity consumption		/	637,424,211.20	810,047,274.25	857,796,797.86
Including: Nuclear power consumption		/	/	698,490,555.07	571,791,536.12
Photovoltaic power consumption		/	/	8,165,697.49	16,885,954.26
Wind power consumption		/	/	80,996,041.69	198,845,956.49
Hydropower consumption		/	/	22,394,980.00	70,273,351.00
Green power proportion	%	/	48.78	49.65	46.92
Steam consumption	Ton	278,905.08	327,082.90	282,283.46	341,749.66
Natural gas consumption	m ³	9,850,320.79	13,788,147.96	21,329,644.73	22,700,128.41
Coal consumption	Ton	5,692.00	5,752.66	6,453.55	6,835.92
Liquefied gas consumption		/	16.78	18.00	3.79
Gasoline consumption	Litre	324,453.44	256,157.90	254,199.65	201,790.25
Diesel consumption ^[5]		1,534,911.05	3,611,015.08	3,764,841.67	4,454,731.18
Energy intensity	tce/hundred-million RMB of operating revenue	661.12	459.93	679.70	846.52

[4] The company's electricity consumption increased compared to 2023, mainly due to the growth of the company's business during the reporting period.

[5] The company's diesel consumption increased compared to 2023, mainly due to the growth of the company's business during the reporting period.

Indicator	Unit	2021	2022	2023	2024
Water Resources					
Water withdrawal	m ³	6,754,152.70	6,372,160.03	6,709,167.95	5,601,943.41
Water consumption		3,717,815.36	2,714,855.56	2,162,530.69	1,231,847.97
Water use intensity	m ³ /hundred-million RMB of operating revenue	11,672.09	5,629.91	5,488.95	3,499.92

☉ Data Overview / Employment

Indicator	Unit	2021	2022	2023	2024
Total Employees					
Total number of employees	Person	14,508	15,912	17,549	17,899
Including: Employees with signed labor contracts		/	/	16,971	17,344
Other workers ^[6]		/	/	578	555
Employee Composition					
Employee Composition by Gender					
Male	Person	10,679	11,702	12,842	13,085
Female		3,829	4,210	4,707	4,814
Employee Composition by Age					
Under 30	Person	3,472	3,966	4,853	4,978
Between 30-50		9,794	10,763	11,392	11,434
Over 50		1,242	1,183	1,304	1,487

[6] Other workers include labor dispatch personnel, rehired retirees, interns.

Indicator	Unit	2021	2022	2023	2024
Employee Composition by Nationality					
China	Person	/	/	17,406	17,785
Brazil		/	/	12	14
Germany		/	/	9	6
South Korea		/	/	1	1
Japan		/	/	5	3
Thailand		/	/	116	87
Georgia		/	/	/	1
Malta		/	/	/	1
Vietnam		/	/	/	1
Employee Composition by Education					
Doctorate	Person	48	45	53	61
Master's degree		557	607	761	935
Bachelor's degree		2,922	3,339	3,652	3,885
College degree		1,829	2,006	2,091	2,246
Below college degrees		9,152	9,915	10,992	10,772
Employee Composition by Function					
Production personnel	Person	10,351	11,350	12,691	12,479
Sales personnel		542	643	680	677
Technical personnel		1,499	1,724	1,935	2,258
Financial personnel		246	263	266	274
Administrative personnel		1,870	1,932	1,977	2,211
Female production personnel		/	/	3,230	3,257
Female sales personnel		/	/	231	197
Female technical personnel		/	/	287	390
Female financial personnel		/	/	166	152
Female administrative personnel		/	/	793	818

Indicator	Unit	2021	2022	2023	2024
Management Composition					
Management team (mid-level management and above, including senior management)	Person	/	690	662	654
Including: Senior management		/	/	5	5
Female management (mid-level management and above, including senior management)		78	122	112	96
Including: Female senior management		/	17	1	1
Proportion of female management (mid-level management and above, including senior management)	%	11.84	17.68	16.92	14.68
Proportion of female senior management	%	/	/	20.00	20.00
Local Employment					
Number of employees hired from the local province	Person	/	/	12,506	12,551
Proportion of employees hired from the local province	%	/	/	71.26	70.12
Number of female employees hired from the local province	Person	/	/	3,342	3,332
Proportion of female employees hired from the local province	%	/	/	71.00	69.21
Number of senior management hired from the local province	Person	/	/	4	5
Proportion of senior management hired from the local province	%	/	/	80.00	100.00
Number of female senior management hired from the local province	Person	/	/	1	1
Proportion of female senior management hired from the local province	%	/	/	100.00	100.00
Signing of Labor Contracts					
Labor contract signing rate	%	/	/	100.00	100.00
Employment of Disabled Individuals					
Number of employees with disabilities	Person	/	20	37	24
Proportion of employees with disabilities	%	/	0.13	0.21	0.13

Indicator	Unit	2021	2022	2023	2024
Employee Turnover ^[7]					
Number of employees at the beginning of the year	Person	/	/	15,494	16,971
Number of new hires for the year		/	/	6,324	5,400
Number of employee departures		/	/	4,772	4,847
Including: Number of male employee departures		/	/	3,767	3,459
Number of female employee departures		/	/	1,005	1,388
Including: Number of Chinese employee departures		/	/	4,698	4,808
Number of Thai employee departures		/	/	71	32
Number of German employee departures		/	/	2	3
Number of Japanese employee departures		/	/	1	0
Number of Brazilian employee departures		/	/	/	3
Number of Uruguayan employee departures	/	/	/	1	
Annual turnover rate	%	/	/	21.87	21.67
Employee Training					
Annual investment in employee training	Ten-thousand RMB	/	/	1,161.49	1,077.66
Total number of employee training participants	Participant	/	/	/	104,804
Total training hours	Hour	/	/	/	446,475

[7] Employee turnover statistics covers staff with signed labor contracts

© Data Overview / Occupational Health and Safety

Indicator	Unit	2021	2022	2023	2024
Work Safety Investment					
Annual work safety investment	Ten-thousand RMB	/	11,932.72	14,555.58	14,885.82
Work Safety Training and Emergency Drills					
Total number of work safety training participants	Participant	62,289	49,751	64,957	81,793
Total work safety training hours	Hour	117,019	112,195	112,341	114,915
Number of safety training sessions	Times	/	/	2,406	3,336
Number of safety emergency drills	Times	/	621	648	1,152
Number of participants in safety emergency drills	Participant	/	/	27,232	32,495
Work Safety Accident					
Extra-major accident	Case	0	0	0	0
Major accident		0	0	0	0
Serious accident		0	0	0	0
Number of work-related injury accidents		/	19	26	21
Occupational Health and Safety Performance					
Number of work-related injuries	Person	/	19	26	21
Number of work-related fatalities		0	0	0	0
Work-related fatality rate	%	0.00	0.00	0.00	0.00
Total hours lost due to work-related injuries	Day	/	/	/	540
Total Lost Worktime Rate	/	/	/	/	96.25
Lost Time Incident Rate (LTIR)	/	/	/	/	0.47

◎ Data Overview / Market

Indicator	Unit	2021	2022	2023	2024
R&D Investment and Personnel					
Annual R&D investment	Ten-thousand RMB	127,575.35	172,893.94	160,857.08	145,615.49
R&D investment as a percentage of revenue from core business	%	/	/	/	4.21
Number of R&D personnel	Person	/	/	/	2,624
Proportion of R&D personnel	%	/	/	/	14.66
Intellectual Property					
Number of new patent applications	Item	137	453	427	410
Number of new patents granted		110	384	337	325
Number of new copyright registrations		/	/	9	11
Number of new trademark applications		/	/	65	46
Number of new trademark registrations		/	/	28	66
Number of patents held as of the end of 2024		/	/	/	1,973
Number of copyrights held as of the end of 2024		/	/	/	117
Number of trademarks held as of the end of 2024		/	/	/	765
Number of intellectual property disputes	Case	/	/	/	0
Information Security and Customer Privacy Breaches					
Information security incidents	Case	/	/	/	0
Customer privacy breaches		/	/	/	0
Non-affiliated Suppliers (By Region)					
Number of non-affiliated suppliers in Mainland China	Count	4,355	4,576	4,678	4,635
Number of non-affiliated suppliers in other regions		172	179	162	144
Total number of non-affiliated suppliers		4,527	4,755	4,840	4,779

◎ Data Overview / Social Contributions

Indicator	Unit	2021	2022	2023	2024
Volunteer Service					
Total number of volunteer participants	Participant	576	696	1,019	802
Total volunteer hours	Hour	2,777	2,469	1,618	2,644.50
National Strategy Response					
Green and low-carbon industry transition	Ten-thousand RMB	/	/	/	269.87
Rural revitalization		/	/	221.44	247.56
The Belt and Road Initiative and overseas responsibility		/	/	8,529.74	8,267.89
Industry-specific and other social responsibilities		/	/	505.72	273.71
Social Donations					
Total amount of social donations	Ten-thousand RMB	723.77	823.36	674.22	548.78

◎ Data Overview / Governance

Indicator	Unit	2021	2022	2023	2024
Violations of Business Ethics					
Number of conflict of interest incidents	Case	/	/	/	0
Number of money laundering or insider trading incidents		/	/	/	0
Number of incidents involving litigation or significant administrative penalties due to unfair competition practices		/	/	/	0

© Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies-Sustainability Report (Trial) Index

Topics	Articles	Location
Chapter III Environmental Disclosure		
Climate change tackling	Article 21-28	Climate Response
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Waste disposal	Article 31	Waste Disposal
Ecosystem and biodiversity protection	Article 32	Ecosystem and Biodiversity Protection
Environmental compliance management	Article 33	Environmental Compliance Management
Energy usage	Article 35	Energy Usage
Usage of water resources	Article 36	Usage of Water Resources
Circular economy	Article 37	Circular Economy
Chapter IV Social Disclosure		
Rural revitalization	Article 39	Industrial Support for Rural Revitalization
Contributions to the society	Article 40	Community Engagement for Shared Prosperity
Innovation-driven	Article 42	Innovation-driven Development
Ethics of science and technology	Article 43	Not Applicable
Supply chain security	Article 45	Supply Chain Security and Resilience Responsible Mineral Management
Equal treatment to small and medium-sized enterprises	Article 46	Equal Treatment to Small and Medium-sized Enterprises
Safety and quality of products and services	Article 47	Safety and Quality of Products and Services
Data security and customer privacy protection	Article 48	Data Security and Customer Privacy Protection
Employees	Article 50	Employees
Chapter V Corporate Governance Information Related to Sustainable Development Disclosure		
Due diligence	Article 52	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts Supply Chain Security and Resilience
Communications with stakeholders	Article 53	Communications with Stakeholders
Anti-commercial bribery and anti-corruption	Article 55	Anti-Commercial Bribery and Anti-Corruption
Anti-unfair competition	Article 56	Anti-unfair Competition

© SASB Index

SASB Topics	Accounting Metrics	Location
Greenhouse Gas Emissions	EM-MM-110a.1: Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	GHG Emissions Management Data Overview
	EM-MM-110a.2: Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions,emissions reduction targets, and an analysis of performance against those targets	Climate Strategy
Air Quality	EM-MM-120a.1: Air emissions of the following pollutants: (1) CO, (2) NOX (excluding N ₂ O), (3) SOX, (4) particulate matter (PM10), (5) mercury (Hg), (6) lead (Pb), and (7) volatile organic compounds (VOCS)	Waste Gas Emissions Management Data Overview
Energy Management	EM-MM-130a.1: (1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	Climate Strategy Energy Usage Data Overview
Water Management	EM-MM-140a.1: (1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	Usage of Water Resources Data Overview
	EM-MM-140a.2: Number of incidents of non-compliance associated with water quality permits,standards and regulations	Usage of Water Resources
Waste & Hazardous Materials Management	EM-MM-150a.4 Total weight of non-mineral waste generated	Waste Disposal Data Overview
	EM-MM-150a.5: Total weight of tailings produced	Waste Disposal Data Overview
	EM-MM-150a.6: Total weight of waste rock generated	Waste Disposal Data Overview
	EM-MM-150a.7: Total weight of hazardous waste generated	Waste Disposal Data Overview
	EM-MM-150a.8: Total weight of hazardous waste recycled	Waste Disposal Circular Economy Data Overview
	EM-MM-150a.9: Number of significant incidents associated with hazardous materials and waste management	Waste Disposal
	EM-MM-150a.10: Description of waste and hazardous materials management policies and procedures for active and inactive operations	Waste Disposal
	EM-MM-160a.1: Description of environmental management policies and practices for active sites	Ecosystem and Biodiversity Protection
	EM-MM-160a.2: Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation	Not covered in this report
	EM-MM-160a.3: Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Not covered in this report

SASB Topics	Accounting Metrics	Location
Security, Human Rights & Rights of indigenous Peoples	EM-MM-210a.1: Percentage of (1) proved and (2) probable reserves in or near areas of conflict	Not applicable
	EM-MM-210a.2: Percentage of (1) proved and (2) probable reserves in or near indigenous land	Not applicable
	EM-MM-210a.3: Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	CommunityEngagement for Shared Prosperity Responsible Mineral Management
Community Relations	EM-MM-210b.1: Discussion of process to manage risks and opportunities associated with community rights and interests	Community Engagement for Shared Prosperity
	EM-MM-210b.2: Number and duration of non-technical delays	Not applicable
Labour Relations	EM-MM-310a.1: Percentage of active workforce covered under collective bargaining agreements, broken down by U.S.and foreign employees	Equal Employment Data Overview
	EM-MM-310a.2: Number and duration of strikes and lockouts.	Not covered in this report
Workforce Health & Safety	EM-MM-320: (1)MSHA all-incidence rate, (2) fatality rate (3) near miss frequency rate (NMFR) and (4) average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees	Data Overview
Business Ethics & Transparency	EM-MM-510a.1: Description of the management system for prevention of corruption and bribery throughout the value chain	Anti-Commercial Bribery and Anti-Corruption
	EM-MM-510a.2: Production in countries that have the 20lowest rankings in Transparency International's Corruption Perception index	Not covered in this report
Tailings Storage Facilities Management	EM-MM-540a.1: Tailings storage facility inventory table: (1)facility name, (2) location, (3) owner ship status, (4) operational status, (5) construction method, (6) maximum permitted storage capacity, (7) current amount of tailings stored, (8) consequence classification, (9) date of most recent independent technical review, (10) material findings, (11) mitigation measures (12) site-specific EPRP	Environmental Compliance Management Tailings Pond Safety Management
	EM-MM-540a.2: Summary of tailings management systems and governance structure used to monitor and maintain the stability of tailings storage facilities	Tailings Pond Safety Management

© Indicators Reference for ESG Reports of Listed Chinese Central State-Owned Enterprises Index **Environmental**

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
E.1 Resource Consumption	E.1.1 Water Resource	E.1.1.1 Fresh-water consumption	Data Overview
		E.1.1.2 Circulating water usage	Usage of Water Resources Data Overview
		E.1.1.3 The proportion of circulating water usage	Usage of Water Resources Data Overview
		E.1.1.4 Water resource consumption intensity	2024 Economic, Environmental and Social Impact Data Overview
	E.1.2 Materials	E.1.2.1 Consumption of non-renewable materials	Data Overview
		E.1.2.2 Consumption of toxic and hazardous materials	Not covered in this report
		E.1.2.3 Material consumption intensity	Not covered in this report
	E.1.3 Energy	E.1.3.1 Fossil energy consumption	Energy Usage Data Overview
		E.1.3.2 Non-fossil energy consumption	Climate Strategy Energy Usage Data Overview
		E.1.3.3 The proportion of non-fossil energy consumption	Climate Strategy Energy Usage
		E.1.3.4 The total energy consumption	Energy Usage Data Overview
		E.1.3.5 The energy consumption intensity	2024 Economic, Environmental and Social Impact
	E.1.4 Packaging materials	E.1.4.1 The amount of packaging materials used	Data Overview
		E.1.4.2 Light-weighting and reduction of packaging materials	Circular Economy
E.2 Pollution prevention and control	E.2.1 Wastewater	E.2.1.1 The compliance status of wastewater discharge	Wastewater Discharge Management
		E.2.1.2 Wastewater management and emission reduction measures	Wastewater Discharge Management
		E.2.1.3 Volume of wastewater discharge	Data Overview
		E.2.1.4 Volume of pollutants discharged in wastewater	Wastewater Discharge Management Data Overview
		E.2.1.5 Concentration of pollutants discharged in wastewater	Wastewater Discharge Management
	E.2.2 Exhaust Air	E.2.2.1 Compliance status of exhaust gas emissions	Wastewater Discharge Management
		E.2.2.2 Volume of air pollutants emitted	Wastewater Discharge Management Data Overview
		E.2.2.3 Concentration of air pollutants emitted	Wastewater Discharge Management
	E.2.3 Solid waste	E.2.3.1 Compliance with legal regulations on solid waste disposal	Waste Disposal
		E.2.3.2 Management of genera industrial solid waste	Waste Disposal
E.2.3.3 Disposal volume of general industrial solid waste		Waste Disposal Data Overview	
E.2.3.4 Management of hazardous waste		Waste Disposal	
E.2.3.5 Volume of hazardous waste disposed		Waste Disposal Data Overview	

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
E.3 Climate change	E.3.1 GHG emissions	E.3.1.1 Sources and types of GHG emissions	GHG Emissions Management
		E.3.1.2 GHG Emissions Management Management of greenhouse gas emissions	GHG Emissions Management
		E.3.1.3 Scope 1 emission	GHG Emissions Management Data Overview
		E.3.1.4 Scope 2 emission	GHG Emissions Management Data Overview
		E.3.1.5 Scope 3 emission	GHG Emissions Management Data Overview
		E.3.1.6 GHG emission intensity	2024 Economic, Environmental and Social Impact Data Overview
	E.3.2 Emission reduction management	E.3.2.1 Management of GHG emission reduction	Climate Strategy
		E.3.2.2 GHG emission reduction	Climate Strategy
	E.3.3 Environmental rights trading	E.3.3.1 Participation in the carbon emissions trading market	Not covered in this report
		E.3.3.2 Participation in the energy rights, water rights, and pollution rights trading markets	Usage of Water Resources Pollutant Discharge
		E.3.3.3 Participation in green electricity trading	Climate Strategy
	E.3.4 Climate risk management	E.3.4.1 Climate risk management	Climate-Related Risks, Opportunities, and Financial Impacts
	E.4 Biodiversity	E.4.1 Impact of production, services, and products on biodiversity	E.4.1.1 Impacts of production, services, and products on biodiversity
E.5 Measures for resource and environmental management systems		E.5.1 Setting Low-Carbon Development Goals and Strategic Measures	E.5.1.1 Setting low-carbon development goals and strategic measures
	E.5.2 Resource management measures	E.5.2.1 Water resource management	Usage of Water Resources
E.5.2.2 Material use management		Climate Strategy Circular Economy	
E.5.2.3 Energy use and energy efficiency management		Energy Usage	
E.5.3 Energy-saving and carbon reduction monitoring, statistical reporting, and assessment system	E.5.3 Energy-saving and carbon reduction monitoring, statistical reporting, and assessment system	Energy Usage	
E.5.4 Green environmental actions and measures	E.5.4.1 Clean production	Pollutant Discharge	
	E.5.4.2 Green technology upgrading and recycling	Climate Strategy Circular Economy	
	E.5.4.3 Green building renovation	Energy Usage	
	E.5.4.4 Green office and operations	Energy Usage Usage of Water Resources	
	E.5.4.5 Green procurement and green supply chain management	Climate Strategy Suppliers and Clients	
	E.5.4.6 Environmental conservation public activities	Not covered in this report	

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
E.5 Green Low-Carbon Certification	E.5.5 Green Low-Carbon Certification	E.5.5.1 Environmental Management System Certification	Environmental Compliance Management
		E.5.5.2 Green and Low-Carbon Enterprise Certification	Climate Strategy
		E.5.5.3 Green and Low-Carbon Product and Service Certification	Climate Strategy
	E.5.6 Legal compliance in environmental matters	E.5.6.1 Emergency Response Plan for Environmental Incidents	Environmental Compliance Management
		E.5.6.2 Environmental violations	Environmental Compliance Management

Social

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
S1 Employee rights	S1.1 Employee recruitment and employment	S1.1.1 Corporate recruitment policy and implementation	Equal Employment Human Rights Protection Employee Development
		S1.1.2 Employee structure	Equal Employment Data Overview
		S1.1.3 Avoiding child labor and forced labor	Human Rights Protection
	S1.2 Employee compensation and benefits	S1.2.1 Compensation philosophy and policy	Employee Compensation and Benefits
		S1.2.2 Working hours and rest and leave	Employee Compensation and Benefits Occupational Health and Safety
		S1.2.3 Compensation and benefits security	Employee Compensation and Benefits
		S1.2.4 Employee democratic management	Employee Communication
	S1.3 Employee health and safety	S1.3.1 Employee occupational health and safety management	Occupational Health and Safety
		S1.3.2 Employee safety risk prevention	Occupational Health and Safety Risk Management
		S1.3.3 Response to safety incidents and work-related injuries	Occupational Health and Safety Incident Management
		S1.3.4 Employee care and assistance	Occupational Health
	S1.4 Employee development and training	S1.4.1 Employee motivation and promotion policy	Employee Development
		S1.4.2 Employee education and training	Employee Development
		S1.4.3 Employee career planning and job change support	Employee Development
	S1.5 Employee satisfaction	S1.5.1 Employee satisfaction survey	Employee Communication
S1.5.2 Labor disputes		Employee Communication	
S1.5.3 Employee turnover situation		Data Overview	

Governance

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
S2 Product and service management	S2.1 Product safety and quality	S2.1.1 Production standard management policies and measures	Safety and Quality of Products and Services
		S2.1.2 Quality management	Safety and Quality of Products and Services
		S2.1.3 Product recall and withdrawal	We did not collect relevant data during this reporting period
		S2.1.4 Negative incidents related to products or services	Safety and Quality of Products and Services
	S2.2 Customer service and rights	S2.2.1 Customer satisfaction	Safety and Quality of Products and Services
		S2.2.2 Customer complaints and handling	Safety and Quality of Products and Services
		S2.2.3 Customer information and privacy protection	Data Security and Customer Privacy Protection
	S2.3 Innovation development	S2.3.1 R&D and innovation management system	R&D and Innovation System
		S2.3.2 R&D investment	R&D and Innovation Achievements Data Overview
		S2.3.3 Innovation achievements	R&D and Innovation Achievements Data Overview
		S2.3.4 Intellectual property protection	Intellectual Property Protection
	S3 Supply Chain Safety and Management	S3.1 Supplier Management	S3.1.1 Supplier selection and management
S3.1.2 Number and distribution of suppliers			Data Overview
S3.2 Supply Chain Management		S3.2.1 Supply chain management policies and measures	Supply Chain Security and Resilience Responsible Mineral Management
		S3.2.2 Supply chain security assurance and emergency plan	Supply Chain Security and Resilience Responsible Mineral Management
		S3.2.3 Major risks and impacts (supply chain)	Supply Chain Security and Resilience Responsible Mineral Management
S4 Social contribution	S4.1 Tax payment situation	S4.1.1 Tax payment situation	2024 Economic, Environmental and Social Impact Tax Compliance
	S4.2 Community co-building	S4.2.1 Policies and measures for participating in local community construction	Rural Revitalization and Social Contributions
		S4.2.2 Contribution and impact on the local community	Rural Revitalization and Social Contributions Data Overview
	S4.3 Social welfare activities	S4.3.1 Policies and measures for participating in social welfare activities	Rural Revitalization and Social Contributions
		S4.3.2 Investment and effectiveness in participating in social welfare activities	Rural Revitalization and Social Contributions Data Overview
		S4.3.3 Construction of an accessible environment	Rural Revitalization and Social Contributions
	S4.4 National strategy response	S4.4.1 Industrial transformation	Carbon Reduction Actions
		S4.4.2 Rural revitalization and regional collaborative development	Rural Revitalization and Social Contributions
		S4.4.3 Belt and Road initiative and overseas responsibility fulfillment	Promoting Industry Development
		S4.4.4 Industry characteristics and other social responsibility fulfillment situations	Rural Revitalization and Social Contributions

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location	
G1 Governance strategy and organizational structure	G1.1 Governance strategy and processes	G1.1.1 Governance strategy formulation	Governance Structure and Mechanisms Shareholder Rights Protection	
		G1.1.2 Governance strategy supervision process	Governance Structure and Mechanisms	
		G1.1.3 Governance strategy approval and review process	Governance Structure and Mechanisms	
		G1.1.4 Party-building leadership	Party Building	
	G1.2 Organizational composition and functions	G1.2.1 Ownership responsibilities	Governance Structure and Mechanisms Risk Management	
		G1.2.2 Board of directors, supervisory board, and management organizational structure and functions	Governance Structure and Mechanisms	
		G1.2.3 Appointment procedures and composition of the board of directors, supervisory board, and management	Governance Structure and Mechanisms	
	G1.3 Compensation management	G1.3.1 Compensation plan for directors and supervisors	Governance Structure and Mechanisms	
		G1.3.2 Transparency of the board's compensation	Governance Structure and Mechanisms	
		G1.3.3 Reasonableness of management compensation	Governance Structure and Mechanisms Energy Usage Occupational Health and Safety	
	G2 Standardized governance	G2.1 Internal control	G2.1.1 Internal audit	Internal Control and Compliance
			G2.1.2 Internal control structure, mechanisms, and processes	Internal Control and Compliance
G2.2 Integrity construction		G2.2.1 Integrity construction system standards	Anti-Commercial Bribery and Anti-Corruption Complaint Mechanism and Whistleblower Protection	
		G2.2.2 Effectiveness of integrity construction measures	Anti-Commercial Bribery and Anti-Corruption	
G2.3 Fair competition		G2.3.1 Fair competition system standards	Anti-Commercial Bribery and Anti-Corruption Complaint Mechanism and Whistleblower Protection	
		G2.3.2 Effectiveness of fair competition measures	Anti-unfair Competition	
G3 Investor relations management and shareholder rights	G3.1 Investor relations management	G3.1.1 Investor relations management strategy	Investor Relations Management	
		G3.1.2 Investor communication	Investor Relations Management	
		G3.1.3 Construction of investor relations management department	Investor Relations Management	
	G3.2 Shareholder rights	G3.2.1 Shareholder (general) meeting situation	Shareholder Rights Protection	
		G3.2.2 Shareholder communication situation	Shareholder Rights Protection Communications with Stakeholders	
		G3.2.3 Shareholder's right to know and participate in decision-making	Shareholder Rights Protection	
	G3.3 Creditor rights	G3.3.1 Credit situation	Not covered in this report	
		G3.3.2 Bond market performance situation	Not covered in this report	
	G4 Information disclosure transparency	G4.1 Information disclosure system	G4.1.1 Financial information disclosure	Shareholder Rights Protection
G4.1.2 Non-financial information disclosure			Shareholder Rights Protection	
G4.2 Quality of information disclosure		G4.2.1 Regular supervision, audit, and evaluation of all disclosed information	We have already disclose in our 2024 annual report	

Primary Indicators	Secondary Indicators	Tertiary Indicators	Location
G5 Compliant operation and risk management	G5.1 Compliant operation	G5.1.1 Compliant operation system	Risk Management Internal Control and Compliance Anti-Commercial Bribery and Anti-Corruption
		G5.1.2 Construction status of the compliance system	Risk Management Internal Control and Compliance Anti-Commercial Bribery and Anti-Corruption
		G5.1.3 Specific process of compliance review	Risk Management Internal Control and Compliance Anti-Commercial Bribery and Anti-Corruption
	G5.2 Risk management	G5.2.1 Risk identification and early warning	Risk Management
		G5.2.2 Risk control and tracking	Risk Management
		G5.2.3 Risk reporting and management	Risk Management Anti-Commercial Bribery and Anti-Corruption Anti-unfair Competition Data Overview

© **ESRS Index**

European sustainability reporting standards (ESRS)		Location/omission
ESRS 2 General Disclosures		
BP-1	General basis for the preparation of sustainability statements	About This Report
BP-2	Disclosures in relation to specific circumstances	Not covered in this report
GOV-1	The role of the administrative, management and supervisory bodies	Governance Structure and Mechanisms
GOV-2	Information provided to and sustainability matters addressed by the undertaking's administrative, management and supervisory bodies	Governance Structure and Mechanisms Risk Management
GOV-3	Integration of sustainability-related performance in incentive schemes	Governance Structure and Mechanisms Energy Usage Occupational Health and Safety
GOV-4	Statement on due diligence	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts Supply Chain Security and Resilience
GOV-5	Risk management and internal controls over sustainability reporting	Risk Management Internal Control and Compliance Climate-Related Risks, Opportunities, and Financial Impacts
SBM-1	Strategy, business model and value chain	About XTC Climate Strategy Supply Chain Security and Resilience Safety and Quality of Products and Services
SBM-2	Interests and views of stakeholders	Communications with Stakeholders
SBM-3	Material impacts, risks and opportunities and their interaction with strategy and business model	Assessment and Management of Material Matters Risk Management Climate-Related Risks, Opportunities, and Financial Impacts
IRO-1	Description of the processes to identify and assess material impacts, risks and opportunities	Assessment and Management of Material Matters Risk Management
IRO-2	Disclosure requirements in ESRS covered by the undertaking's sustainability statement	Assessment and Management of Material Matters Appendix

European sustainability reporting standards (ESRS)		Location/omission
ESRS E1 Climate Change		
E1-1	Transition plan for climate change mitigation	Climate Strategy
E1-2	Policies related to climate change mitigation and adaptation	Climate Strategy
E1-3	Actions and resources in relation to climate change policies	Climate Strategy
E1-4	Targets related to climate change mitigation and adaptation	Climate Strategy
E1-5	Energy consumption and mix	Energy Usage Data Overview
E1-6	Gross Scopes 1, 2, 3 and Total GHG emissions	GHG Emissions Management Data Overview
E1-7	GHG removals and GHG mitigation projects financed through carbon credits	Not covered in this report
E1-8	Internal carbon pricing	Not covered in this report
E1-9	Anticipated financial effects from material physical and transition risks and potential climate-related opportunities	Climate-Related Risks, Opportunities, and Financial Impacts Assessment and Management of Material Matters
ESRS E2 Pollution		
E2-1	Policies related to pollution	Pollutant Discharge Waste Disposal
E2-2	Actions and resources related to pollution	Pollutant Discharge Waste Disposal
E2-3	Targets related to pollution	Environmental
E2-4	Pollution of air, water and soil	Pollutant Discharge Waste Disposal Ecosystem and Biodiversity Protection
E2-5	Substances of concern and substances of very high concern	Pollutant Discharge Waste Disposal
E2-6	Anticipated financial effects from pollution-related impacts, risks and opportunities	Climate-Related Risks, Opportunities, and Financial Impacts Assessment and Management of Material Matters
ESRS E3 Water and Marine Resources		
E3-1	Policies related to water and marine resources	Usage of Water Resources
E3-2	Actions and resources related to water and marine resources	Usage of Water Resources
E3-3	Targets related to water and marine resources	Environmental
E3-4	Water consumption	Data Overview
E3-5	Anticipated financial effects from water and marine resources-related impacts, risks and opportunities	Climate-Related Risks, Opportunities, and Financial Impacts Assessment and Management of Material Matters

European sustainability reporting standards (ESRS)		Location/omission
ESRS E4 Biodiversity and ecosystems		
E4-1	Transition plan and consideration of biodiversity and ecosystems in strategy and business model	Ecosystem and Biodiversity Protection
E4-2	Policies related to biodiversity and ecosystems	Ecosystem and Biodiversity Protection
E4-3	Actions and resources related to biodiversity and ecosystems	Ecosystem and Biodiversity Protection
E4-4	Targets related to biodiversity and ecosystems	Environmental
E4-5	Impact metrics related to biodiversity and ecosystems change	Ecosystem and Biodiversity Protection
E4-6	Anticipated financial effects from biodiversity and ecosystem-related risks and opportunities	Climate-Related Risks, Opportunities, and Financial Impacts Assessment and Management of Material Matters
ESRS E5 Resource use and circular economy		
E5-1	Policies related to resource use and circular economy	Circular Economy
E5-2	Actions and resources related to resource use and circular economy	Circular Economy
E5-3	Targets related to resource use and circular economy	Environmental
E5-4	Resource inflows	Energy Usage Usage of Water Resources Circular Economy
E5-5	Resource outflows	Pollutant Discharge Waste Disposal Circular Economy
E5-6	Anticipated financial effects from resource use and circular economy-related impacts, risks and opportunities	Climate-Related Risks, Opportunities, and Financial Impacts Assessment and Management of Material Matters
ESRS S1 Own workforce		
S1-1	Policies related to own workforce	Employees
S1-2	Processes for engaging with own workforce and workers' representatives about impacts	Employee Communication
S1-3	Processes to remediate negative impacts and channels for own workforce to raise concerns	Employee Communication Human Rights Protection
S1-4	Taking action on material impacts on own workforce, and approaches to managing material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions	Employees
S1-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Social
S1-6	Characteristics of the undertaking's employees	Equal Employment Data Overview
S1-7	Characteristics of non-employees in the undertaking's own workforce	Data Overview
S1-8	Collective bargaining coverage and social dialogue	Employee Communication
S1-9	Diversity metrics	Equal Employment Data Overview
S1-10	Adequate Wages	Employee Compensation and Benefits
S1-11	Social protection	Employee Compensation and Benefits
S1-12	Persons with disabilities	Data Overview
S1-13	Training and skills development metrics	Employee Development Data Overview
S1-14	Health and safety metrics	Occupational Health and Safety Data Overview
S1-15	Work-life balance metrics	Employee Compensation and Benefits
S1-16	Remuneration metrics (pay gap and total remuneration)	Not covered in this report
S1-17	Incidents, complaints and severe human rights impacts	Data Overview

European sustainability reporting standards (ESRS)		Location/omission
ESRS S2 Workers in the value chain		
S2-1	Policies related to value chain workers	Supply Chain Security and Resilience Responsible Mineral Management
S2-2	Processes for engaging with value chain workers about impacts	Supply Chain Security and Resilience Responsible Mineral Management
S2-3	Processes to remediate negative impacts and channels for value chain workers to raise concerns	Supply Chain Security and Resilience Responsible Mineral Management
S2-4	Taking action on material impacts on value chain workers, and approaches to managing material risks and pursuing material opportunities related to value chain workers, and effectiveness of those action	Supply Chain Security and Resilience Responsible Mineral Management
S2-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Social
ESRS S3 Affected communities		
S3-1	Policies related to affected communities	Community Engagement for Shared Prosperity
S3-2	Processes for engaging with affected communities about impacts	Community Engagement for Shared Prosperity
S3-3	Processes to remediate negative impacts and channels for affected communities to raise concerns	Community Engagement for Shared Prosperity
S3-4	Taking action on material impacts on affected communities, and approaches to managing material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions	Community Engagement for Shared Prosperity
S3-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Social
ESRS S4 Consumers and end-users		
S4-1	Policies related to consumers and end-users	Safety and Quality of Products and Services Data Security and Customer Privacy Protection
S4-2	Processes for engaging with consumers and end-users about impacts	Safety and Quality of Products and Services
S4-3	Processes to remediate negative impacts and channels for consumers and end-users to raise concerns	Safety and Quality of Products and Services
S4-4	Taking action on material impacts on consumers and end-users, and approaches to managing material risks and pursuing material opportunities related to consumers and end-users, and effectiveness of those actions	Safety and Quality of Products and Services Data Security and Customer Privacy Protection
S4-5	Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Social
ESRS G1 Business Conduct		
G1-1	Business conduct policies and corporate culture	Commercial Behaviors
G1-2	Management of relationships with suppliers	Supply Chain Security and Resilience Equal Treatment to Small and Medium-sized Enterprises
G1-3	Prevention and detection of corruption and bribery	Anti-Commercial Bribery and Anti-Corruption Complaint Mechanism and Whistleblower Protection
G1-4	Incidents of corruption or bribery	Anti-Commercial Bribery and Anti-Corruption Data Overview
G1-5	Political influence and lobbying activities	Not covered in this report
G1-6	Payment practices	Equal Treatment to Small and Medium-sized Enterprises

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IFRS S1

Core Elements	Disclosure Recommendations	Disclosure Placement
Governance	a) The governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of sustainability-related risks and opportunities.	Governance Structure and Mechanisms Risk Management
	b) Management's role in the governance processes, controls and procedures used to monitor, manage and oversee sustainability-related risks and opportunities.	Governance Structure and Mechanisms Risk Management
Strategy	a) The sustainability-related risks and opportunities that could reasonably be expected to affect the entity's prospects within the time horizons—short, medium or long term.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	b) The current and anticipated effects of sustainability-related risks and opportunities on the entity's business model and value chain, and where in the entity's business model and value chain sustainability-related risks and opportunities are concentrated.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	c) How the entity has responded to, and plans to respond to, sustainability-related risks and opportunities in its strategy and decision-making, and the progress against plans the entity has disclosed in previous reporting periods, including quantitative and qualitative information, and trade-offs between sustainability-related risks and opportunities that the entity considered.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	d) The quantitative and qualitative effects of sustainability-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and the sustainability-related risks and opportunities identified for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements, and how the entity expects its financial position, financial performance and cash flows to change over the short, medium and long term, given its strategy to manage sustainability-related risks and opportunities.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	e) The resilience of the entity's strategy and its business model to those sustainability-related risks.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
Risk Management	a) The processes and related policies the entity uses to identify, assess, prioritize and monitor sustainability-related risks, including information about: the inputs and parameters the entity uses, whether and how the entity uses scenario analysis to inform its identification of sustainability-related risks, whether and how the entity prioritizes sustainability-related risks, how the entity assesses the nature, likelihood and magnitude of the effects of those risks.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts Risk Management
	b) The processes the entity uses to identify, assess, prioritize and monitor sustainability-related opportunities, including: whether and how the entity uses scenario analysis to inform its identification of sustainability-related opportunities.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	c) The extent to which, and how, the processes the entity uses to identify, assess, prioritize and monitor sustainability-related risks and opportunities are integrated into and inform the entity's overall risk management process.	Climate-Related Risks, Opportunities, and Financial Impacts Risk Management
Metrics and targets	a) Metrics required by an applicable IFRS Sustainability Disclosure Standard.	GHG Emissions Management Data Overview
	b) Metrics the entity uses to measure and monitor sustainability-related risks or opportunities and its performance in relation to that sustainability-related risk or opportunity.	2024 Economic, Environmental and Social Impact GHG Emissions Management Data Overview
	c) Any targets the entity has set it is required to meet by law or regulation.	Environmental Social Governance

IFRS S2

Core Elements	Disclosure Recommendations	Disclosure Placement
Governance	a) The governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities.	Governance Structure and Mechanisms Risk Management
	b) Management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.	Governance Structure and Mechanisms Risk Management
Strategy	a) The climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects within time horizons—short, medium or long term, whether the entity considers the risk to be a climate-related physical risk or climate-related transition risk.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	b) The current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain, and where in the entity's business model and value chain climate-related risks and opportunities are concentrated.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	c) Information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the entity sets targets, how the entity is resourcing and quantitative and qualitative information about the disclosed progress of plans.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	d) The quantitative and qualitative effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements, and how the entity expects its financial position, financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	e) The entity's assessment of its climate resilience, including the entity's assessment for its strategy and business model, the significant areas of uncertainty considered in the entity's assessment of its climate resilience and the entity's capacity to adjust or adapt its strategy and business model to climate change over the short, medium and long term. The entity shall use climate-related scenario analysis to assess its climate resilience and disclose how and when the climate-related scenario analysis was carried out, including information about the inputs the entity used, the key assumptions the entity made in the analysis and the reporting period in which the climate-related scenario analysis was carried out.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
Risk Management	a) The processes and related policies the entity uses to identify, assess, prioritize and monitor climate-related risks, including information about: the inputs and parameters the entity uses, whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks, whether and how the entity prioritizes climate-related risks, how the entity assesses the nature, likelihood and magnitude of the effects of those risks	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts Risk Management
	b) The processes the entity uses to identify, assess, prioritize and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities.	Assessment and Management of Material Matters Climate-Related Risks, Opportunities, and Financial Impacts
	c) The extent to which, and how, the processes for identifying, assessing, prioritizing and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.	Climate-Related Risks, Opportunities, and Financial Impacts Risk Management
Metrics and targets	a) The cross-industry metric categories of greenhouse gas emissions, internal carbon prices, the percentage of executive management remuneration recognized in the current period that is linked to climate-related considerations, capital deployment towards climate-related risks and opportunities, the amount and percentage of assets or business activities vulnerable to climate-related risks and opportunities.	GHG Emissions Management Data Overview
	b) Industry-based metrics that are associated with one or more particular business models, activities or other common features that characterize participation in an industry.	2024 Economic, Environmental and Social Impact GHG Emissions Management Data Overview
	c) The quantitative and qualitative climate-related targets the entity has set or it is required to meet by law or regulation, progress towards reaching the target, information about its performance, and each greenhouse gas emissions target.	Environmental Social Governance

© GRI Index

GRI Standards	Disclosures	Location	Omission
General Disclosures			
GRI 2: General Disclosures 2021	2-1 Organizational details	About XTC	
	2-2 Entities included in the organization's sustainability reporting	About This Report	
	2-3 Reporting period, frequency and contact point	About This Report	
	2-4 Restatements of information	Not covered in this report	This report does not cover restatements of information
	2-5 External assurance	About This Report	
	2-6 Activities, value chain and other business relationships	About XTC Chairman's Statement Suppliers and Clients	
	2-7 Employees	Human Rights Protection Data Overview	
	2-8 Workers who are not employees	Data Overview	
	2-9 Governance structure and composition	Governance Structure and Mechanisms	
	2-10 Nomination and selection of the highest governance body	Governance Structure and Mechanisms	
	2-11 Chair of the highest governance body	Governance Structure and Mechanisms	
	2-12 Role of the highest governance body in overseeing the management of impacts	Governance Structure and Mechanisms	
	2-13 Delegation of responsibility for managing impacts	Governance Structure and Mechanisms Energy Usage Usage of Water Resources Pollutant Discharge Waste Disposal Occupational Health and Safety	
	2-14 Role of the highest governance body in sustainability reporting	Governance Structure and Mechanisms	
	2-15 Conflicts of interest	Governance Structure and Mechanisms	
	2-16 Communication of critical concerns	Communications with Stakeholders	
	2-17 Collective knowledge of the highest governance body	Governance Structure and Mechanisms	
	2-18 Evaluation of the performance of th highest governance body	Not covered in this report	We did not collect relevant data during the reporting period
	2-19 Remuneration policies	Governance Structure and Mechanisms	
	2-20 Process to determine remuneration	Governance Structure and Mechanisms	

GRI Standards	Disclosures	Location	Omission
GRI 2: General Disclosures 2021	2-21 Annual total compensation ratio	Not covered in this report	We did not collect relevant data during the reporting period
	2-22 Statement on sustainable development strategy	Climate Strategy	
	2-23 Policy commitments	Environmental Supply Chain Security and Resilience Responsible Mineral Management Safety and Quality of Products and Services Data Security and Customer Privacy Protection Equal Employment Human Rights Protection Employee Development Employee Compensation and Benefits Occupational Health and Safety Commercial Behaviors	
	2-24 Embedding policy commitments	Climate Response Energy Usage Usage of Water Resources Pollutant Discharge Waste Disposal Environmental Compliance Management Circular Economy Community Engagement for Shared Prosperity Supply Chain Security and Resilience Responsible Mineral Management Safety and Quality of Products and Services Data Security and Customer Privacy Protection Equal Employment Human Rights Protection Employee Development Employee Compensation and Benefits Occupational Health and Safety Risk Management Internal Control and Compliance Commercial Behaviors	
	2-25 Processes to remediate negative impacts	Climate Response Energy Usage Usage of Water Resources Pollutant Discharge Waste Disposal Environmental Compliance Management Circular Economy Community Engagement for Shared Prosperity Supply Chain Security and Resilience Responsible Mineral Management Safety and Quality of Products and Services Shareholder Rights Protection Data Security and Customer Privacy Protection Human Rights Protection Occupational Health and Safety Risk Management Internal Control and Compliance Commercial Behaviors	

GRI Standards	Disclosures	Location	Omission
	2-26 Mechanisms for seeking advice and raising concerns	Communications with Stakeholders Shareholder Rights Protection Community Engagement for Shared Prosperity Supply Chain Security and Resilience Responsible Mineral Management Safety and Quality of Products and Services Human Rights Protection Employee Communication Complaint Mechanism and Whistleblower Protection	
	2-27 Compliance with laws and regulations	Governance Structure and Mechanisms Shareholder Rights Protection Climate Response Usage of Water Resources Pollutant Discharge Waste Disposal Environmental Compliance Management Responsible Mineral Management Safety and Quality of Products and Services Data Security and Customer Privacy Protection Equal Employment Human Rights Protection Occupational Health and Safety Anti-Commercial Bribery and Anti-Corruption Anti-unfair Competition Tax Compliance	
	2-28 2-28 Membership associations	Promoting Industry Development	
	2-29 2-29 Approach to stakeholder engagement	Communications with Stakeholders	
	2-30 2-30 Collective bargaining agreements	Employee Communication	
Material topics			
GRI 3: Material Topics 2021	3-1 Management of material topics	Assessment and Management of Material Matters Communications with Stakeholders	
	3-2 List of material topics	Assessment and Management of Material Matters	
Economic performance			
GRI 3: Material Topics 2021	3-3 Management of material topics	Governance Structure and Mechanisms Climate-Related Risks, Opportunities, and Financial Impacts Risk Management Internal Control and Compliance Employee Development Communications with Stakeholders	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	2024 Economic, Environmental and Social Impact	
	201-2 Financial implications and other risks and opportunities due to climate change	Climate-Related Risks, Opportunities, and Financial Impacts Risk Management	
	201-3 Defined benefit plan obligations and other retirement plans	Employee Development	
	201-4 Financial assistance received from government	Not covered in this report	We have already disclose in our 2024 annual report

GRI Standards	Disclosures	Location	Omission
Market presence			
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights Protection	
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Not covered in this report	We did not collect relevant data during the reporting period
	202-2 Proportion of senior management hired from the local community	Data Overview	
Indirect economic impact			
GRI 3: Material Topics 2021	3-3 Management of material topics	Industrial Support for Rural Revitalization	
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Industrial Support for Rural Revitalization	
	203-2 Significant indirect economic impacts	Industrial Support for Rural Revitalization	
Procurement practices			
GRI 3: Material Topics 2021	3-3 Management of material topics	Supply Chain Security and Resilience Responsible Mineral Management	
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Not covered in this report	We did not collect relevant data during the reporting period
Anti-corruption			
GRI 3: Material Topics 2021	3-3 Management of material topics	Anti-Commercial Bribery and Anti-Corruption	
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Anti-Commercial Bribery and Anti-Corruption	
	205-2 Communication and training about anti-corruption policies and procedures	Anti-Commercial Bribery and Anti-Corruption	
	205-3 Confirmed incidents of corruption and actions taken	Anti-Commercial Bribery and Anti-Corruption Data Overview	
Anti-competitive behavior			
GRI 3: Material Topics 2021	3-3 Management of material topics	Anti-unfair Competition	
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Anti-unfair Competition Data Overview	

GRI Standards	Disclosures	Location	Omission
Tax			
GRI 3: Material Topics 2021	3-3 Management of material topics	Tax Compliance	
GRI 207: Tax 2019	207-1 Approach to tax	Tax Compliance	
	207-2 Tax governance, control, and risk management	Tax Compliance	
	207-3 Stakeholder engagement and management of concerns related to tax	Tax Compliance Communications with Stakeholders	
	207-4 Country-by-country reporting	Not covered in this report	We did not collect relevant data during the reporting period
Materials			
GRI 3: Material Topics 2021	3-3 Management of material topics	Circular Economy	
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Circular Economy Data Overview	
	301-2 Recycled input materials used	Circular Economy Data Overview	
	301-3 Reclaimed products and their packaging materials	Circular Economy Data Overview	
Energy			
GRI 3: Material Topics 2021	3-3 Management of material topics	Energy Usage	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Energy Usage Data Overview	
	302-2 Energy consumption outside of the organization	Not covered in this report	We did not collect relevant data during the reporting period
	302-3 Energy intensity	2024 Economic, Environmental and Social Impact	
	302-4 Reduction of energy consumption	Climate Strategy Energy Usage	
	302-5 Reductions in energy requirements of products and services	Climate Strategy	
Water and effluents			
GRI 3: Material Topics 2021	3-3 Management of material topics	Usage of Water Resources	

GRI Standards	Disclosures	Location	Omission
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Usage of Water Resources	
	303-2 Management of water discharge-related impacts	Wastewater Discharge Management Data Overview	
	303-3 Water withdrawal	Usage of Water Resources Data Overview	
	303-4 Water discharge	Wastewater Discharge Management Data Overview	
	303-5 Water consumption	Usage of Water Resources Data Overview	
Biodiversity			
GRI 3: Material Topics 2021	3-3 Management of material topics	Ecosystem and Biodiversity Protection	
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Ecosystem and Biodiversity Protection	
	304-2 Significant impacts of activities, products and services on biodiversity	Ecosystem and Biodiversity Protection	
	304-3 Habitats protected or restored	Ecosystem and Biodiversity Protection	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Not covered in this report	Our operating sites and surrounding areas do not involve any affected habitats
Emissions			
GRI 3: Material Topics 2021	3-3 Management of material topics	GHG Emissions Management Waste Gas Emissions Management	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	GHG Emissions Management Data Overview	
	305-2 Energy indirect (Scope 2) GHG emissions	GHG Emissions Management Data Overview	
	305-3 Other indirect (Scope 3) GHG emissions	GHG Emissions Management Data Overview	
	305-4 GHG emissions intensity	2024 Economic, Environmental and Social Impact Data Overview	
	305-5 Reduction of GHG emissions	Climate Strategy	
	305-6 Emissions of ozone-depleting substances (ODS)	Not covered in this report	Our operations do not involve such emissions
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Waste Gas Emissions Management Data Overview	

GRI Standards	Disclosures	Location	Omission
Waste			
GRI 3: Material Topics 2021	3-3 Management of material topics	Waste Disposal	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Waste Disposal	
	306-2 Management of significant waste-related impacts	Waste Disposal	
	306-3 Waste generated	Waste Disposal Data Overview	
	306-4 Waste diverted from disposal	Waste Disposal Data Overview	
	306-5 Waste directed to disposal	Waste Disposal Data Overview	
Supplier environmental assessment			
GRI 3: Material Topics 2021	3-3 Management of material topics	Supply Chain Security and Resilience Responsible Mineral Management	
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Supply Chain Security and Resilience Responsible Mineral Management	
	308-2 Negative environmental impacts in the supply chain and actions taken	Supply Chain Security and Resilience Responsible Mineral Management	
Employee			
GRI 3: Material Topics 2021	3-3 Management of material topics	Equal Employment Human Rights Protection	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Data Overview	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Compensation and Benefits	
	401-3 Parental leave	Data Overview	
Labor management relations			
GRI 3: Material Topics 2021	3-3 Management of material topics	Equal Employment Human Rights Protection	
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Not covered in this report	We did not collect relevant data during the reporting period

GRI Standards	Disclosures	Location	Omission
Occupational Health and Safety			
GRI 3: Material Topics 2021	3-3 Management of material topics	Occupational Health and Safety	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Occupational Health and Safety	
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety Risk Management	
	403-3 Occupational health services	Occupational Health	
	403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational Health and Safety Management Structure	
	403-5 Worker training on occupational health and safety	Occupational Health and Safety Training	
	403-6 Promotion of worker health	Occupational Health	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational Health	
	403-8 Workers covered by an occupational health and safety management system	Occupational Health and Safety Data Overview	
	403-9 Work-related injuries	Data Overview	
	403-10 Work-related ill health	Occupational Health	
Training and education			
GRI 3: Material Topics 2021	3-3 Management of material topics	Supply Chain Security and Resilience Responsible Mineral Management Human Rights Protection Employee Development Occupational Health and Safety	
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Data Overview	
	404-2 Programs for upgrading employee skills and transition assistance programs	Employee Development	
	404-3 Percentage of employees receiving regular performance and career development reviews	Employee Compensation and Benefits Data Overview	
Diversity and equal opportunity			
GRI 3: Material Topics 2021	3-3 Management of material topics	Supply Chain Security and Resilience Responsible Mineral Management Equal Employment Human Rights Protection	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Human Rights Protection Data Overview	
	405-2 Ratio of basic salary and remuneration of women to men	Not covered in this report	We did not collect relevant data during the reporting period

GRI Standards	Disclosures	Location	Omission
Non-discrimination			
GRI 3: Material Topics 2021	3-3 Management of material topics	Equal Employment Human Rights Protection	
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Human Rights Protection	
Freedom of association and collective bargaining			
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights Protection Employee Communication	
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Employee Communication	
Child labor			
GRI 3: Material Topics 2021	3-3 Management of material topics	Responsible Mineral Management Human Rights Protection	
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Responsible Mineral Management Human Rights Protection	
Forced or compulsory labor			
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights Protection	
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Human Rights Protection	
Security practices			
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights Protection	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Human Rights Protection	
Right of indigenous peoples			
GRI 3: Material Topics 2021	3-3 Management of material topics	Community Engagement for Shared Prosperity	
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Community Engagement for Shared Prosperity	

GRI Standards	Disclosures	Location	Omission
Local communities			
GRI 3: Material Topics 2021	3-3 Management of material topics	Community Engagement for Shared Prosperity	
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Community Engagement for Shared Prosperity	
	413-2 Operations with significant actual and potential negative impacts on local communities	Community Engagement for Shared Prosperity	
Supplier social assessment			
GRI 3: Material Topics 2021	3-3 Management of material topics	Supply Chain Security and Resilience Responsible Mineral Management	
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Supply Chain Security and Resilience Responsible Mineral Management	
	414-2 Negative social impacts in the supply chain and actions taken	Supply Chain Security and Resilience Responsible Mineral Management	
Public policy			
GRI 3: Material Topics 2021	3-3 Management of material topics	Not covered in this report	We do not involved in the relevant matter
GRI 415: Public Policy 2016	415-1 Political contributions	Not covered in this report	We do not involved in the relevant matter
Customer health and safety			
GRI 3: Material Topics 2021	3-3 Management of material topics	Safety and Quality of Products and Services	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Safety and Quality of Products and Services	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Social	
Marketing and labeling			
GRI 3: Material Topics 2021	3-3 Management of material topics	Safety and Quality of Products and Services	
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Safety and Quality of Products and Services	
	417-2 Incidents of non-compliance concerning product and service information and labeling	Social	
	417-3 Incidents of non-compliance concerning marketing communications	Social	
Customer privacy			
GRI 3: Material Topics 2021	3-3 Management of material topics	Data Security and Customer Privacy Protection	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Data Security and Customer Privacy Protection	

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Independent Limited Assurance Report

RSMZZ[2025]NO.361Z0344

To the Board of Directors of Xiamen Tungsten Co., Ltd.

We were engaged by Xiamen Tungsten Co., Ltd. ("the Company") to undertake a limited assurance engagement of the key indicators ("the Indicators") for the period from January 1, 2024 to December 31, 2024 included in its 2024 Sustainability Report ("the Report").

Assured Indicators

<ul style="list-style-type: none"> ● GHG Emissions <ul style="list-style-type: none"> — Scope 1: Direct GHG emissions (tCO₂e) — Scope 2: Indirect GHG emissions from purchased energy (market-based) (tCO₂e) — Total GHG emissions (Scope 1+ Scope 2) (tCO₂e) ● Air Pollutants <ul style="list-style-type: none"> — NO_x emissions (Ton) — SO_x emissions (Ton) — PM emissions (Ton) — Non-methane total hydrocarbon emissions (Ton) — Ammonia emissions (Ton) — Cobalt and its compounds emissions (Ton) 	<ul style="list-style-type: none"> ● Energy Consumption <ul style="list-style-type: none"> — Electricity consumption (kWh) — Green electricity consumption (kWh) — Steam consumption (Ton) — Natural gas consumption (m³) — Coal consumption (Ton) — Liquefied gas consumption (Ton) — Gasoline consumption (Litre) — Diesel consumption (Litre) ● Wastewater and Wastewater Pollutants <ul style="list-style-type: none"> — Wastewater discharge volume (m³) — Ammonia nitrogen discharge (Ton) — Chemical oxygen demand discharge (Ton) — Total nitrogen discharge (Ton) — Total lead discharge (Ton) — Total arsenic discharge (Ton)
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<ul style="list-style-type: none"> — Nickel and its compounds emissions (Ton) — Manganese and its compounds emissions (Ton) — Sulfuric acid mist emissions (Ton) — Volatile organic compounds emissions (Ton) — Hydrogen chloride emissions (Ton) 	<ul style="list-style-type: none"> — Total nickel discharge (Ton) — Total chromium discharge (Ton) — Total cadmium discharge (Ton) — Total cobalt discharge (Ton) — Total molybdenum discharge (Ton) — Total zinc discharge (Ton) — Total copper discharge (Ton) — Total manganese discharge (Ton) — Total phosphorus discharge (Ton) — Total iron discharge (Ton)
<ul style="list-style-type: none"> ● Hazardous Waste <ul style="list-style-type: none"> — Transfer and disposal volume of hazardous waste (Ton) 	<ul style="list-style-type: none"> ● Water Resources <ul style="list-style-type: none"> — Water withdrawal (m³) — Water consumption (m³)
<ul style="list-style-type: none"> ● Total Employees (Person) <ul style="list-style-type: none"> — Total number of employees (Person) 	<ul style="list-style-type: none"> ● Employee Composition by Gender <ul style="list-style-type: none"> — Male (Person) — Female (Person)
<ul style="list-style-type: none"> ● Employee Composition by Age <ul style="list-style-type: none"> — Under 30 (Person) — Between 30-50 (Person) — Over 50 (Person) 	<ul style="list-style-type: none"> ● Employee Composition by Education <ul style="list-style-type: none"> — Doctorate (Person) — Master's degree (Person) — Bachelor's degree (Person) — College degree (Person) — Below college degrees (Person)
<ul style="list-style-type: none"> ● Employee Composition by Function <ul style="list-style-type: none"> — Production personnel (Person) — Sales personnel (Person) — Technical personnel (Person) — Financial personnel (Person) — Administrative personnel (Person) — Female production personnel (Person) — Female sales personnel (Person) — Female technical personnel (Person) — Female financial personnel (Person) 	<ul style="list-style-type: none"> ● Management Composition <ul style="list-style-type: none"> — Management team (mid-level management and above, including senior management) (Person) — Senior management (Person) — Female management (mid-level management and above, including senior management) (Person) — Female senior management (Person)



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<ul style="list-style-type: none"> — Female administrative personnel (Person) 	
<ul style="list-style-type: none"> ● Employee Turnover — Number of employees at the beginning of the year (Person) — Number of employee departures (Person) — Number of new hires for the year (Person) 	<ul style="list-style-type: none"> ● Employment of Disabled Individuals — Number of employees with disabilities (Person) — Proportion of employees with disabilities (%)
<ul style="list-style-type: none"> ● Work Safety Training — Total number of work safety training participants (Participant) — Total work safety training hours (Hour) — Number of safety emergency drills (Times) 	<ul style="list-style-type: none"> ● Work Safety Accident — Extra-major accident (Case) — Major accident (Case) — Serious accident (Case) — Number of work-related injury accidents (Case)
<ul style="list-style-type: none"> ● Occupational Health and Safety Performance — Number of work-related injuries — Number of work-related fatalities 	<ul style="list-style-type: none"> ● Intellectual Property — Number of new patent applications (Item) — Number of new patents granted (Item) — Number of new copyright registrations (Item) — Number of new trademark applications (Item) — Number of new trademark registrations (Item)
<ul style="list-style-type: none"> ● Non-affiliated Suppliers (By Region) — Number of non-affiliated suppliers in Mainland China (Count) — Number of non-affiliated suppliers in other regions (Count) — Total number of non-affiliated suppliers (Count) 	<ul style="list-style-type: none"> ● Volunteer Service — Total number of volunteer participants (Participant) — Total volunteer hours (Hour)

The Company's Responsibility

The Company was responsible for selecting the criteria, and preparing and fairly presenting information presented in the Report in accordance with that criteria. This responsibility includes establishing and maintaining internal controls, adequate records and making estimates that are reasonable in the circumstances.

RSM's Responsibility

We are responsible for performing a limited assurance engagement on the Indicators in accordance with *International Standard on Sustainability Assurance 5000 - General Requirements for Sustainability Assurance Engagements* (ISSA 5000), and issuing a limited assurance conclusion.

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Our Independence and Quality Control

We have complied with *International Code of Ethics for Professional Accountants* (including *International Independence Standards*) issued by the International Ethics Standards Board for Accountants (IESBA) regarding sustainability assurance engagements. We have maintained independence and fulfilled all other professional ethics requirements. In conducting this engagement, we have adhered to the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

In accordance with *International Standard on Quality Control*, we maintain a

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comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Procedures Performed

In accordance with the requirements of ISSA 5000 and applying professional judgment, we performed the following procedures:

i. Risk Assessment

- Conducted interviews with the Company’s management, sustainability reporting team, and relevant data governance departments to gain an understanding of the reporting preparation process.
- Evaluated the applicability of relevant criteria to the Company’s operations.
- Identified and assessed risks of material misstatement in the Indicators.
- Gained an understanding of the Company’s internal control systems for collecting, reporting, and monitoring sustainability information.

ii. Data Verification

- Evaluated the design of key structures, systems, processes, and controls established by the Company for compiling the Indicators.
- Performed sample testing on data collection and reporting processes for the Indicators.
- Recalculated the Indicators and reconciled them with reported disclosures.
- Conducted sample testing to verify the consistency between source data and system records.
- Performed analytical procedures on significant fluctuations to assess their reasonableness.

iii. Disclosure Compliance Evaluation

- Evaluated whether the Indicators complies with requirements of applicable criteria.
- Assessed consistency between qualitative statements and quantitative data in the report.
- Examined whether the presentation of the Indicators contains potentially misleading expressions.

iv. Other procedures

Other procedures we deemed necessary.

Limited Assurance Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company’s reporting criteria described in the Report.

Inherent Limitation

Due to the selective nature of testing and sampling techniques, as well as the inherent limitations of internal controls, misstatements, fraud, or non-compliance may occur and not be detected.

Furthermore, we draw users’ attention to the fact that, there is currently no globally accepted framework for evaluation and measurement. This may result in inconsistent measurement methodologies, potentially affecting the comparability of information across different entities.

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Comparative Information

i. Assurance Status of Comparative Information

The comparative information for 2023 included in the Report has undergone limited assurance procedures by our firm, and we issued an unqualified limited assurance conclusion in our report dated April 17, 2024. This assurance engagement was conducted in accordance with International Standard on Assurance Engagements 3000 (Revised): Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (ISAE 3000).

ii. Explanation of Changes in Historical Year Assurance Scope

Indicator	2023 Assurance Scope	2024 Assurance Scope	Reason for Change
Employment contract signing rate	Included	Excluded	Optimization of assurance resources given its limited impact on user decision-making

iii. Impact of Reporting Boundary Changes on Comparative Information

During the 2024 reporting period, the reporting boundary of the company changed due to the following events:

- The company invested in the establishment of Leading Crystal (Xiamen) Optoelectronic Technology Co., Ltd.
- The subsidiary Fujian Golden Dragon Rare-earth Co., Ltd. invested in the establishment of Golden Dragon Rare-Earth Innovation Technology (Xiamen) Co., Ltd., and Golden Dragon Rare-Earth New Materials (Baotou) Co.,Ltd.
- The subsidiary Xiamen Golden Egret Special Alloy Co., Ltd. invested in the establishment of CHANGZHOU GOLDEN EGRET CEMENTED CARBIDE CO., LTD.

- The subsidiary XTC New Energy Materials (Xiamen) Co., Ltd. invested in the establishment of XTC New Energy/Orano-CAM, Société par actions simplifiée.
- The subsidiary Xiamen Tengwangge Real Estate Development Co., Ltd. completed equity transfers involving five subsidiaries, including Shengtengge (Chengdu) Real Estate Development Co., Ltd. and Chengdu Tengwangge Property Management Co., Ltd.
- The subsidiary Pingnan County Rare Earth Development Co., Ltd. was deregistered.

Limitation of Use

This report is intended solely for the Company's use in preparing its 2024 Sustainability Report in accordance with applicable criteria, and shall not be used for any other purposes. We accept no liability to any third party other than the intended users.

【This page serves as the officially stamped page of the Independent Limited Assurance Report (RSMZZ[2025]NO.361Z0344).】



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