

The background of the cover is a collage of industrial images. A large circular cutout in the center shows a daytime view of a large industrial plant with various towers, pipes, and storage tanks, set against a backdrop of green hills. To the right of this circle, there is a vertical strip showing a different industrial scene with tall, narrow structures. At the bottom, another circular cutout shows a nighttime view of an industrial facility with bright lights and blue structures. The overall theme is industrial and environmental.

2024

Environmental Social and Governance Report

Tianshan Material Co., Ltd.

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About the Report

The Report is the fourth environmental, social and governance report (hereinafter referred to as the “ESG Report” or the “Report”) of Tianshan Material Co., Ltd. (hereinafter referred to as “Tianshan Material”, the “Company” or “we”). The Report provides an update on the Company’s sustainability efforts in 2024. In the Report, we hope to deliver the Company’s philosophy, initiatives and performance on environmental, social and governance issues to enhance understanding and communication among our stakeholders.



Scope of the Report

Unless otherwise specified, the Report discloses information and data covering the Company’s environmental, social and governance practices and achievements for the period from January 1, 2024 to December 31, 2024 (hereinafter referred to as “the year”, the “reporting period”, or 2024). Certain events mentioned in this Report, whether before or after the aforementioned period, are included for the sake of comprehensiveness of context and detail in this Report. The Report defines the scope of the organization based on the principle of importance. Unless otherwise stated, the materials covered in the Report are from Tianshan Material and its subsidiaries.



Data Description

The Report is actual feedback on Tianshan Material’s environmental, social responsibility and corporate governance practices, with all the information and data derived from the Company’s official documents, statistical reports or the summary and statistics of environmental, social and governance practices of its subsidiaries. Unless otherwise specified, the monetary amounts mentioned in this Report are measured in RMB.



Publication of the Report

The Report is published in English and Chinese respectively. In case of discrepancies between the Chinese version and the English translation, the Chinese version shall prevail. The Report is issued in both hard copy and electronic form, and the electronic version of the Report is available on the official website of Tianshan Material Co., Ltd. (<http://www.sinoma-tianshan.cn/>), Shenzhen Stock Exchange (<http://www.szse.cn>) and Cninfo (www.cninfo.com.cn).



Principles and Basis

In the process of developing the Report, we mainly refer to the “Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange - Sustainability Report (For Trial Implementation)”, “Reference of ESG Indicators System for ESG Reports of Listed Companies Controlled by Central Enterprises”, the “GRI Sustainability Reporting Standards” (GRI Standards) of the Global Sustainability Standards Board (GSSB) and the United Nations Sustainable Development Goals (SDGs) for 2030.



Review and Approval

The Report was confirmed by the Management and the Board’s ESG Committee and approved by the Board of the Company on March 25, 2025.



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Glossary

In the Report, unless the context otherwise specifies, the following terms shall hereinafter be interpreted as follows:

No.	Term	Definition
1	CNBMG	China National Building Material Group Co., Ltd.
2	CNBM	China National Building Material Company Limited
3	Tianshan Material, the Company, we	Tianshan Material Co., Ltd.
4	Company Charter	Articles of Association of Tianshan Material Co., Ltd.
5	CUCC	China United Cement Corporation
6	Henan Tianshan	Henan Tianshan Materials Co., Ltd.
7	South Cement	South Cement Co., Ltd.
8	Zhejiang Cement	Zhejiang South Cement Co., Ltd.
9	Jiangxi Cement	Jiangxi South Cement Co., Ltd.
10	Zhongnan Cement	Hunan South Cement Group Co., Ltd
11	Southwest Cement	Southwest Cement Co., Ltd.
12	Yunnan Cement	Yunnan Tianshan Cement Co., Ltd.
13	Guizhou Cement	Guizhou Tianshan Cement Co., Ltd.
14	Jiahua Special Cement	Jiahua Special Cement Co., Ltd.
15	Xinjiang Cement	Xinjiang Tianshan Cement Co., Ltd.
16	Sinoma Cement	Sinoma Cement Ltd.
17	Sanshi Material	Zhejiang Sanshi South New Material Co., Ltd.
18	Huanan Material	South New Material Technology Co., Ltd.

No.	Term	Definition
19	Huadong Material	Huadong Materials Co., Ltd.
20	CUCC Qingzhou	China United Cement Qingzhou Corporation
21	CUCC Tengzhou	China United Cement Tengzhou Corporation
22	Huanghe Tongli	Huanghe Tongli Cement Co., Ltd.
23	Yulong Tongli	Zhumadian Yulong Tongli Cement Co., Ltd.
24	Shanya South	Hangzhou Shanya South Cement Co., Ltd.
25	Huaikan South	Huzhou Huaikan South Cement Co., Ltd.
26	Jiande South	Jiande South Cement Co., Ltd.
27	Nancheng South	Jiangxi Nancheng South Cement Co., Ltd.
28	Hunan Linli South New Material	Hunan Linli South New Material Technology Co., Ltd.
29	Old Town Southwest	Lijiang Old Town Southwest Cement Co., Ltd.
30	Sichuan Golden Cement	Sichuan Golden Cement Co., Ltd.
31	Zambia Industrial Park	China National Building Material Zambia Industrial Park
32	Sinoma Pingxiang	Sinoma Pingxiang Cement Co., Ltd.
33	Luopu Tianshan	Luopu Tianshan Cement Co., Ltd.
34	Hunan Jiuhua	Hunan Jiuhua South New Material Technology Co., Ltd.
35	Hanshan South	Hanshan South Cement Co., Ltd.
36	Aksu Tianshan	Aksu Tianshan Duolang Cement Co., Ltd.

No.	Term	Definition
37	Sichuan Guangyuan Commercial Concrete	Sichuan Guangyuan Southwest Commercial Concrete Co., Ltd.
38	CUCC Beichuan	China United Concrete Beichuan Co., Ltd.
39	Tonglu Benteng Construction Materials	Tonglu Benteng Construction Materials Products Co., Ltd.
40	Sinoma Yunfu	Sinoma Tianshan (Yunfu) Cement Co., Ltd.
41	Dinghua Building Materials	Huaping County Dinghua Energy Building Materials Co., Ltd.
42	Hefei South	Hefei South Cement Co., Ltd.
43	Shangchen New Materials	Fuzhou Dongxiang Shangchen New Materials Co., Ltd.
44	Hami Tianshan	Hami Tianshan Cement Co., Ltd.
45	Jinlei South	Hunan Jinlei South Cement Co., Ltd.
46	Midong Tianshan	Xinjiang Midong Tianshan Cement Co., Ltd.
47	Jiaxing Fengqiao South Concrete	Jiaxing Fengqiao South Concrete Co., Ltd.
48	Mengxin Company	Mengxin Bayin Gala Co. Ltd.
49	Guilin South	Guilin South Cement Co., Ltd.
50	CUCC Ju County	China United Cement Ju County Corporation
51	Guzhang South	Hunan Guzhang South Cement Co., Ltd.
52	CUCC Jining	China United Cement Jining Corporation
53	CUCC Xichuan	China United Cement Xichuan Corporation
54	Chuzhou Huadong Materials	Chuzhou Huadong Materials Co., Ltd.
55	CUCC Taishan	China United Cement Taishan Corporation
56	CUCC Tai'an	China United Cement Tai'an Corporation

No.	Term	Definition
57	China Building Materials Academy	China Building Materials Academy Co., Ltd.
58	CUCC Xintai	Xintai China United Cement Taifeng Corporation
59	Sinoma Hengda	Sinoma Hengda Cement Co., Ltd.
60	Shaoyang South	Shaoyang South Cement Co., Ltd.
61	Shaofeng South	Hunan Shaofeng South Cement Co., Ltd.
62	Anren South	Hunan Anren South Cement Co., Ltd.
63	Dazhou Lisen	Dazhou Lisen Cement Co., Ltd.
64	SASAC, Bureau of Social Responsibility	Bureau of Social Responsibility of the State-owned Assets Supervision and Administration Commission of the State Council
65	Securities Times	Shenzhen Securities Times Co., Ltd.
66	Shanghai Securities News	Shanghai Securities News Co., Ltd.
67	Easy Board/Value Online	Shenzhen Value Online Information Technology Co., Ltd.
68	The Directors & Boards	A magazine organized by Jiangsu People's Publishing House
69	China Fund	A newspaper organized by the Bauhinia Culture Group
70	Panorama	Shenzhen Panorama Network Co. Ltd.
71	CLS	A media organized by Shanghai United Media Group
72	New Fortune Magazine	Shenzhen New Fortune Magazine Co., Ltd.
73	SZSE	Shenzhen Stock Exchange
74	The year, the reporting period	The period from 1 January 2024 to 31 December 2024

Management's Message



The year 2024 was a leap year for Tianshan Material's new journey towards higher quality and green transition. Amidst a multitude of challenges posed by the national macroeconomic environment, such as decelerating growth, periodic product fluctuations, and profound adjustments in the real estate industry, our three core businesses encountered unprecedented trials. However, in these trying times, we intently focused on the "3633 Action Plan" and stood united with everyone who cares for Tianshan Material. We deepened our refined management and tapped into internal potential to achieve cost savings and higher efficiency. In addition, we fully promoted the in-depth integration of the industrial chain and digital transformation to inject new vitality and wisdom into our development.

We are acutely aware that each stride forward must be accompanied by a respectful and gentle approach towards nature. Therefore, we have proactively responded to the national "dual carbon" initiative and embraced green and sustainable development as our solemn responsibility. In specific, we have not only seamlessly integrated the corporate mission that "materials create a better world" into our corporate strategic blueprint but have also actively practiced the philosophy to "use resources in a natural-favorably way and serve in construction". Centered around the three pillars of "creating low-carbon sustainable advantages, strengthening the high-quality talent base, and delivering win-win cooperation benefits", we have carefully planned and implemented a series of strategic measures. Between 2024 and 2025, we comprehensively upgraded our sustainable development strategy and delineated a clear path and actionable goals, in a bid to paint a vibrant ecological portrait of green building materials in collaboration with our industrial partners, thereby contributing to the enduring sustainability of our planet.

Innovation remains the inexhaustible impetus in our quest for global prominence. We have spared no efforts to overcoming technological barriers, striving to serve society with high-quality products. We have also been dedicated to energy saving, carbon reduction, and environmental protection. Through technological transformation and industrial upgrading, we have been promoting the high-end, intelligent, and green transition of the building materials industry. This year, many of our subsidiaries received low-carbon product certification, and green factories and mines emerged as industry benchmarks. These milestones not only cement our role as pioneers in the green transition of the building materials industry but also exemplify our actionable vision for harmonious coexistence between man and nature.

While pursuing excellence, we always bear in mind the care and responsibility we have for each and every one of our employees, as we firmly believe that health and safety are the most solid foundations. We have made continuous efforts to optimize our safety production management system, and strengthen risk prevention and control measures. Furthermore, we have carried out diversified safety education and health promotion activities, pursued the goal of zero accidents and zero occupational diseases, so as to ensure the life safety and health of every employee and partner.

In the coming years, we will continue to adhere to the concept of sustainable development, further integrate the green development concept into our management system, and establish a unique sustainable development model featuring "Tianshan characteristics". Our goal is to make Tianshan Material a trustworthy basic material manufacturer and service provider, leveraging every strength to build a greener, more harmonious, and better world. We would like to invite each of you to join our journey where every choice we make demonstrates the "goodness" of building materials. Together, we will witness the power of harmonious coexistence between man and nature in every creation. Let's make concerted efforts to create a bright future for all people.



1

Building a New Blueprint for Our Vision


At Tianshan Material, we practice the principles of sustainable development by continuously improve our ESG management system. We strive to foster harmony between the Company, the environment, and society. Focusing on improving our ESG management performance, we aim to create sustainable corporate value. This year, the Company has placed great emphasis on engaging with stakeholders, further developing the sustainable development strategy model featuring Tianshan characteristics and exploring ways to balance ecological, economic, and social benefits.

- Overview of the Company
- Sustainable Development Strategy Model
- ESG Governance Structure
- ESG Performance Highlights
- ESG Awards and Recognitions
- Investor Communication
- Materiality Assessment

Overview of the Company

Founded in November 1998 and listed on the Shenzhen Stock Exchange (SZSE) in 1999 (stock code: 000877), Tianshan Material Co., Ltd. leads the country in clinker and commercial concrete production capacity, and is a national leader in aggregate production. The scope of business covers manufacturing and sales of cement, clinker, commercial concrete and aggregates.


By the end of the reporting period



Total assets


288,074

million




Legal entities

491



Covering


25 provinces, autonomous regions and municipalities directly under the central government.



Clinker production capacity

300


million tonnes



Aggregate production capacity

230


million tonnes



Commercial concrete capacity

360

million cubic meters



Employees

55

thousand



Sustainable Development Strategy Model

Guided by the mission of “materials create a better world” and the philosophy of “excellence in operation, refinement in management and robustness in organization”, the Company has formed a sustainable development strategy system. This year, with deep collaboration between the Board’s Environmental, Social and Governance Committee (ESG Committee) and various functional departments, the optimization of digital tools, and the refinement of strategic actions and goals, the Company has further advanced the sustainability strategy. To support the implementation of this strategy, the Company organized a range of multi-layer and multi-form meetings, including internal alignment sessions, management awareness training, and meetings with the general manager of subsidiaries. These efforts are aimed at building consensus and driving shared development. Besides, the Company has made comprehensive adjustments to the strategic roadmap and engaged in detailed discussion with key departments to set the action plans and goals for 2024-2025, laying a solid foundation for achieving sustainable development.

Strategic planning of Tianshan Material’s sustainable development



Three Key Goals for Our Sustainable Development

Creating low-carbon sustainable advantages

The focus of “creating low-carbon sustainable advantages” aims to improve Tianshan Company’s environmental performance. By applying new energies, developing green products and expanding recycling, the Company is committed to achieving green transition to address climate issues and reduce ecological impacts.

Strengthening the high-quality talent

The focus of “strengthening the high-quality talent base” aims to promote the common development of the Company and employees. While striving to become a leading player within the industry, the Company also provides employees with a healthy, safe and comfortable workplace to improve employees’ well-being and sense of belonging.

Delivering win-win cooperation benefits

The focus of “delivering win-win cooperation benefits” aims to build a green industrial chain, carry out sustainable procurement and meet diversified customer needs. Tianshan Material seeks to add value to the society and enhance our social influence. Besides, we improve our business conduct, enhance the Company’s modern governance capability, and effectively implement sustainable development management, so as to fulfill corporate social responsibilities.

ESG Governance Structure

To align with the Company’s strategies and sustainability needs, as well as to achieve higher quality and efficiency in management, the Company has established a sound “governance-management-execution” ESG governance structure, formulated work rules, clarified job duties and formed a long-term ESG work mechanism to further promote the win-win development with stakeholders, achieve the mid- and long-term strategic goals of the Company and promote sustainable development.

Tianshan Material has formulated and implemented the “Rules of the ESG Committee of the Board” and “Management Rules for the ESG Working Group”, which defines the Company’s ESG governance structure and promotes the implementation of ESG management issues.

ESG Governance Structure

The Board

The Board is the highest responsible body for the management and public disclosure of the Company’s ESG issues, and reviews and approves the Company’s ESG strategies and objectives as well as major issues relating to social responsibilities.

ESG Committee

The Board has set up an Environmental, Social and Governance (ESG) Committee (hereinafter referred to as “ESG Committee”), which comprises three directors: Zhao Xinjun, Shen Jun, and Li Chen, and the Chairman Zhao Xinjun acts as the head of the ESG Committee. The ESG Committee is mainly responsible for formulating the Company’s ESG management policies, objectives, strategies and framework, identifying ESG development trends and assessing ESG risks and opportunities faced by the Company, and supervising and guiding the ESG Working Group.

- Review the Company’s ESG and climate change-related policies and strategies to ensure that they comply with laws, regulations and standards
- Review the Company’s ESG and climate change-related management and internal supervision system and make recommendations to the Board on its appropriateness and effectiveness
- Assess and sort out the ESG and climate change-related risks and opportunities of the Company and make recommendations to the Board
- Review and supervise the goals and implementation of the Company’s ESG and climate change-related work, assess the work and make recommendations to the Board
- Assess how the Company communicates with stakeholders on ESG matters and ensure that appropriate communication policies and channels are in place to effectively engage the Company’s relationships with stakeholders
- Other job duties delegated by the Company’s Board

ESG Working Group

The ESG Working Group, as the main coordinating and executive body, is authorized by the ESG Committee to assist the ESG Committee in guiding and supervising the governance function of the Company in implementing ESG issues. The ESG Working Group is mainly responsible for formulating ESG-related policies and action plans in line with the Company’s strategy and ESG objectives; managing ESG-related risks and issues in Company’s daily operations; communicating with the Company’s subsidiaries and coordinating and promoting the implementation of ESG-related issues; and collecting, collating and compiling the annual ESG report and other ESG-related issues.

- Organize, coordinate and supervise the implementation and execution of ESG and climate change-related work by the subsidiaries of the Company
- Organize and carry out the ESG work of the Company in accordance with the overall ESG and climate change-related management goals, strategies and guidelines approved by the ESG Committee, formulate relevant systems and processes and report to the ESG Committee for review and approval
- Report regularly to the ESG Committee on ESG and climate change-related management (including but not limited to assessment, ranking and management of significant ESG related issues)
- Communicate with stakeholders on ESG and climate change-related matters and present feedback concerning important ESG and climate change-related matters or the Company’s business to the ESG Committee, management or relevant departments
- Other duties and responsibilities delegated by the Board or the ESG Committee

ESG Performance Highlights

Creating low-carbon sustainable advantages

160
products certified as green products or low-carbon products

398
companies passed the quality system certification

431
factories passed the environmental management system certification

431
factories passed the occupational health and safety management system certification

54
national green factories

61
national green demonstration factories of ready mixed concrete

38
national green mines

103
provincial green mines

21
smart mines

6,312,300 m²
of operating area where biodiversity impact assessments have been carried out and biodiversity management plans have been developed

Total investment of RMB **2,034,584.2 thousand** in ecological and environmental protection, up **22.12%** year on year

146,604,719.03 tonnes
of total greenhouse gas emissions, down **11.99%** year on year

1,685.21 tonnes/RMB 1 million
of greenhouse gas emissions intensity

99.43 kgce/t
comprehensive energy consumption per unit of clinker products, down **6.94 kgce/t** of standard coal compared with last year

92.18%
recycled water utilization rate of clinker-producing cement companies

100%
reusing rate of the treated wastewater for concrete business

0.2396 kg
nitric oxide (NO_x) emissions per unit of clinker, down **7.86%** year on year

0.0201 kg
sulfur dioxide (SO₂) emissions per unit of clinker, down **1.49%** year on year

0.0194 kg
particle emissions per unit of clinker, down **23.24%** year on year

40,868.76 tonnes
of total emission of nitrogen oxides (NO_x)

100%
overall pass rate of cement products

19,309,556.77 tce
of standard coal equivalent of total energy consumption (including total natural gas consumption, total power consumption, total renewable energy consumption and total non-renewable energy consumption)

4.00%
thermal substitution rate (TSR) from alternative fuels

Strengthening the high-quality talent base

Training hours of employees reached **1,222 thousand**

685.9 thousand hours
for safety and environmental protection

126 thousand hours
for management

410 thousand hours
for skills and business

Total expenses for employee training and development reached RMB **42,702 thousand**, up **41.5%** year on year

863,374
employee attendances in occupational health and safety training sessions

100%
AI alert comprehensive response rate

Delivering win-win cooperation benefits

5,220 copies
of “Commitment to Integrity and Self-discipline of Management” were signed

70,404 copies
of “Integrity Responsibility Agreement” were signed

4,452
anti-corruption (anti-commercial bribery) training sessions

Anti-corruption training with **164,237 attendances** by employees and directors

100% signing rate of the “Supplier Integrity Commitment”

100% of the key employee participated in the anti-corruption (anti-commercial bribery) training sessions

Total investment of RMB **42,855.3 thousand** in public welfare (including material donations)

RMB **32 million** of donations to the Shanjian Public Welfare Special Fund of the China Volunteer Service Foundation

3,319 hours
of volunteer activities

ESG Awards and Recognitions



Investor Communication

The Company regards investors as the basis for capital market development. Respecting, protecting and rewarding investors and treating all investors equally are important principles of corporate governance. In the year, the Company improved and strictly implemented the “Investor Relations Management Policy”, “Investor Rights and Interests Protection Policy”, “Information Disclosure Management Measures” and “Management Policy for Internal Information and Insiders”, so as to disclose the Company’s material information, continue to open up and optimize investor communication channels, and pay attention to and respond to the voices of investors.

Communication with investors is crucial for the sustained growth and prosperity of the Company. The Company has set up a seasoned and professional team for investor relations management, which has extensive experience and deep expertise in investor relations management, financial management, and legal affairs, as well as good communication skills. The Company formulates the annual work plan on a yearly basis, specifying the objectives and key tasks for investor relations management, and updates the work plan every six months to adapt to market changes and the Company’s development.

In 2024, the Company was dedicated to expanding and optimizing the communication channels and methods with stakeholders, so as to accelerate the development of a digital and intelligent investor relations management system. The Company continues to operate the “Investor Relations” module on the official website and the “Tianshan Company Investor Relations” official account and mini-program to enable investors to stay informed about the latest developments of the Company. In addition, the Company leverages a variety of channels to engage with investors, including the SZSE interactive platform, performance presentations, regular reports, on-site research, teleconferences, web conferences, third-party roadshow platforms, online interactive platforms, IR mailboxes and investor relations telephone lines. We also regularly carry out themed activities focusing on the Company’s business development, green and low-carbon transition, and dissemination of investment value. Through all of these efforts, we aim to communicate extensively with investors and respond positively to the many concerns we have learnt about.

In 2024, the Company updated the “Annual Investor Communication Plan” and actively put it into practice. Throughout the year, the Company hosted two annual performance presentations, one on-site research event on special cement production for special analysts, one collective reception day event for listed company investors, and one large-scale investor education activity co-hosted with the China Securities Investor Service Center and the Shanghai Securities News, titled “Get to Know My Listed Company”, which generated a total of 2.13 million online views. Besides, the Company organized 82 targeted investor research events, 19 reverse roadshow sessions, and received a total of 365 investor visits from research institutions, involving 669 individuals. The Company issued seven investor relations activity reports, participated in 32 strategic and peak meetings, achieved a 100% response rate to investor queries on the SZSE interactive platform, and handled over 200 investor inquiry calls. In the year, we strengthened communication with investors and organized investor exchange to guarantee the smooth communication between us and our investors.

In 2024,



Company hosted **2** annual performance presentations



Company organized **82** targeted investor research events



Received a total of **365** investor visits from research institutions



Achieved a **100%** response rate to investor queries on the SZSE interactive platform



19 reverse roadshow sessions,



Large-scale investor education activity “Get to Know My Listed Company”

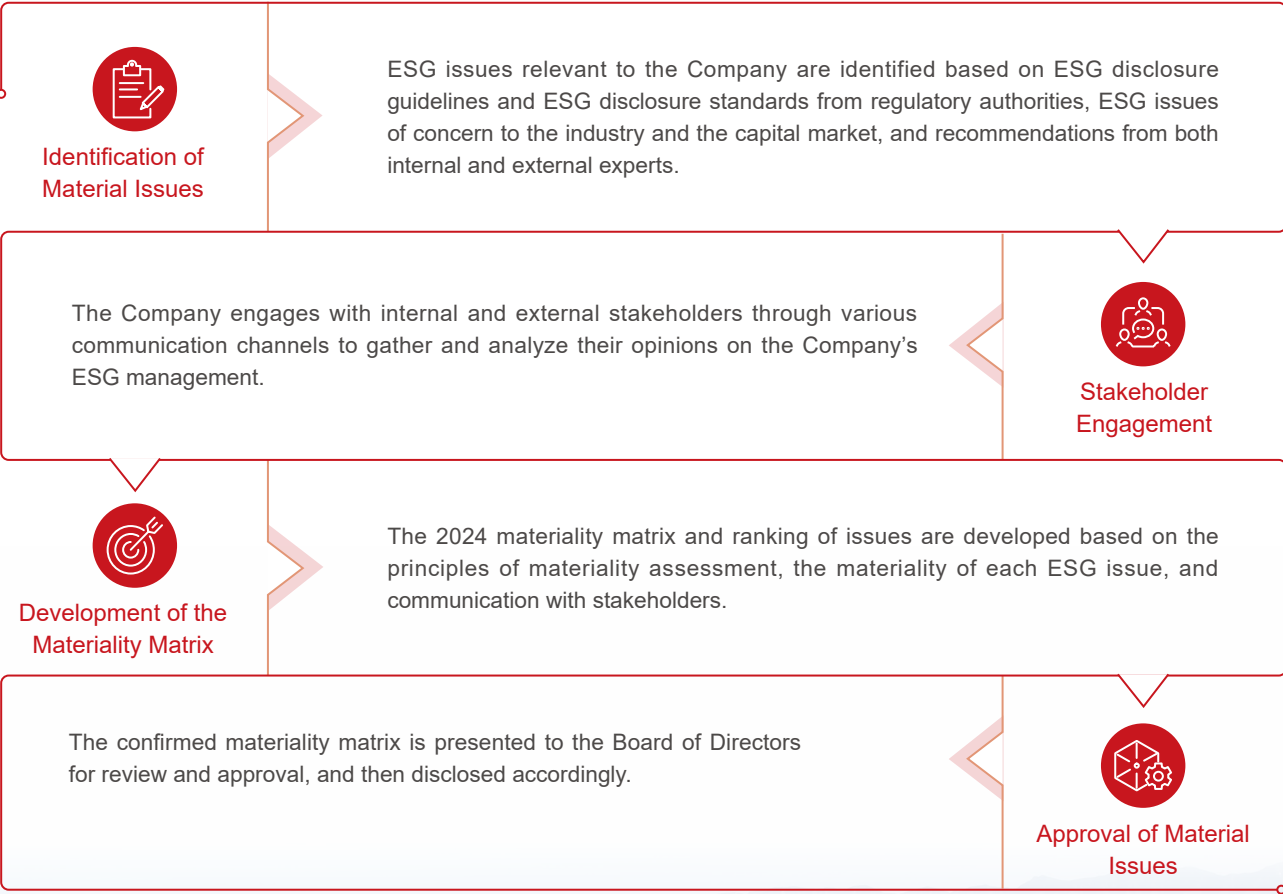
2.13 million online views

Materiality Assessment

Materiality analysis

Under the supervision of the Board's ESG Committee, Tianshan Material regularly conducts ESG materiality assessment. The process is carried out through the following steps and is confirmed by the Board of Directors.

Tianshan Material materiality assessment process



Stakeholder engagement

The Company maintains regular communication with stakeholders via various channels to understand and promptly respond to their needs, using their feedback and concerns as motivation for continuous improvement of our ESG management. In the year, the key issues of concern of main stakeholders are as follows:

Stakeholder	Focused Topics	Communication Method
 Directors	<ul style="list-style-type: none">Company strategy and planningCompany Charter and important policiesImportant organizational restructuring and personnel arrangementMajor investment and financing mattersQuality of operationsComplianceQuality assurance of products and services	<ul style="list-style-type: none">Shareholders' MeetingBoard MeetingBoard special committee meetingsIndependent directors special meetingBoard Consultation
 Company Management	<ul style="list-style-type: none">Optimization, upgrading and green transition of production and operationCompany governance, reform and innovationCompliance of employee occupational safety and healthAnti-corruption and integrity promotion	<ul style="list-style-type: none">Management MeetingWork reporting and communicationGovernance and integrity training and management, etc.
 Employees	<ul style="list-style-type: none">Employee occupational health and safetyEmployee career development and trainingLabor regulationsHR Management	<ul style="list-style-type: none">Safety training and practiceCareer development seminarsSupport for employees in difficultyEmployee representative meetings and seminars, etc.
 Government and Regulatory Agencies	<ul style="list-style-type: none">ComplianceQuality assurance of products and servicesGreenhouse gas emission and managementWater use and managementEmployee occupational health and safetyEcology and natural resource protection	<ul style="list-style-type: none">Reporting on work and regular communication with regulatorsParticipation in conferences and major eventsEnvironmental information disclosurePublishing compliance reports and accepting supervision

Stakeholder	Focused Topics	Communication Method
<div> Shareholders/Investors</div>	<ul style="list-style-type: none">Quality of operationsGreen transitionComplianceQuality assurance of products and servicesGreenhouse gas emission and managementWastewater drainage and managementSolid waste disposal and managementLabor regulationsOptimization and upgrading	<ul style="list-style-type: none">Publication of periodic reportsHolding shareholders' meeting, performance presentation, analyst presentation, roadshow and reverse roadshow, strategy meetings, investor education activities, and investor group reception day activitiesCommunication channels such as SZSE interactive platform, "Investor Relations" module on the official website, the "Tianshan Material Investor Relations" official account and mini-program, investor hotline, IR and director secretary email
<div> Customers</div>	<ul style="list-style-type: none">Quality assurance of products and servicesAnti-unfair competitionComplianceAnti-corruption and integrity promotion	<ul style="list-style-type: none">Customer researchCustomer complaint handling and callbackRegular disclosure of corporate information
<div> Business suppliers/ contractors</div>	<ul style="list-style-type: none">ComplianceAnti-corruption and integrity promotionQuality assurance of products and servicesSupply chain management	<ul style="list-style-type: none">Supplier management assessment and communicationContract negotiation and daily meetingsRegular disclosure of corporate information
<div> Community/industry associations</div>	<ul style="list-style-type: none">Green transitionSustainable developmentAnti-unfair competitionCompliance	<ul style="list-style-type: none">Industry communication and seminarRegular disclosure of corporate information
<div> Press</div>	<ul style="list-style-type: none">Ecology and natural resource protectionOptimization and upgradingGreen transitionQuality assurance of products and servicesSolid waste disposal and managementWastewater drainage and management	<ul style="list-style-type: none">Press interviewsPress releases and announcements
<div> Research institutes such as universities/research institutes</div>	<ul style="list-style-type: none">Research innovation and investmentQuality assurance of products and servicesEcology and natural resource protection	<ul style="list-style-type: none">Research cooperation and communicationRegular disclosure of corporate information

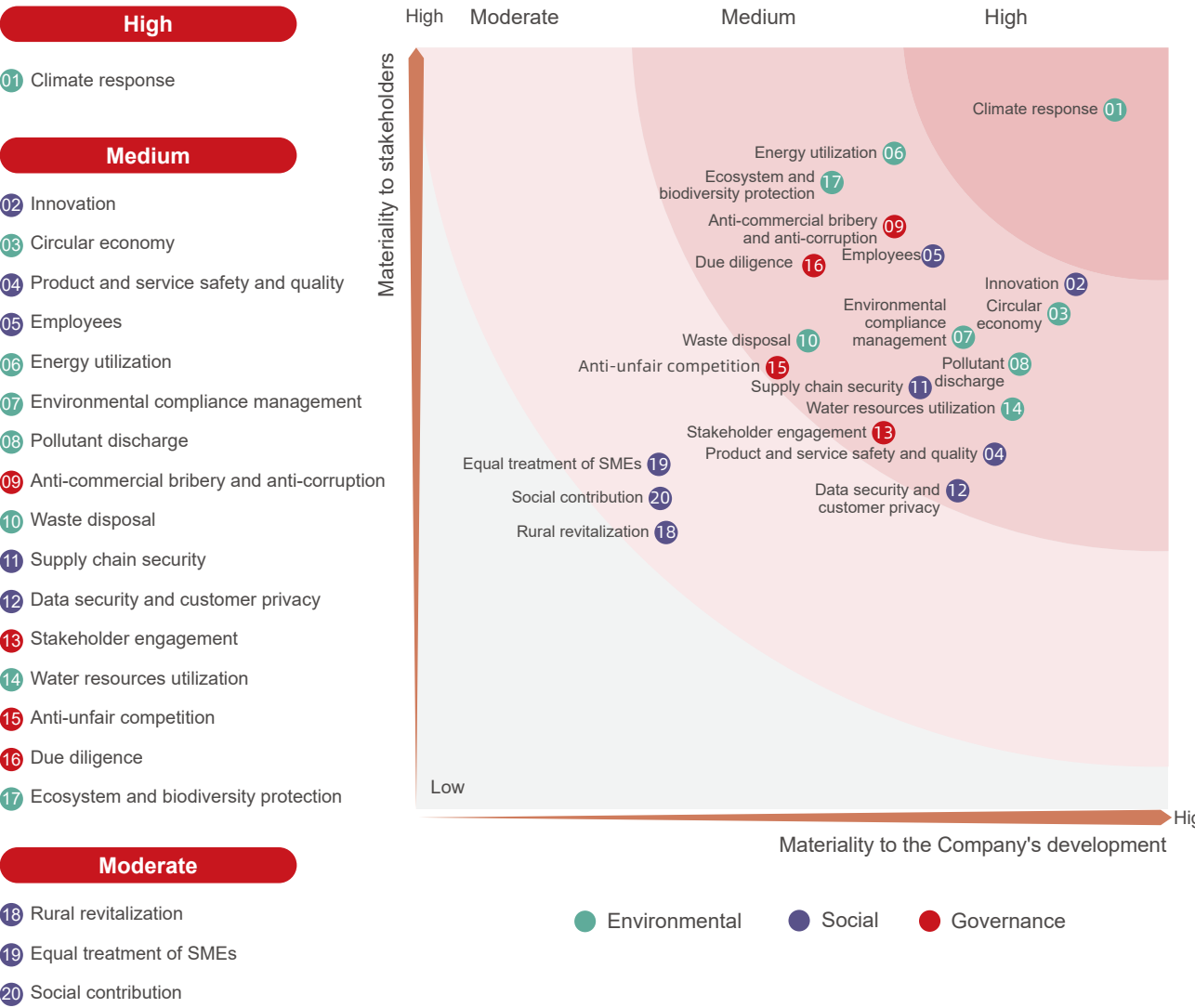
Materiality analysis

The Company identifies key issues related to our business that are material from an impact perspective through internal and external interviews, peer benchmarking, and expert consultations based on assessments of national policies, regulatory concerns, industry trends, and our own development plans.

Tianshan Material analyzes the materiality assessment results and prioritizes the materiality of each issue in the form of a matrix. A total of 20¹ material issues have been identified and the materiality matrix has been formed accordingly, which has been confirmed by the Board of Directors.

ESG Materiality assessment results²

Tianshan Material 2024 materiality matrix



¹ Tianshan Material is mainly engaged in the traditional construction materials business, and our core business includes the production and sale of cement, clinker, commercial concrete and aggregates. We do not conduct scientific research and technology development activities related to life science, artificial intelligence or other fields involving science and technology ethics, so the issue of "ethics of science and technology" is not involved.

² The Company is actively sifting and exploring methodologies for assessing and analyzing the financial materiality of ESG issues to better guide sustainable development management and information disclosure.

2 Feature

Fulfilling the New Mission on Climate Change

The Company is deeply committed to green development and proactively champions the national strategic goals of “carbon peaking and carbon neutrality”. By diligently identifying and analyzing climate-related risks and opportunities that affect the Company’s operations, we have developed appropriate climate risk management strategies and measures. We strive to balance ecological and economic benefits and social benefits. To make our efforts more standardized and transparent, we have disclosed key content related to our response to climate change, including “governance”, “strategy”, “risk and opportunity management”, and “metrics and targets” with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

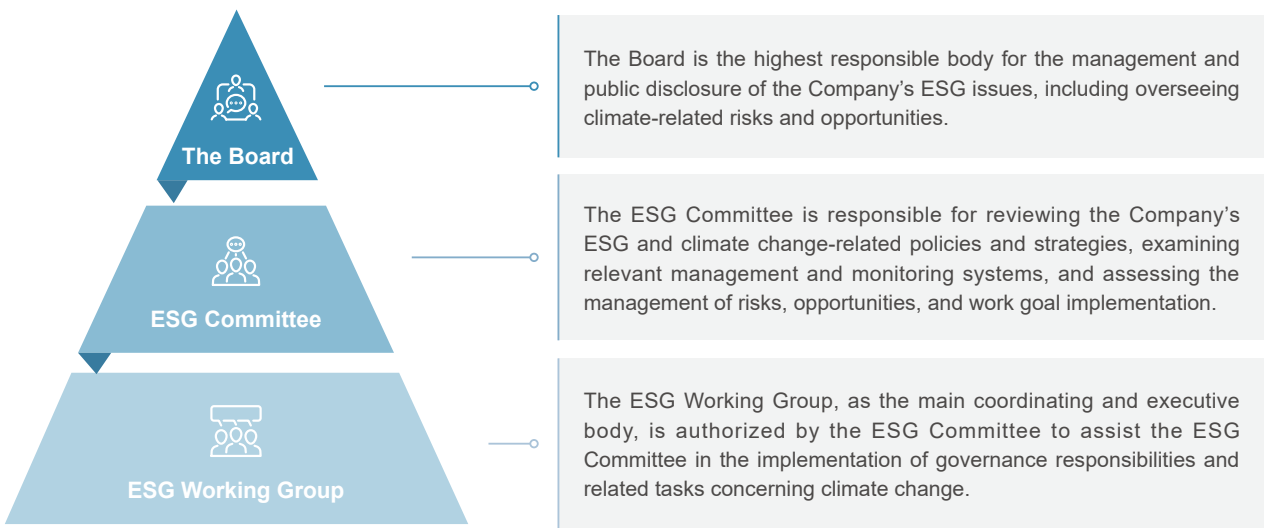
- Advancing Climate Governance
- Risk and Opportunity Management
- Climate Action Strategy
- Metrics and Targets

Advancing Climate Governance

Governance structure

A solid governance structure and clear management responsibilities are crucial for effective climate change response and management in enterprises. The Board is the highest responsible body for the management and public disclosure of the Company's ESG issues, including overseeing climate-related risks and opportunities. The Board has set up an Environmental, Social and Governance (ESG) Committee (hereinafter referred to as "ESG Committee"), which comprises three directors: Zhao Xinjun, Shen Jun, and Li Chen, who possess diversified expertise and strategic vision and extensive experience in driving the green transition of the industry and addressing climate change. The ESG Committee is responsible for reviewing the Company's ESG and climate change-related policies and strategies, examining relevant management and monitoring systems, and assessing the management of risks, opportunities, and work goal implementation.

The ESG Working Group, as the main coordinating and executive body, is authorized by the ESG Committee to assist the ESG Committee in the implementation of governance responsibilities and related tasks concerning climate change. Management of the Company is responsible for climate change-related tasks, including strategic planning, management policy formulation, resource allocation, target setting, and implementation overseeing. The Company has integrated the management of climate change into the duties of various departments, including the Technical Management Department and the Safety and Environmental Protection Department. The Technical Management Department is responsible for technological innovation as well as the implementation of emissions reduction plans, while the Safety and Environmental Protection Department is responsible for environmental regulatory compliance and reports to the ESG Committee on a regular basis.



The Company has formulated and implemented the "Rules of the ESG Committee of the Board" and "Management Rules for the ESG Working Group", which stipulate the composition, duties and responsibilities, decision-making procedures, and rules of procedure of the ESG Committee at the policy level. The Company holds an ESG Committee meeting at least once a year to report on matters related to climate change, including the achievement of targets and risk management practices.

The Company links climate response performance to the compensation of the Company's management to incentivize them to actively implement sustainability strategies. These measures are designed to meet stakeholder expectations, enhance long-term competitiveness and reputation of the Company, while also optimizing internal management and ensuring regulatory compliance, so as to drive dual achievement of company development and climate-related goals. The Company has signed the "Responsibility Statement of Annual Operation and Management Target for Regional Companies" with the subsidiaries, and the "Responsibility Statement of Annual Ecological Environmental Protection Target" with the Company's management, persons in charge of each subsidiary, and managers and employees of the subsidiaries, and made ESG-related management performance tied to the KPIs. The signing rate of these responsibility statements was 100%.

Climate Action Strategy

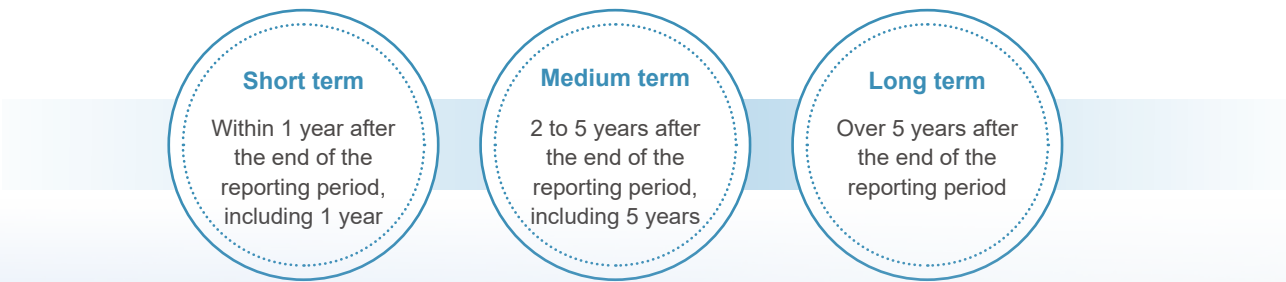
Climate change is a significant challenge for human society. At Tianshan Material, we continue to refine our strategic framework to address climate-related risks and actively contribute to the national goals for "Carbon Peaking and Carbon Neutrality". Based on regulatory requirements and industry characteristics, Tianshan Material identifies and assesses climate risks and opportunities the Company faces. In line with the Company's strategy and development progress, the Company has formulated and gradually implemented corresponding measures. Besides, the Company requires all subsidiaries to develop short-, medium-, and long-term strategies to contribute to positive climate and environmental change.

Climate-related risks and opportunities

Taking into account the external environment, the Company's strategic development goals, business operations, and value chain impacts, we analyze the material risks and potential opportunities arising from climate change. Through collaboration among various departments, we identify and assess the potential business and financial impacts of key climate change related risks and opportunities. We also conduct scenario analysis and financial impact assessments based on the current management practices.

We have defined the time horizon of Tianshan Material's climate change related risks and opportunities across the short, medium, and long term, aligning closely with the time frame and business direction outlined in the 15th Five-Year Plan, providing strong support for the Company's sustainable development. Furthermore, we have established criteria for classifying the materiality of the financial impact of climate change risks and opportunities as "high", "medium" or "low" based on the impact of each risk and opportunity on operating income.

Definitions of Short, Medium and Long Term



(See next page for specific climate change-related risks and opportunities.)



Climate-Related risks

Type	Impact Period	Description	Measures to Address Risks	Current Financial Impact (Impact on the Current Year)	Anticipated Financial Impact (Impact on the Year Ahead)
Transition Risks					
Policy and Legal	Short term	Increased pricing of GHG emissions leads to increased operating costs (e.g., higher compliance costs, increased insurance premiums).	<ul style="list-style-type: none">Formulate and make continuous improvements to medium- and long-term goals for carbon emissions after in-depth research.Develop a carbon emissions monitoring program and establish and apply a carbon emissions online monitoring system.Set up a Dual-Carbon Management Department and assign dedicated personnel to undertake related work. Conduct carbon emissions trading-related training to enhance the awareness and capabilities of employees responsible for carbon emissions trading.	Low	Low
		Enhanced emission reporting obligations and mandates on and regulation of existing products and services lead to increased operating costs (e.g., higher compliance costs, increased insurance premiums, such as property insurance and safety production liability insurance).	<ul style="list-style-type: none">Engage with relevant authorities in different regions to gain a deeper understanding of policies and their guidance, identify potential risk factors, and reduce risks through standardized management.Take measures to strengthen the accountability of member units, including annual work planning and the formulation of corresponding policies and management mechanisms to clarify responsibilities, and effectively address incidents and control costs.Engage third-party agencies to assist the Company in enhancing environmental compliance consultation and management.Impose penalties for environmental violations and continue to enhance environmental remediation efforts.	Low	Low
		Environmental issue related litigations may result in fines and judgements, which in turn lead to reduced demand and operating income.	<ul style="list-style-type: none">Assign the Safety and Environmental Department and the Legal Compliance Department to monitor all regulatory matters and legal proceedings that may pose significant risks to the Company, including compliance risk factors related to environmental protection requirements, and provide updates to management on a regular basis.	Low	Low
		Government or other regulatory agencies introduce standards, requirements, and subsidies for green products or management in the cement industry. This, in turn, urges real estate developers to prioritize the use of green building materials when planning new projects. As a major producer of cement, partners may adjust their procurement criteria in line with the new policy and prioritize cooperation with green cement producers. A high share of traditional cement products without a timely transition to a greener, low-carbon product portfolio could lead to a decrease in demand for the Company's products/services, resulting in reduced operating income.	<ul style="list-style-type: none">Actively respond to the requirements from stakeholders across the cement value chain, upstream and downstream, regarding climate change, such as advancing green product certification for single-purpose cement and special cement.	Low	Low

Type	Impact Period	Description	Measures to Address Risks	Current Financial Impact (Impact on the Current Year)	Anticipated Financial Impact (Impact on the Year Ahead)
Market	Medium term	Increased concerns or negative feedback from institutional investors and other funding providers regarding environmental protection may lead to a tightening of available funds, resulting in reduced funding for the Company.	<ul style="list-style-type: none">Maintain regular communication with institutional investors and other funding providers and disclose ESG reports periodically to address stakeholder concerns.	Low	Low
		Low-carbon market trends and consumer behavior can lead to reduced demand for non-low-carbon products, resulting in reduced operating income.	<ul style="list-style-type: none">Enhance market research and adjust product strategy in a timely manner. Pay close attention to the demand for low-carbon products and carry out continuous research on innovative low-carbon product solutions. <p>Tianshan Material's Corporate Research Center collaborates with China Building Materials Academy and other relevant research institutes to create synergy for innovative low-carbon products. These concerted efforts focus on low calcium, low energy consumption, carbon capture and low clinker technologies to promote the low carbonization of cement and its products.</p>	Low	Low
		Fluctuations in market prices may lead to increases in production inputs (e.g., energy, water, waste disposal).	<ul style="list-style-type: none">Enhance the penetration of photovoltaic systems in each plant, explore the potential of photovoltaic power and wind power, and increase the share of green power.Enhance the R&D and application of water-saving technologies to reduce water consumption and improve water efficiency through technological innovation.Carry out ultra-low emission transformations by adopting advanced environmental protection technologies and equipment to reduce pollutant discharge and improve environmental performance.	Medium	Medium
		The limited availability of alternative raw materials and alternative fuels in certain regions may lead to increased production costs.	<ul style="list-style-type: none">Identify alternative raw materials and fuels based on local conditions, taking into account both cost and availability, and formulate plans for alternative fuel development.	Low	Low
		Investment in the R&D of low-carbon technologies, equipment, and management may lead to increased capital expenditures and costs.	<ul style="list-style-type: none">Intensify market and technology research to ensure that our R&D is closely aligned with actual needs. Optimize the R&D process and improve the efficiency of capital use.	Low	Low
Technical	Long term				
Physical Risks					
Acute	Short term	Increased severity of extreme weather events can result in decreased production capacity, higher operating costs, and lower operating income.	<ul style="list-style-type: none">Continuously expand procurement channels, enhance inventory management, implement dual sourcing, and pre-stock to address supply disruptions and ensure a stable supply.Respond promptly to weather risk alerts from China Meteorological Administration and natural disaster management agencies, and arrange for the shipment of goods base on the weather conditions. In the event of extreme weather, shipments shall be immediately suspended and vehicles shall be managed accordingly.Establish an internal intelligent production safety management system, with certain factories adjusting production schedules based on flood and rainy seasons, and ensuring material and production readiness in advance.	Low	Low

Type	Impact Period	Description	Measures to Address Risks	Current Financial Impact (Impact on the Current Year)	Anticipated Financial Impact (Impact on the Year Ahead)
Acute	Short term	Extreme weather may cause loss of existing assets.	<ul style="list-style-type: none">Appropriately purchase commercial insurance such as catastrophe insurance, property insurance, and safety production liability insurance, to reduce potential property losses caused by various disasters and accidents.	Low	Low
Chronic	Medium term	Changes in precipitation patterns and extreme variability in weather patterns may result in increased operating costs.	<ul style="list-style-type: none">Respond promptly to flood risk alerts from China Meteorological Administration and natural disaster management agencies, establish an emergency coordination mechanism for production and sales, establish an internal intelligent production safety management system, and ensure material and production readiness in advance.	Medium	Medium

Climate-Related opportunities

Type	Impact Period	Description	Measures to Seize Opportunities	Current Financial Impact	Anticipated Financial Impact
Resource Efficiency	Medium or long term	Under the dual pressure of resource scarcity and increased cost pressures, using alternative raw materials and fuels not only reduces dependence on limited natural resources but also helps lower procurement costs for raw materials.	<ul style="list-style-type: none">Identify alternative raw materials and fuels based on local conditions, taking into account both cost and availability, and formulate future plans for alternative fuel development.	Low	Low
Energy Efficiency	Medium or long term	Use clean energy to reduce operating costs and reduced exposure to future fossil fuel price increases.	<ul style="list-style-type: none">Continue to carry out themed energy-saving technical improvements, enhance relevant technological R&D, and improve production and operation efficiency, so as to reduce operating costs in the long run.Promote clean energy and high-efficiency technologies and continue to improve the penetration of photovoltaic systems in factories, thereby reducing carbon emissions by replacing traditional high-carbon energy sources and optimizing energy efficiency.	Medium	Medium
Products and Services	Short to medium term	Increased demand for green products such as low-carbon cement and low-carbon concrete in the downstream industry chain can contribute to an increase in operating income.	<ul style="list-style-type: none">Carry out R&D of low-carbon cement technologies, and continue to advance green product certification for single-purpose cement and special cement.Provide reliable and stable green building materials tailored to customer needs.	Low	Low
Resilience	Short to medium term	Launch cutting-edge carbon reduction projects, strengthen R&D in carbon reduction technologies, and reduce carbon emissions through carbon capture and storage from a medium- to long-term perspective, thereby lowering carbon emission costs for the Company.	<ul style="list-style-type: none">Actively implement carbon reduction technologies such as Carbon Capture, Utilization, and Storage (CCUS) to reduce carbon emissions.	Low	Low

Risk and Opportunity Management

Climate change scenario analysis

The Company refers to the Shared Socioeconomic Pathways (SSP) from the Intergovernmental Panel on Climate Change (IPCC) and climate change scenarios publicly released by the International Energy Agency (IEA). In addition, based on the Company's "Implementation Plan for Reaching Carbon Peaking and Carbon Neutrality", we have selected two applicable scenarios: a low-emission scenario and a high-emission scenario, to analyze the impacts of critical climate-related physical and transition risks on our operations.

Climate scenario analysis under physical risks

Scenario Applied	Optimistic Scenario RCP2.6/RCP4.5, SSP1	Pessimistic Scenario RCP6.0/RCP8.5, SSP3
Climatic Characteristics	Low-Emission scenario: Through effective mitigation measures, the greenhouse gas emissions are halved by 2050.	High-Emission scenario: Maintaining the status quo leads to a continuous increase in greenhouse gas emissions.
Socioeconomic Characteristics	Emphasis is placed on the harmonious coexistence of human beings and nature. Cross-regional and cross-agency cooperation is effective and sustained. Strict environmental management, rapid technological change, improved resource efficiency, reduced difficulties in accessing water, and increased water safety are witnessed.	Global governance, institutions, and leadership are relatively weak. Investment in technological R&D has decreased. Resource usage intensity has increased. Environmental policies are not being prioritized, with environmental systems in certain regions severely damaged. Water scarcity and safety challenges are enhanced by continued population growth.
Estimated Temperature Rise by the End of the Century	<2°C	>4°C
Scenario Source	Intergovernmental Panel on Climate Change (IPCC)	

Climate scenario analysis under transition risks

Scenario Applied	NZE Net Zero Emissions by 2050 Scenario	STEPS Stated Policies Scenario (STEPS)
Scenario description and impacts	This scenario assumes the possibility and impact of global net-zero greenhouse gas emissions by 2050. In this scenario, countries will introduce strict policies to increase the use of energy-efficient technologies and reduce dependence on fossil fuels.	This scenario assumes the development trends in energy demand and supply without considering the introduction of any new policies or measures.
Estimated Temperature Rise by the End of the Century	<1.5°C	2.4°C
Scenario Source	International Energy Agency (IEA)	

The prioritization and relevant criteria of sustainability-related impacts, risks, and opportunities are based on a comprehensive consideration of their alignment with the Company’s long-term strategy under different climate scenarios, the significance of their impacts on the Company’s operations and financial condition, the urgency of the impacts, the Company’s control over the issue, and the level of stakeholder concern. Together, these criteria guide the Company in identifying and prioritizing issues that are critical to sustainability, ensuring that the Company achieves its triple bottom line goals of economic, social, and environmental impacts while addressing the challenges of climate change. The table below shows the degree of impact of the identified risks and opportunities on the Company under different climate change scenarios.

Scenario	Optimistic Scenario RCP2.6/RCP4.5, SSP1			Pessimistic Scenario RCP6.0/RCP8.5, SSP3		
	Low	Moderate	High	Low	Moderate	High
Risks						
Increased acute extreme weather incidents result in reduced production capacity, damage to assets, and reduced operating income.	√					√
Changes in chronic precipitation patterns and extreme variability in weather patterns lead to increased operating costs.	√					√
Opportunities						
Use of lower-emission sources of energy contributes to reduced operating costs.	√					√
Use of alternative fuels contributes to reduced raw material procurement costs.		√			√	

Scenario	NZE Net Zero Emissions by 2050 Scenario			STEPS Stated Policies Scenario (STEPS)		
	Low	Moderate	High	Low	Moderate	High
Risks						
Increased pricing of GHG emissions can result in higher GHG emissions costs in the future.		√			√	
Fluctuations in market prices may lead to increases in production inputs (e.g., energy, water, waste disposal).		√				√
Opportunities						
Increased demand for green products such as low-carbon cement and low-carbon concrete may contribute to increased operating income.	√				√	
Availability of new products or services through R&D and innovation can enhance enterprise competitiveness and increase revenue.	√				√	

The Company has implemented a series of key risk mitigation measures to address the challenges of green development and transformation. The Safety and Environmental Department keeps tabs on regulatory and legal changes related to climate change, enabling the Company to adjust its strategies in a timely manner. On top of that, a Dual-carbon Management Department has been established to focus on carbon emission planning and monitoring. The Company also provides training programs to enhance employees’ expertise in carbon trading. Moreover, the Company is actively pushing forward with resource conservation and technological innovation, such as water-saving initiatives and the adoption of renewable energy, to enhance operational efficiency and environmental performance.

On the marketing strategies, the Company is stepping up its market research efforts to quickly adapt to the growing demand for low-carbon products. The Company also maintains steady communication with stakeholders by regularly publishing ESG reports. Besides, the Company has tightened up its internal management and accountability to make sure environmental responsibilities are properly carried out. With these moves, the Company aims to keep marching forward on the road to sustainable development while ensuring business continuity and compliance.

Meanwhile, the relevant business departments have carried out the following work:

Review current business activities

Check if there are climate-related risks. For example, assess if the Company’s supply chain is vulnerable to climate events, such as floods, droughts, or extreme weather.

Monitor industry trends and policies

Keep a close eye on climate risk trends and policy changes, including government regulatory requirements on carbon emissions and environmental protection, as well as industry best practices and standards. By the end of 2024, the Company had invested RMB 835 million in organized transformation and completed selective catalytic reduction (SCR) retrofit projects for 59 enterprises.

Collect and analyze climate-related data

Collect relevant environmental and climate data and conduct both quantitative and qualitative analyses. For example, collect data on energy use, carbon emissions, and water resource management to understand the Company’s carbon footprint and resource risks. The Company actively advances digital transformation and has built the Tianshan Material Production Management Reporting System. The system contains data on production, energy, quality, and ultra-low emissions, facilitating intelligent data collection and analysis.

Foster active stakeholder engagement

In line with the “Opinions on Promoting the Implementation of Ultra-low Emission in the Cement Industry” and certain local government requirements, the Company has pushed for the transformation of transportation methods. Specifically, the Company drives initiatives to shift from road to rail transport, from road to water transport, and to adopt clean transportation, together for a sustainable concrete industry.

Metrics and Targets

Tianshan Material has set ecological and environmental protection targets, which have been reviewed and approved by the leadership. We have entered into target responsibility agreements with regional companies, and evaluated and examined the annual accomplishments of these targets by these regional companies based on the “Management Measures for the Evaluation of Occupational Health, Safety and Ecological and Environmental Protection Work”. By doing so, the Company aims to become an industrial pioneer in green transition.

Climate targets and progress

The Company has pledged its commitment to green development, with environmental consciousness running throughout its operations. The Company strives to contribute positively to the society and environment, working towards coordinated development of the economy, society, and environment. In line with its targets and business conditions, Tianshan Material and its member units have set up feedback mechanisms and refined reward systems. These efforts are made to spur and sustain active engagement from teams across all levels in realizing these targets.

In 2025, the Company aims to achieve the following targets:

- Average unit clinker CO₂ emissions of 815 kg, reducing by 6.24% from 2021
- Average tonne of cement CO₂ emissions of 612 kg, reducing by 11.10% from 2021
- Comprehensive energy consumption of tons of clinker decreased by 8.8% from 2021

- The proportion of cement clinker production capacity that reaches the energy efficiency benchmark level exceeds 40%
- Built 1 carbon capture project
- Green mines meet the 100% standard

3

Leading the New Chapter of Green Development

We firmly believe that driving green and low-carbon development is the sole path for corporate sustainable development. Tianshan Material has been actively contributing to the vision of a beautiful China and implementing green development concepts through various initiatives. These initiatives include enhancing processes, upgrading production equipment, optimizing energy mix, boosting energy efficiency, developing green products and services, and reinforcing management practices.

- Embracing Green Actions
- Developing Circular Economy
- Innovate Low-carbon Products
- Biodiversity Protection
- Emission Compliance Management

Embracing Green Actions

The Company is dedicated to improving resource utilization and reducing environmental impact. By refining our institutional framework, optimizing energy management mechanism, and adopting low-carbon technologies, the Company is making strides toward its targets of energy conservation, emission reduction, and sustainable development. These actions propel the Company toward a greener, low-carbon future with higher efficiency.

Environmental Management System Improvement

The Company places a high priority on improving the environmental management system in line with the “dual carbon” goals. By considering the actual operations, strategic needs, and industry trends, the Company constantly improves its environmental management mechanisms. We also develop carbon reduction measures and plans tailored to our business, promoting a deep integration of the environmental management system with green and low-carbon development.

Management system improvement

Tianshan Material has always prioritized environmental protection as a core corporate value, constantly enhancing its environmental management system to foster high-quality, green, and low-carbon development. We speed up “four shifts” of environmental management concepts, that is: management strategy shifts from pursuing “zero penalties” for environmental pollution to prioritizing ecological and green development; management mode shifts from end-of-pipe treatment to reduction at the source; management mechanism shifts from routine control to technological innovations driven by energy savings and emission reduction; and management focus shifts from a greater concern for safety to equal emphasis on safety and environmental protection.

To bolster environmental management, the Company has issued the “Environmental Policy Statement” applicable to the headquarters, subsidiaries and suppliers, which clarifies the management responsibilities at all levels. The Board of Directors regularly oversees the implementation of the policy. In addition, the Company has been fully promoting the certification of the environmental management system and the occupational health and safety management system, with 431 and 431 factories passing the certification, respectively. This year, the certification coverage rate of all operating subsidiaries reached 100%.

The Company has put in place a robust environment-related risk management and prevention system. We have developed policies such as the “Environmental Emergency Management System” and the “Measures of Tianshan Material for the Management of Ecological and Environmental Protection Incidents”. These policies clearly outline the processes for environmental risk assessment, hidden danger investigation, and emergency response. The Company has implemented a closed-loop management model that combines “supervision, mutual inspection, and self-inspection” to ensure that environmental protection work is fully covered and continuously improved. This year, the Company had no major environmental incidents.

This year, Tianshan Material faced six administrative penalties from environmental and other relevant authorities due to environmental incidents, with total fines amounting to approximately RMB 1.12 million. These penalties are primarily centered on pollutant emissions and monitoring, as well as responses to heavy pollution weather. The Company completed the overall rectifications and accountability measures according to relevant rules, which had no material impact on our production and operation activities. Moving forward, Tianshan Material remains committed to enhancing environmental management, bolstering environmental monitoring, and mitigating environmental risks.

Carbon reduction roadmap improvement

In line with the “Dual Carbon” goals, the Company is actively pursuing whole-process carbon management including carbon reduction at the source and throughout the process, and carbon sequestration at the end point.

The Company implements a range of measures aimed at reducing carbon emissions and supporting the transition to a low-carbon cement industry. These measures include boosting energy efficiency, promoting alternative fuels, developing low-carbon cement technologies, implementing carbon metering, advancing carbon capture and purification technologies, and leveraging carbon dioxide utilization. In 2024, the company reduced emissions by 1,495,368.14 tons of CO2 equivalent through redesigning production processes, upgrading equipment, improving processes and replacing fuels.



431 factories with certified environmental management systems



431 factories with certified occupational health and safety management systems

In 2024,



The certification coverage rate of all operating subsidiaries

100%

In terms of carbon emissions monitoring, the Company actively participates in the Ministry of Ecology and Environment’s pilot program for “online carbon emissions monitoring.” By the end of 2024, six of our subsidiaries had successfully installed and commissioned the continuous emission monitoring systems (CEMS) on seven clinker lines, now regularly submitting data. We have enhanced our monitoring accuracy through multi-technology solutions, ensuring that the uncertainty in carbon emissions measurements remains below 3%. The related technological achievements have earned recognition from the National Institute of Metrology of China, marking a significant leap for the cement industry from broad-scale accounting to precise measurement in carbon monitoring.

Beyond that, the Company is committed to building a carbon emissions management platform. For example, Huaikan South has realized intelligent centralized control of emissions data. The Company engages a third-party organization to check its greenhouse gas emissions data every year, making sure the data is accurate and in line with regulations. At the same time, the Company also organizes internal audits and support to improve its carbon data management capabilities.

Carbon trading management

To proactively address the challenges posed by the national carbon trading market, the Company has initiated preparations for inclusion in the carbon trading market and engaged in research on carbon trading policies for the cement industry. These efforts significantly boost the Company’s carbon asset management capabilities. The Company has also organized 204 key business persons from 25 subsidiaries to participate in a carbon trading simulation jointly run by the China Building Materials Federation and the Hubei Carbon Emission Exchange. This simulation provides us with valuable experience in carbon market trading. Meanwhile, to enhance the capabilities of professional technical personnel and those involved in carbon emissions accounting and monitoring, the Company has conducted training sessions on new guidelines for carbon emissions accounting and verification, with a total of 751 participants.

Furthermore, to standardize carbon asset management, the Company has developed a series of internal management systems, including the “Measures for Carbon Asset Management (Trial)”, the “Measures for Carbon Emissions Data Management (Trial)”, the “Rules for Carbon Emissions Trading (Trial)”, and the “Measures for the Development and Management of Greenhouse Gas Emission Reduction Projects (Trial)”. These systems form the basis of a comprehensive dual-carbon framework that covers carbon emissions, data management, trading, and emission reduction projects, providing a solid foundation for the Company to steadily advance carbon market transactions and carbon asset management.

Environmental awareness enhancement

This year, Tianshan Material has been actively promoting environmental management communication and training across all levels of the Company. These training sessions comprehensively enhance the environmental awareness and green development capabilities of all our employees, thereby supporting the Company’s sustainable development. The Company has organized multi-level and comprehensive training and communication activities that cover key areas such as environmental management, water efficiency management, waste reduction, and energy efficiency management.

Training on online monitoring for environmental protection

- Four training courses for online monitoring for environmental protection were held, with 220 participants in total. The training covered both theoretical knowledge and practical skills in environmental monitoring, significantly boosting capabilities in environmental data management and online monitoring.

Training on dual carbon strategy

- Leveraging the General Manager Special Training Camp, the Company conducted a special training session titled “Tianshan Material’s Journey to Dual Carbon Excellence” for middle and senior management as well as general managers, with 215 participants in total. The training effectively enhanced the management’s understanding and response capabilities regarding dual carbon policies.

Carbon related management system communication and training

- Multiple online and offline sessions were organized around the Company’s carbon management system and carbon emissions data management system. These sessions helped employees gain a deep understanding of carbon management requirements and strengthened their awareness of compliance.

In addition, on occasions like National Low-carbon Day, the Company organized a range of activities, such as special lectures, low-carbon initiative signature campaigns, and environmental photography contests. These activities integrated education with fun, boosting employees’ sense of participation and environmental responsibility.

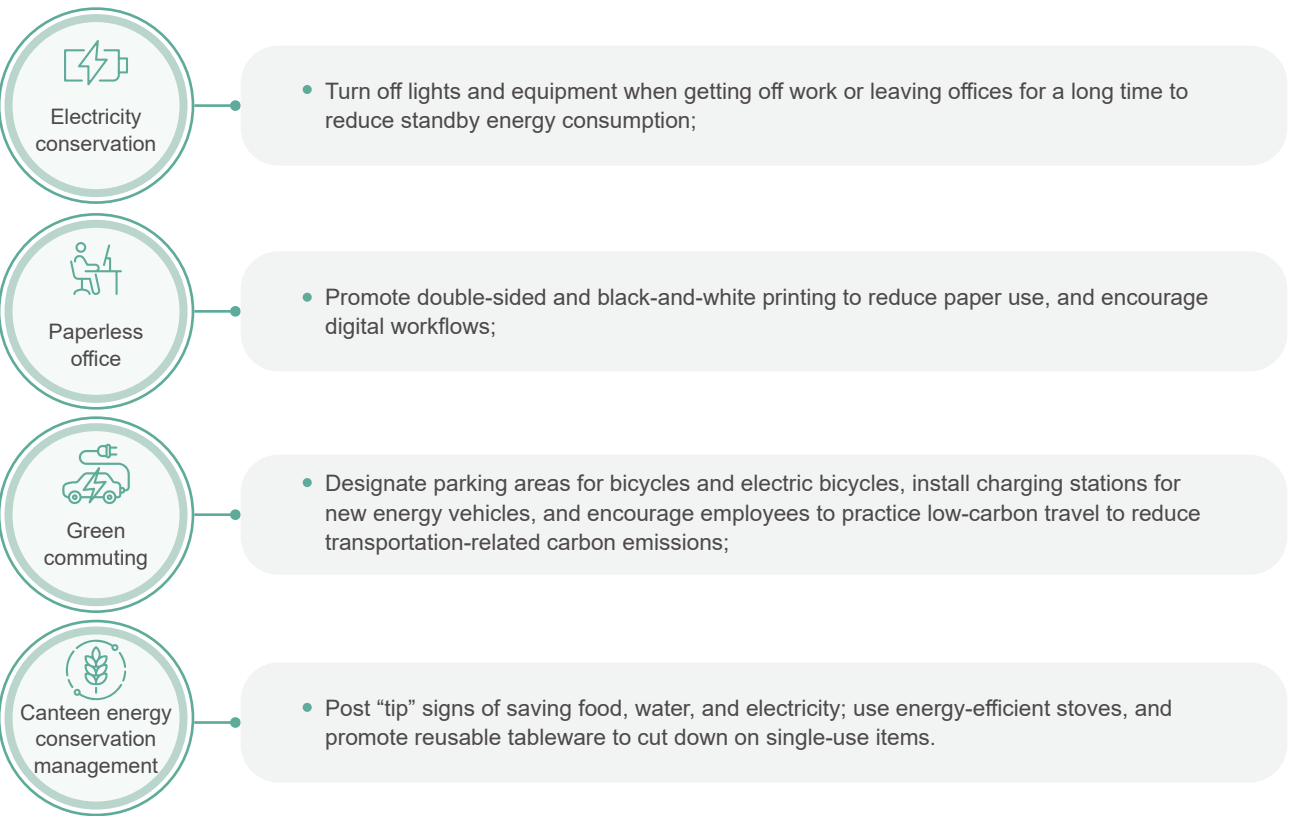
Promotion of Green Operation

Tianshan Material has always been dedicated to green office practices and sustainable operations. The Company has integrated the principles of energy conservation and emission reduction into its day-to-day management and is committed to creating a resource-efficient and environmentally friendly workplace. Through institutional improvement, practical management and enhanced energy efficiency, the Company has significantly improved its green office management.

To standardize green office practices, the Company has revised and implemented the “Management Measures for Administration Affairs”, which clearly outline energy-saving requirements in areas such as meeting management, office environment setup, and office supplies consumption:



In terms of green operations, the Company actively encourages all employees to practice energy-saving and consumption-reducing concept:



In addition, the Company has installed aerospace metal reflective film on the top of the office building, effectively reducing solar heat gain and air conditioning energy consumption, and enhancing indoor comfort. The building also features energy-efficient glass and high-performance thermal insulation materials to optimize thermal insulation, reduce heating and cooling loads, and further decrease energy consumption.

Energy Efficiency Improvement

The Company attaches importance to energy consumption management of production lines and explores the potential of energy saving and carbon emission reduction. We have optimized the kiln system, renovated the grate cooler, and improved the energy-saving technology of fans, continuously improving the energy efficiency level of each energy-consuming link. The Company also conducts regular internal energy management reviews to systematically assess energy efficiency, identify potential savings, and optimize its energy management system, thereby enhancing the energy management performance. In 2024, the Company has reduced electricity consumption by 520 thousand MWh, achieving savings of 122 thousand tonnes of standard coal, and 320 thousand tonnes of CO₂ emissions. In the year, the comprehensive energy consumption per unit of clinker products reached 99.43 kgce/t, down 6.94 kgce/t compared with last year, and the comprehensive electricity consumption per unit of clinker products reached 48.64 kWh, down 1.38 kWh.

Case	Retrofits of energy-efficient fans and permanent magnet motors
<p>Luopu Tianshan actively embraces national policies on energy conservation and emission reduction. The company initiated a retrofit project for energy-efficient fans and permanent magnet motors in its kiln and mills, with the goal of improving energy efficiency and reducing carbon emissions.</p> <p>The project targeted the high-temperature fans, circulating fans, and tail fans in the kiln and mills. The original operational efficiency for the equipment ranged from 63.72% to 74.46%, resulting in relatively high energy consumption. The company introduced energy-efficient fans that meet the Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for Fan (GB19761-2020). After the retrofit, the operational efficiency for the fan increased to over 80%, effectively reducing energy consumption. Additionally, the company replaced the existing motors with permanent magnet energy-saving motors, which feature high mechanical efficiency and excellent power factor, significantly reducing motor operational losses and improving the overall system efficiency.</p> <p>Following the implementation of the project, the electricity consumption per unit of clinker was reduced by 3.37 kWh/t, and the electricity consumption per unit of cement produced was reduced by 0.11 kWh/t. This not only significantly lowered energy costs but also enhanced production efficiency.</p>	



Clean Energy Utilization

To drive long-term sustainable development, Tianshan Material is actively advancing the transition to clean energy and is committed to reducing greenhouse gas emissions. The Company continues to optimize its energy mix and reduce carbon emission intensity by implementing advanced emission treatment technology upgrades and increasing the proportion of renewable energy used.

Upgrading of carbon capture technologies

The Company is actively engaged in carbon capture to minimize greenhouse gas emissions. By storing captured CO₂ or converting it into useful products such as building materials, CO₂ has been reused as a resource.

 Case

The carbon capture project boosts crude oil recovery for Shengli Oilfield and partners with Integrated Modern Agriculture

In early 2024, the 200 thousand tonnes per year of carbon capture by oxyfuel combustion pilot project of CUCC Qingzhou, a subsidiary of CUCC, formally commenced production. This project marks the largest carbon capture demonstration line in the global cement industry. The company continuously explores cost-effective carbon capture and purification technologies, strengthening cross-industry collaborations, and advancing the industrialization of carbon capture, utilization, and storage (CCUS). This year, Tianshan Material achieved significant milestones in carbon capture projects. The Company signed a cooperation agreement with Shengli Oilfield to enhance crude oil recovery and facilitate carbon storage. The partnership supports Shengli Oilfield's target of achieving an annual injection capacity of 3 million tonnes by the end of the 15th Five-Year Plan, promoting the green development of the CCUS industrial chain in Shandong Province.

Additionally, CUCC Qingzhou entered into a strategic cooperation agreement with Qingzhou Nanxiaowang Integrated Modern Agricultural Development Co., Ltd. ("Integrated Modern Agriculture") to explore the efficient utilization of carbon dioxide in modern agriculture and support the green transformation of the agriculture. Carbon capture and purification technology is widely used in carbonated beverages, cold chain logistics and food preservation, expanding new scenarios of CO₂ resource utilization. The captured carbon dioxide is further purified and applied to the production of food-grade liquid carbon dioxide and dry ice.

CUCC Qingzhou was awarded the WCA Climate Action Award by the World Cement Association (WCA) at the WCA 2024 Annual General Meeting, which fully demonstrated the technical innovation strength of CUCC Qingzhou in promoting the green transformation of the cement industry, energy saving and carbon reduction, as well as its positive contribution to global environmental protection.



CUCC Qingzhou's 200 thousand tonnes per year of carbon capture by oxyfuel combustion pilot project

Promotion of low-carbon transport vehicles

The Company promotes green and low-carbon transport, and strives to minimize non-renewable energy consumption and reduce environmental pollution.

 Case

The use of all-electric concrete mixer trucks boosted

Huadong Material actively embraces the national "Dual Carbon" strategy and has initiated a project at Wuxi Huadong Materials Co., Ltd., to replace fuel-powered vehicles with all-electric concrete mixer trucks. The company purchased 30 all-electric concrete mixer trucks, becoming one of the first companies in Wuxi to widely promote the use of new energy transport vehicles. The project supports the development of a new commercial concrete transportation system that is energy-saving, low-carbon, and resource-efficient.

By switching to all-electric mixer trucks, the project replaces traditional fossil fuels with clean energy, effectively reducing fuel consumption and lowering carbon emissions and greenhouse gas emission intensity. By doing so, the company has explored a low-carbon development path tailored to the industry's needs. Beyond reducing carbon emissions, all-electric mixer trucks offer zero exhaust emissions and low-noise operation, significantly improving urban air quality and reducing noise pollution. In addition, these trucks decrease hazardous waste from traditional fuel-powered vehicles, promoting a transition of the company from a resource-saving to an environmentally friendly model. Consequently, the project supports harmonious coexistence and green development between the company and the city.

Moreover, after the project's implementation, concrete transportation management has become smarter and more digital. The trucks are equipped with advanced in-vehicle monitoring systems and smart dispatch platforms, which enhance transportation safety while optimizing dispatch efficiency and reducing operating costs.



All-electric concrete mixer trucks at Wuxi Huadong Materials Co., Ltd.

Furthermore, the Company actively partners with major equipment manufacturers to drive the extensive adoption of new energy vehicles. In 2024, the total number of new energy vehicles used by outsourced units was approximately 600.

Renewable energy application

The Company continues to expand the use of renewable energies, and aims to reduce dependence on traditional energies by constructing solar panels and wind turbines in the Company’s production areas, in an attempt to minimize the adverse impact on the environment. By the end of 2024, the company had commissioned 43 PV projects with an installed capacity of 166.16 MW.

Case Tianshan Material's low-carbon transition empowered by photovoltaic projects

To align with the national green and low-carbon development strategy, Tianshan Material has been actively advancing distributed photovoltaic power generation projects. In 2024, six cement plants of Tianshan Material in the Central and South China region launched a photovoltaic project with a total capacity of 19 MW. The project adopts a “self-generation and self-use, and surplus electricity connected to the grid” model and has fully entered the construction phase.

The project, covering six cement plants of Shaoyang South, Shaofeng South, Anren South, and Guzhang South, leverages the rooftops of plant buildings to install photovoltaic systems. Once put into operation, these systems will significantly cut the cost of purchased electricity, promote clean and low-carbon production, and reduce energy consumption and carbon emissions, thereby boosting the core competitiveness of the Company’s cement business. Designed for a 25-year operational lifespan, the project is expected to generate an average of 18.3566 million kWh annually. Compared to thermal power of the same capacity, it will save 5,519.83 tonnes of standard coal and reduce CO₂ emissions by approximately 15,125.84 tonnes each year. Through the construction of these photovoltaic projects, Tianshan Material has not only met its energy-saving and emission reduction targets but also spurred the green transformation of the cement industry, laying a solid foundation for sustainable development.



Case 2.5 MW photovoltaic project at Hunan Jiuhua

Hunan Jiuhua has built distributed photovoltaic power stations on the rooftops of the mixing building, raw material stacking shed and sand washing production line plant, with an area of about 22 thousand m² and an installed capacity of 2.5 MW, and the estimated average annual power generation capacity is 2.25 million kWh. In 2024, the Company consumed a total of 100.26 kWh of self-generated electricity, resulting in cost savings of RMB 295.4 thousand.



Photovoltaic project at Hunan Jiuhua

Case Ruichang aggregate transport corridor photovoltaic project

Ruichang Corridor Transportation Co., Ltd., by fully utilizing the resources within the plant, has built a distributed photovoltaic power station on the rooftop and two facades of the landscape corridor for ore transportation. The station has applied a total of 4,302 pieces of CdTe power generation glass to lay more than 7,000 square meters of photovoltaic power generation equipment. The total installed capacity of the project is about 685 kWp. In 2024, the cumulative power generation of the project was 369 thousand kWh, saving 121.01 tonnes of standard coal and reducing 367.81 tonnes of carbon emissions.



Ruichang aggregate transport corridor photovoltaic project

Developing Circular Economy

Tianshan Material continues to promote the development of the circular economy and remains committed to minimizing the dependence on natural resources. The Company actively increases the proportion of alternative raw materials and fuels, and promotes the water recycling technology to boost resource efficiency and mitigate the impact on the environment by the Company's production and operation, thereby supporting green and sustainable development.

Use of Alternative Materials

Tianshan Material actively promotes the use of alternative raw materials and fuels in cement production. This initiative aims to reduce dependence on traditional resources and lower carbon emissions and environmental pollution.

The Company has set clear circular economy management targets and plans. It is expected that the substitution rate of raw materials will reach 2.7% and 3% by 2025 and 2030 respectively.

Use of alternative raw materials

We have researched and learnt about applicable alternative resources in the region where each subsidiary is located, such as calcium industrial solid wastes including calcium carbide slag, steel slag, yellow phosphorus slag, fly ash, coal slag, copper slag, magnesium slag, sulfuric acid slag and red mud, and gradually improve the substitution rate of raw materials. During the year, the Company conducted a series of initiatives for the comprehensive utilization of resources mainly by adopting alternative raw materials such as fly ash, mineral powder and calcium carbide slag.



Clinker production

- Approximately 60% of CO₂ from clinker production is generated from the raw material (i.e., limestone), while alternative raw materials can significantly reduce CO₂ emissions from carbonate decomposition. The Company uses alternative raw materials such as waste residue after high-temperature calcination and materials that clearly do not contain calcium carbonate and magnesium carbonate. The main types include calcium carbide slag, magnesium slag, paper making white mud, sulfuric acid slag, coal ash and red mud. In 2024, the Company consumed a total of 9,780 thousand tonnes of alternative raw materials, reducing carbon dioxide emissions by 2.38 million tonnes.



Concrete production

- The Company adopts mineral admixtures such as fly ash and mineral powder, and optimizes their proportions with additive trial blending to improve concrete performance and reduce environmental pollution. In the year, the Company used 5,277.2 thousand tonnes of fly ash and 4,624.9 thousand tonnes of mineral powder.



Aggregate production

- We use low-grade limestone and waste stone for aggregate production to achieve 100% resource utilization.



Cement production

- The artificial sand and rock flour produced in the processing process of the aggregate production line are reutilized by the Company in the cement production line, which can lower the production cost and improve efficiency.



Case

Replacement of limestone with acetylene sludge in clinker production for energy conservation and emission reduction

Midong Tianshan actively responds to national policies by using acetylene sludge to fully replace limestone in clinker production. The company also utilizes fly ash, copper slag, desulfurized gypsum and silicon powder from power plants, achieving circular economic development. This not only consumes industrial slag but also eases the environmental pressure on surrounding enterprises in the park, facilitating the coordinated development of the ecological environment and land resources. Since its commissioning, the clinker production line has operated continuously throughout the year. The production line has produced approximately 1.5 million tonnes of clinker, consumed 2.3 million tonnes of acetylene sludge and 300 thousand tonnes of other slag annually, achieving a 100% utilization rate of industrial slag. As of December 2024, Midong Tianshan had consumed a total of 38 million tonnes of industrial slag, contributing to the protection of the ecological environment and energy conservation and emission reduction.

While using alternative materials, Midong Tianshan has always prioritized quality. In 2024, the company obtained certifications for its quality, environment, energy, and occupational health and safety management systems from China Quality Mark Certification Group. In December 2024, the company passed the re-assessment and acceptance of the second-level safety standardization and has repeatedly won the excellent award in the Grand Comparison of Cement Chemical Analysis hosted by the China National Center for Quality Inspection and Testing of Cement.



Midong Tianshan's acetylene sludge production line



Excellent award in the 19th National Grand Comparison of Cement Chemical Analysis of "Tianbao Huarui Cup"



Case

Partial replacement of limestone with magnesium slag to facilitate energy saving and carbon reduction in clinker production

Hanshan South has been deeply exploring raw material substitute technology. The company has innovatively used magnesium slag, a solid, carbon-free, high-calcium by-product from local metal magnesium production enterprises, as an alternative raw material in the clinker production process. This move fully taps into the carbon reduction potential of solid waste resource utilization.

During clinker production, Hanshan South incorporates 5% to 8% magnesium slag into the raw meal, partially replacing limestone and siliceous materials. The application of magnesium slag not only effectively reduces the carbonate content in the raw meal but also plays a role in inducing crystallization, lowering nucleation energy, and promoting the formation of silicate mineral crystals during the calcination process. Additionally, the CaF₂ in the raw meal acts as a mineralizer, further promoting the formation of C₃S and enhancing the burnability of the raw meal. This technological improvement significantly reduces the thermal energy required for carbonate decomposition, achieving energy saving and consumption reduction. Without affecting the clinker quality, the physical coal consumption is reduced by 4.98 kg/t, and the comprehensive electricity consumption is reduced by 1.64 kWh/t, achieving remarkable energy-saving results.



Hanshan South's production line

Use of alternative fuels

The Company has developed the “Implementation Plan for Reaching Carbon Peaking and Carbon Neutrality”, proposing to promote the carbon reduction through introducing alternative fuels and other methods.

The alternative fuels used by the Company comprise solid, liquid and gaseous alternative fuels. Solid alternative fuels include refuse-derived fuel (RDF)³, biomass, plastic waste, waste tires, and petroleum coke. Liquid alternative fuels include mineral oil, waste hydraulic oil and others. Gaseous alternative fuels include coke-oven gas, oil refinery gas, pyrolysis gas, and hydrogen energy.

The Company is dedicated to the research on regional alternative fuel resources and the R&D of alternative fuel technology and equipment in collaboration with an intra-group company. Meanwhile, the Company is developing projects for the collection and storage of RDF, biomass fuels, and other alternative fuel resources, with a focus on promoting the construction of alternative fuel projects in Shandong, Henan, Anhui, Jiangsu, Zhejiang, Sichuan, Guizhou, Yunnan, and other regions. Furthermore, we conduct research on the application of hydrogen fuel in the cement industry, and construct demonstration end-user engineering projects with large-scale utilization of alternative fuels in due course. By the end of 2024, there were 89 alternative fuel projects completed and put into operation with excellent progress in carbon reduction.

In 2024, our key performance indicators of alternative materials usage are as follows:

Key Performance Indicator	Unit	Data in 2024
Percentage of alternative fuels to replace fossil fuels	%	4.00
Percentage of clinker in cement	%	73.59
Percentage of alternative raw materials in cement ⁴	%	2.67
Percentage of alternative raw materials in concrete ⁴	%	36.3

Recycling of Water Resources

The Company has always placed emphasis on efficient utilization and sustainable management of water resources. We therefore take active and constant measures to promote water resources recycling and improve water use efficiency to realize green and low-carbon transition. In the year, we achieved the following notable results in improving water extraction compliance, increasing water reuse rate and enhancing comprehensive utilization of wastewater.

The Company is committed to water resources recycling and the continuous improvement of water management system. In 2024, the water reuse rate in factories recorded 92.18%, exceeding the target of annual water reuse rate ≥90%. In addition, the commercial concrete enterprises of the Company put more efforts in the construction of water-saving and drainage facilities within their factories, achieving 100% comprehensive utilization of treated sewage, thereby substantially decreasing the consumption of fresh water. In 2025, following the management goal of “maintaining the water reuse rate ≥90% in the factories and decreasing water consumption per unit of product by 0.1%”, the Company will continue to strengthen water-saving management and make more progress in water conservation and consumption reduction.

For more efficient recycling of water resources, the Company has carried out a series of measures, including the optimization of production process, construction of a recirculation system, and sewage treatment and reuse.

In terms of production process, the Company has adopted an advanced dry-process rotary kiln cement production process, which significantly reduces water consumption in raw material drying and grinding. We have also updated the clinker calcination system to enhance thermal efficiency, leading to a reduction in the water demand of the cooling system and a decrease in water consumption.

In terms of recirculation system construction, the Company has scaled up input in building a highly efficient circulating cooling water system, which realizes closed-circuit recycling of production water except evaporation and natural loss, greatly reducing the need for fresh water supply.

In terms of sewage treatment and resource utilization, the Company has been upgrading the wastewater treatment station and improving the sewage treatment capacity, with wastewater being safely discharged or reused after meeting the standard through treatment. In addition, the Company actively explores new paths of wastewater reuse. For example, wastewater such as the circulating water of the waste heat power system and reverse osmosis concentrated water are recycled to the reservoir, and then applied for non-productive purposes after processed, such as greening of the plant and dust suppression in mines. Such approach realizes wastewater utilization, and further reduces the dependence on natural water bodies.


Case

Utilization of alternative fuels to facilitate energy saving and carbon reduction in clinker production lines

CUCC Tengzhou has successfully carried out an alternative fuel application project based on its 4,600 t/d cement clinker production line, facilitating energy conservation, carbon reduction, and green transition in cement production.

It has invested in building a 240 t/d production line which uses alternative fuel. The project employs advanced alternative fuel metering technology to conduct sophisticated preprocessing of various raw alternative fuels and solid wastes to ensure that the processed fuel products meet the high-temperature calcination requirements of thermal equipment in the kiln system while maintaining combustion efficiency and calorific value stability. Supported by the high-temperature calcination process of decomposing furnace, the alternative fuels completely combust, enhancing energy efficiency while effectively reducing conventional fossil fuel consumption.


The project demonstrates remarkable outcomes, achieving annual co-processing of 48 thousand tonnes of alternative fuels. Approximately 26.4 thousand tonnes of standard coal equivalent are replaced, and CO₂ emissions are reduced by about 68.8 thousand tonnes per year. This approach not only significantly lowers corporate energy costs and dependence on traditional fossil fuels, but also substantially improves the resource utilization rate of solid wastes. The project has established a role model for large-scale, high-proportion co-processing of alternative fuels for cement industry in Shandong Province.



Alternative fuel production line

³ RDF (refuse-derived fuel) is the combustible portion extracted from urban solid wastes and is applied for energy recovery after processing.

⁴ Alternative materials do not include gypsum, volcanic ash and other natural raw materials.

 Case


Apply smart water control model in an innovative manner to facilitate efficient management of wastewater recycling

Huaikan South has demonstrated bold innovation in the field of industrial wastewater recycling and established an integrated and smart water use management model that effectively drives its green and low-carbon transition.

It has introduced an advanced distributed control system (DCS). This system provides precise flow data for water balance diagram based on real-time monitoring of flow rates, water pressure, and operating status across water-consuming equipment, reinforcing online monitoring and management capabilities for both water and steam resources in all respects. The comprehensive treatment of circulating water has not only improved water quality but also reduced circulating water consumption, markedly decreasing the reliance on freshwater resources.

Furthermore, Huaikan South has proactively expanded its approach to water resource management by deploying a rainwater collection system. This system centrally collects and treats precipitation across the facility complex, and the treated rainwater is extensively utilized for floor cleaning and landscape irrigation, realizing efficient rainwater reuse.

This year, Huaikan South raised water reuse rate up to 98.7% by reduction of water consumption at source and wider utilization of wastewater. Its smart water use management model is listed in the “2024 Typical Cases List of Industrial Wastewater Recycling” published by the Ministry of Industry and Information Technology.



In recent years, we have made remarkable progress in water conservation and recycling. Our implementation of systematic water conservation management and technological innovation has cut down water consumption per unit of product and improved water reuse rate, while achieving effective control of the total wastewater discharged.

Innovate Low-carbon Products

To actively respond to the challenges of climate change and sustainable development, the Company continuously develops and promotes green and low-carbon products and services that meet market demands in a bid to provide customers with sustainable and innovative solutions.

Diverse Products

Carbon reduction of concrete and cement products is a key step in the green and low-carbon development of the industrial chain. The Company strengthens quality control of raw materials and management of the mixture proportion technology, improves the quality of aggregates and cement, and reduces the use of concrete cementitious materials. Efforts are made to explore the carbonization and carbon sequestration of concrete and cement products to facilitate the green and low-carbon development of the industrial chain.

In recent years, the Company continues to promote the R&D of special cement⁵ and has achieved noticeable results. Special cement is an environmentally friendly product which possesses carbon capture potential and can effectively absorb carbon dioxide in the process of hardening. In addition, this stable and durable product can reduce the consumption of building materials and the energy consumption and CO₂ emission in the production process.

In the year, 2,513 thousand tons of special cement and 15,061 thousand tons of single-purpose cement⁶ were sold, totaling 17,574 thousand tons, a year-on-year increase of 19.76%.

To reduce the carbon emissions of cement products, the Company has made the following efforts:

- ▶ **Reduce carbon emission intensity during clinker production**
 - Reduce carbon emission intensity during clinker production by optimizing the production process and energy structure;
- ▶ **Cut down clinker usage**
 - Cut down clinker usage by accelerating the R&D and promotion of new low-calcium clinker, raising its proportion in the product mix, and lessening the overall carbon footprint;
- ▶ **Save power consumption of grinding**
 - Save power consumption of grinding by deepening the application of graded grinding technology and developing new mixed materials with high activity;
- ▶ **Optimize clinker indicators**
 - Optimize clinker indicators by the lime saturation factor (LSF) of general silicate cement clinker and balancing carbon emission intensity while ensuring product performance.

⁵ Special cement refers to cement species that have certain special performance or functions over general purpose cement, and are suitable for specific purposes, or can play special functions and assign special functions to the building.

⁶ Single-purpose cement refers to those with special treatment or addition of special materials in terms of raw material ratio and production process to meet specific engineering needs and solve specific problems.

Case

Develop low-heat Portland cement resistant to high-geothermal environment to facilitate the construction of high-standard projects

Jiahua Special Cement Co., Ltd. has developed low-heat Portland cement resistant to high-geothermal environment to address issues such as cracking and poor durability of tunnel secondary lining concrete in high-geothermal environments. Leveraging its self-developed “ion doping-crystal structure stabilization and activation” fine clinker technology, Jiahua Special Cement has successfully resolved challenges including premature liquid phase formation and low viscosity during the calcination process of high-magnesium, high-iron, low-alumina clinker. This innovation has yielded a cement product dominated by dicalcium silicate (C₂S content ≥40%), featuring low heat generation, micro-expansion properties, high strength, and exceptional adaptability to high-geothermal environments, meeting engineering requirements under complex geological conditions.

Compared with ordinary Portland cement, this product reduces raw limestone consumption by approximately 10%, lowers calcination temperature by about 100°C, and decreases CO₂ emissions by roughly 10%, significantly enhancing resource utilization efficiency and contributing to green, low-carbon development. In practical engineering application, the cement demonstrates superior crack resistance and durability. It has been successfully applied to major projects including railway construction, providing robust technical support for advancing high-standard, premium-quality infrastructure at a high starting point.

In the year, Aksu Tianshan passed the on-site inspection regarding production facilities, technological process, quality management and environmental protection control by the certification bodies. Its products, the “Tianshan” brand general-purpose cement, 42.5 Portland cement and 52.5 Portland cement, were all awarded the China Low-carbon Product Certification. By the end of 2024, a total of 131 subsidiaries of the Company had obtained the China Green Building Materials Product Certification.



Subsidiaries of the Company obtained the “Certificate for China Low-carbon Product Certification”



Subsidiaries of the Company obtained the “Certificate for China Green Building Materials Product Certification”

Case

Green building materials empower low-carbon development - Concrete products of Sichuan Guangyuan Commercial Concrete obtained “Green Building Materials Product Certification”

Sichuan Guangyuan Commercial Concrete pursues the idea of green and low-carbon development and maintains sustained efforts in the R&D and production of green products. In terms of product innovation, it successfully developed C30 permeable concrete based on technological innovation, which demonstrates excellent water permeability and environmental-friendly performance, and has achieved commercialization. For production process, Sichuan Guangyuan Commercial Concrete has improved enclosed material storage yards, and installed spraying dust suppression systems and pulse dust collectors, effectively reducing particulate emissions. A newly constructed zero-discharge sand and gravel separator enables complete recycling and zero discharge of waste materials and wastewater, further enhancing resource recycling efficiency.

This year, it obtained the 2-star certification of China Green Building Materials Product Certification for four product categories, i.e., ordinary concrete, self-compacting concrete, fiber-reinforced concrete, and high-strength concrete. Centering on green building materials, it strives to drive the green transition of the construction industry and embark on the path of high-quality and sustainable development.

Construction of Green Factories

The Company gives priority to the high-end oriented, intelligence oriented and environmental protection oriented transition of production and service. We continue to optimize business layout and resource allocation in production, and facilitates the green and intelligent development of the production system. The Company establishes a joint working group for intelligent construction, and compiles and perfects the “Intelligent Factory Construction Guide”, “Intelligent Factory Evaluation Standard”, “Digital Mine Construction Guide”, “Pilot Project of Intelligent Factory and General Plan for Information-based Production” and other guiding documents, which lay a solid foundation for the implementation of intelligent and green projects to ensure their efficient implementation, standardized operation and promotion.

In 2024, we set an annual management goal of “comprehensive utilization rate of mine resources ≥85%”, and accomplished the target by recording 100%.

Case

Building-integrated photovoltaics promotes energy saving and carbon reduction - Hefei South Cement Co., Ltd. carries out plant green reconstruction

Hefei South Cement Co., Ltd. has incorporated cutting-edge building-integrated photovoltaic (BIPV) technology, utilizing innovative cadmium telluride (CdTe) photovoltaic glass into its plant energy efficiency upgrades. This technology converts conventional insulating glass into a conductive, power-generating material through a five-layer semiconductor film structure deposited on glass substrates. The CdTe glass features adjustable light transmittance, customizable color patterns, and recyclability, serving as a multifunctional green building material that integrates energy efficiency, renewable power generation, and aesthetic design.

The project will install 5,626 m² of CdTe photovoltaic glass with a total capacity of 0.58 MW, expected to generate 356.3 thousand kWh of clean electricity annually. This renewable energy supply will offset factory power consumption and reduce operational energy consumption. Additionally, it is estimated to cut annual CO₂ emissions by 267.2 tonnes and conserve 100.1 tonnes of standard coal equivalent, markedly improving energy utilization efficiency.

Case

Intelligent upgrading and clean energy enable green manufacturing - CUCC Beichuan won the honorary title of national green factory

CUCC Beichuan has emerged as a trailblazer in sustainable manufacturing, advancing its “eco-friendly and resource-conserving” vision through intelligent upgrades and clean energy integration. It has pioneered an integrated co-processing system for solid waste and alternative fuels, leveraging breakthroughs in technological innovation to enhance resource efficiency and minimize reliance on conventional fuels. The distributed photovoltaic power generation project is also launched to diversify its energy mix with renewables and achieve carbon reduction at the source. Upon full implementation, these measures are expected to drive significant annual reduction in carbon emissions, boost energy efficiency, and accelerate its transition to low-carbon operations. Recognized for its exemplary practices of green manufacturing, CUCC Beichuan was named to the “2024 Green Manufacturing List” and certified as a National Green Factory. Its achievements have set a new industry benchmark for eco-conscious cement production and propelled the industry toward a carbon-neutral future.

Biodiversity Protection

The loss of biodiversity has been recognized as one of the greatest global risks at present, and biodiversity protection is essential for human well-being and the health of our planet. As the largest cement company in the world, the Company, pursuing the concept of green development, takes active actions to preserve the ecological environment and avoid or minimize the pollution and damage to the ecological conditions caused by our production and operation. We aim to make contribution to the harmonious coexistence between man and nature, and the building of a beautiful China

According to UN Sustainable Development Goals (UNSDGs), the “Kunming-Montreal Global Biodiversity Framework” adopted at the 15th meeting of the Conference of the Parties to the “Convention on Biological Diversity”, the “Opinion on Further Strengthening Biodiversity Conservation” issued by the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council, and related conventions and opinions on biodiversity protection, the Company has issued the “Policy Statement on Biodiversity”, which applies to all operating regions, suppliers, associates, and other business partners. The Company is committed to protecting biodiversity, and incorporates biodiversity as a key issue in our ESG governance system, which is supervised by the Board’s ESG Committee, and shall be implemented by the ESG Working Group and relevant functional departments.

Biodiversity Risk Assessment

The Company actively carries out biodiversity risk assessments covering our operations, surrounding areas, and upstream and downstream activities to avoid adverse effects on biodiversity. The Company continuously improves the prevention and control system of biodiversity risk management and assessment, and applies assessment standards and framework related to biodiversity to identify, analyze and evaluate the potential impact on biodiversity and natural capital by production, operation, procurement and acquisition, and to avoid operation in areas of world or national biodiversity importance.

Guide by the red line policies for ecological and environmental protection, the Company has strengthened its management philosophy regarding ecological conservation and conducted rigorous assessments for factory site selection and layout planning. Where potential ecological impacts are identified within the scope of the ecological conservation red line, we will cease operations, relocate projects, or decommission facilities to ensure the integrity of ecosystems. This year, the Company did not initiate new production activities beyond red line, or have any operation ceased or facility decommissioned.

For operations at terrestrial or marine sites adjacent to key ecological functional zones, natural reserve, and ecologically sensitive and vulnerable regions, the Company has implemented a series of ecological protection and restoration measures. These include optimizing plant layout, minimizing disturbances to natural habitats, executing vegetation restoration projects, and carrying out soil and water conservation practices to mitigate impact on surrounding ecosystems. We conduct regular monitoring of ecological conditions around operational sites to ensure preservation of original ecological functions. In 2024, the Company effectively lessened ecological pressures on sensitive areas, maintained stability in surrounding ecosystems, preserved ecological functions in relevant regions without significant degradation, and sustained favorable environmental quality.

Biodiversity Protection Actions

We value the management of risks and opportunities arising from ecological and environmental changes, bend ourselves to minimizing the damage caused by our production and operation to the environment, and produce cement products in an ecologically friendly manner. Abiding by the principle of “concurrent mining and reclamation”, the Company takes practical actions to protect biodiversity.

Case Promote the integration of “intelligent industry” and “ecological beauty” to build a national green mine benchmark

Huanghe Tongli actively practices the idea of ecological civilization, and promotes the construction of green mines under the integration of intelligent industry” and “ecological beauty”:

Green mining and resource utilization: Its advanced production lines enable green mining and efficient processing of ores, to fully utilize waste rock. The industrial wastes are reused as reclamation material, thereby alleviating land shortage and achieving waste reduction and recycling.

Ecological restoration and revegetation: Huanghe Tongli insists on ecological restoration throughout the lifecycle of mines, and takes actions such as water diversion and construction of impounding reservoir, regreening more than 400 thousand square meters of land. Around 300 thousand seedlings have been planted, with a high survival rate. Under its efforts, a four-season evergreen garden mine has been built up. In 2024, the orchard saw a good harvest.

Digitally smart mine: Huanghe Tongli drives digital and intelligent transition, and has installed intelligent car-washing, surveillance and environmental protection monitoring systems to achieve an all-round and real-time monitoring. A range of technologies are integrated to promote the construction of 5G smart mine with higher level of management efficiency and resource utilization.



Conservation of natural habitats and wildlife

During our operations at factories and mining sites, we prioritize the protection of natural habitats, wetlands, forests, wildlife corridors, and agricultural land, and minimize ecological impact to the greatest extent possible. To ensure habitat integrity, we adopt mining techniques and transportation plans according to local conditions to significantly weaken disturbance to regional ecosystem. In 2024, we restored native vegetation of certain zones in plenty of projects, reinforcing ecological quality, and strengthening both biodiversity and ecosystem resilience. The habitat conditions for numerous indigenous species were more livable and ecological connectivity were smoother across regions.



 Case

Sichuan Golden Cement's ecological restoration and reclamation of limestone mine accelerate transition towards green mine

Under the global consensus on ecological civilization and environmental protection, the ecological restoration of mines has become a crucial indicator for evaluating regional and enterprises capabilities of advancing sustainable development. Sichuan Golden Cement actively responds to the “Technical Specifications for Ecological Restoration of Mines” issued by the Ministry of Natural Resources. Adhering to the philosophy of “giving priority to ecological protection and maintaining green development”, it fully implements ecological restoration at the Wulongdong Cement Limestone Coal Mine, contributing to green mine transition.

Based on mining operations and climate patterns, Sichuan Golden Cement has scientifically formulated an ecological restoration plan to conduct remediation strategies by phase and by region. Innovative application of lawn hydroseeding technology, combined with interlaced planting of shrubs and vines, has significantly enhanced vegetation recovery. By the end of 2024, the comprehensive remediation and regreened area reached 17 hectares with 100% greening coverage. Sichuan Golden Cement also places emphasis on organic integration of ecology and landscape. The key projects including viewing terrace, pavilions, and central scenic areas are embellished by colorful floral displays, rockery landscapes, and tranquil corridors, creating a “Beautiful Mine” image that elevates ecological and cultural value of the mining field.

The reclamation of Wulongdong Mine has achieved remarkable results. The substantially increased vegetation coverage provides quality habitats for diverse species, thus establishing a stable ecosystem that effectively controls soil erosion and mitigates potential water/soil contamination possibility from mining activities.



Restoration project of limestone mine ecology

 Case

Huanghe Tongli's efforts for a green mine – the integration of “intelligent industry” and “ecological beauty”

The Lujiaoling Mine is located in Fancun Town, Yiyang County, and covers an area of 1.8989 square kilometers. Since the beginning of the mine's development, Huanghe Tongli had adhered to an eco-priority development path. Upholding the principle of “reclamation during excavation, greening during construction and beautification during production for a green mine”, the company made every effort to minimize the impact on the natural environment. By establishing a sand and gravel aggregate production line and a commercial concrete production line capable of utilizing 100% of the mine waste rock, Huanghe Tongli has achieved green mining and processing of ore at Lujiaoling Mine. To cope with the limited land for reclamation and significant challenges associated with it, the company used industrial waste such as filter cake separated from sand washing as materials for artificial slope reconstruction. This solved the land shortage issue and achieved waste reduction, reuse and decontamination to a large extent.

Through restoration efforts, the company regreened a total area of over 400 thousand square meters at Lujiaoling Mine. Additionally, the company diverted water from the Luohe River, built reservoirs and applied fertilizers to maintain the eco-environment of the mine. These greater efforts successfully consolidated the company's greening achievements and ensured a survival rate of over 99% for the saplings planted there.




 Case

Dazhou Lisen's efforts for a “green, safe, intelligent and efficient” mining system

Bearing in mind the concept that “mountains, rivers, forests, farmlands, lakes, and grasslands are a life community”, Dazhou Lisen, a subsidiary of Southwest Cement, has been actively exploring an “ecological mine restoration+” model and practicing remediation during mining under the rule of “ensuring evergreen mountains”. In this regard, the company has planted herbaceous plants and flowers that regreen in different seasons, and built a unique landscape viewing pavilion, successfully transferring “the abandoned mine to lucid waters and lush mountains and to invaluable assets”. To date, more than 6.3 thousand trees, 36 thousand bamboo plants, and 1.2 thousand flowers have been planted, about 1.5 thousand kilograms of grass seeds have been sown. An ecological area of about 78 mu (around 52 thousand square meters) has been restored and every greenable place in the mine has been greened.

In March 2024, Dazhou Lisen actively responded to CNBM's green planting campaign – “Building a Green Homeland: Building Materials Empowering Carbon Peaking and Neutrality” by planting more than 4.8 thousand holly trees along the mine roads, continuously working on the mine's green construction, and highlighting its high-quality development with green concept. In April 2024, Dazhou Lisen Mine was awarded as “Green Mine” by Sichuan Province.



 Case

Dinghua Building Material supports the construction of beautiful villages by improving rural living environment

Longdong River Area, located in Xingquan Community, Xingquan Town, Huaping County, Lijiang City, Yunnan Province, is named after the river formed by water flowing out of karst caves. This area serves as a primary living and agricultural zone for the local residents. Due to lack of planning, Longdong River Area has long faced problems such as dirty environment and river pollution, which affect local biodiversity and the life quality of residents.

At the beginning of 2023, Xingquan Community proposed a beautiful village construction plan for Longdong River Area. Dinghua Building Material, as a local company, actively responded to the community initiative and donated 100 solar street lights at the end of 2023. In the year, Dinghua Building Material donated 100 tonnes of cement for the community infrastructure renovation, with a total investment of nearly RMB 300 thousand, effectively supporting the environmental improvement and infrastructure construction of the village.

In October 2024, the beautiful village construction project in Longdong River Area was completed and put into use. The plan has improved the living environment of residents and demonstrated the harmonious coexistence of biodiversity conservation and rural revitalization.



Dinghua Building Material supports the construction of beautiful villages by improving rural living environment

Ecological restoration and soil and water conservation of mines

The Company has formulated and implemented a restoration plan of mine ecology, and carries out work on the principle of “concurrent mining and restoration”, with a focus on greening and ecological integration around the mining area. The Company has constructed ditches and retaining walls and launched soil and water conservation projects in mining slope areas, thereby effectively reducing the erosion of slopes by rainfall and the risk of soil erosion. In addition, the Company increases the proportion of electric mining vehicles used in mining and transporting, reducing exhaust emissions and mitigating the pollution to the surrounding environment. In the year, the Company effectively reduced soil erosion and ecosystem degradation in the mining area. As a result, the ecological environment and natural landscape around the mining area gradually recovered to a more stable condition, fostering harmonious coexistence of the mining area and the surrounding ecosystems.

 Case

Ecological restoration projects for the green development of mines

In active response to China’s development concept of “lucid waters and lush mountains are invaluable assets”, Hunan Linli South New Material is committed to steering the mining industry towards the path of green development, thus contributing to the construction of ecological civilization. Upholding the principle of “concurrent mining and greening”, the Company collaborates with the Chinese Academy of Sciences, Hunan University, Central South University, and Anhui University of Science and Technology to establish an integrated base for production, academia, research, and training. This initiative aims to restore the ecological integrity of mines, enhance land productivity, and explore a region-specific green restoration model.

In the practice of ecological restoration, the Company adopts the restoration method combining planting and sowing. Specifically, the Company innovatively uses the technical means of planting seedlings in nutrient bags and sowing seeds to gradually establish ecosystems with natural succession capacity, and realize the sustainable improvement of the ecological environment of the mining area. Since the establishment in 2019, the Company has completed the ecological restoration for a total area of 152 thousand m², with a restoration rate of 100%, effectively promoting the restoration and reconstruction of the ecological environment of the mining area.

With the outstanding results of green development, Hunan Linli South New Material was invited to participate in the Hunan International Green Development Expo hosted by the Department of Natural Resources of Hunan Province. In the Expo, the Company showcased its excellent achievements in mine ecological restoration and green development, fully demonstrating the exemplary and leading role of the Company in promoting the sustainable development of the industry.



Conservation and sustainable utilization of biological genetic resources

The Company focuses on the conservation of biological genetic resources. Following the principles of sustainable utilization and access and benefit sharing, the Company carries out regular biodiversity monitoring in the mining area and around the project site to identify and protect plants and animal resources of significant ecological value. The Company actively participates in the early warning and management of biodiversity risks, and formulates special management programs for high-risk areas to reduce the potential impacts of its operations on biological genetic resources. The establishment of the biological genetic resource management system has enabled the Company to protect biodiversity through a professional and systematic approach. This approach also ensures that the habitats of key species are not significantly disturbed, and promotes the sustainable utilization and long-term protection of biological genetic resources.

Ecological impact management throughout the product lifecycle

To reduce the impact on ecosystems, biological species and their habitats throughout the lifecycle of its products, the Company implements green management strategies in all aspects, including product design, raw material procurement, manufacturing, transportation, use and disposal. By promoting the construction of green mines and green factories, we advance the application of clean production technologies to reduce the discharge of greenhouse gases and pollutants. The Company introduces eco-friendly materials in certain projects to reduce resource consumption and environmental burden. Green management measures have effectively reduced the ecological footprint of products throughout their lifecycle, enhanced resource conservation and energy efficiency, and further solidified the Company’s position as an industry leader in sustainable development.

We will continue to strengthen biodiversity conservation management, optimize ecological and environmental protection measures, and foster the deep integration of biodiversity into corporate sustainable development. The Company is dedicated to becoming an industry benchmark in ecological protection and green development, and making greater contributions to global biodiversity conservation.

Tianshan Material’s key performance indicators related to the biodiversity assessment in 2024		
Key Performance Indicators	Unit	Data in 2024
Total number of operation premises	\	507
Total area of operation premises	m ²	82,063,440
Total number of operation premises conducting biodiversity impact assessment	\	472
Total area of operation premises conducting biodiversity impact assessment	m ²	75,440,101
Total number of operation premises with great impact on biodiversity	\	0
Total area of operation premises with great impact on biodiversity ⁷	m ²	0
Total number of operation premises carrying out biodiversity management plans	\	102
Total area of operation premises carrying out biodiversity management plans ⁸	m ²	6,312,300

⁷ Total area of operation premises with great impact on biodiversity refers to the total area of mines and woodlands within the scope of the Company’s place of business that may have a significant impact on biodiversity.
⁸ Total area of operation premises carrying out biodiversity management plans refers to the total area of the Company covered by the biodiversity management plan.

Emission Compliance Management

Tianshan Material attaches great importance to emission compliance management and regards it as an important part of environmental management. The Company has established internal management policies such as the “Pollution Prevention and Control Management System” and the “Pollutant Discharge Permit Management System”. As a result, the Company’s emission activities throughout operations comply with relevant laws and regulations and standards. In addition, the Company actively implements diversified emission reduction measures and conducts waste discharge publicity and training to promote the sustainable development of society and the industry. In the year, the Company’s pollutant discharge was in compliance with the requirements of relevant laws and regulations, and no incidents of excessive pollutant discharge occurred. In the year, the Company did not experience any pollutant discharge incidents that had adverse effects on the health of employees or community residents, nor was the Company subject to any significant administrative penalties or criminal liability as a result. The Company’s environmental monitoring program and risk management measures were effectively implemented.


More Robust Waste Gas Management

The Company focuses on exhaust emission management, carries out audits of waste gas management, invests in independent development and introduction of advanced environmental protection processes, which greatly cut down pollution emissions. The Company’s main waste gas pollutants include industry-specific pollutants such as nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM), as well as controlled substances such as mercury specified in the “Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal”.

The Company has formulated the “Key Periods of Atmospheric Pollution Control Work Plan”. According to the ultra-low emission standards and implementation progress requirements of each region, the Company has accelerated the ultra-low emission transformation of cement enterprises and implemented the upgrading and renovation projects of environmental protection facilities represented by SCR, denitrification tubes, wet desulfurization and other technical routes.


In the year, the Company signed the “Eco-environmental Protection Goal Responsibility Statement” with each regional company, specifying the target of reducing NO_x, SO₂ and PM emissions per unit product in 2024. That is, the emissions of NO_x, SO₂ and PM per tonne of clinker would be decreased by 1.5%, 0.8% and 0.6% year on year, respectively. By the end of 2024, through emission reduction measures such as ultra-low emission transformation, control of sulfur content of raw combustion materials and upgrading of existing dust collection equipment, emissions of clinker NO_x, SO₂ and PM had decreased by 7.86%, 1.49% and 23.24%, respectively. All emission targets were achieved in the year.

Exhaust emission management measures




Ultra-low emission and emission reduction technology

- Conduct emission reduction technology transformation for new dry-process cement clinker line to reduce NO_x and ammonia escape emission concentration;




Dust collection bag expansion and transformation

- Implement dust collection bag expansion and transformation, and optimize production lines to significantly reduce PM emissions;




Denitrification transformation

- Apply reliable denitrification technology to convert polluting waste gas into harmless gas and reduce waste gas emissions;



Desulfurization transformation


- Introduce compound desulfurization technology to effectively control pollutant emission concentration, while ensuring the stability of kiln system operation.

 Case

Zhejiang Cement adopts “P-N-SCR ultra-low emission technology” to facilitate innovative breakthroughs in carbon neutrality

Zhejiang Cement continuously enhances energy conservation, emission reduction and green and low-carbon technology innovation, and has launched the P-N-SCR ultra-low emission technology innovation project. The project integrates source emission reduction, process control and end-of-pipe treatment. Through the three core technologies of highly integrated pipeline denitrification, precise selective non-catalytic reduction (SNCR) and innovative selective catalytic reduction (SCR), the project has built an efficient and coordinated online pollution reduction and carbon reduction system. After adopting this technology, Jiande South, a subsidiary of Zhejiang Cement, saw a significant reduction in NO_x emissions from the kiln tail flue gas, with the concentration dropping to 45 mg/m³. The ammonia consumption per tonne of clinker was reduced to below 1.00 kg, and ammonia escape was effectively controlled within 5 mg/m³. This resulted in an annual reduction of 1,100 tonnes of NO_x and 2,520 tonnes of CO₂ emissions.

The project has achieved an organic integration of multi-stage collaborative governance, efficient emission reduction, and energy saving and carbon reduction, driving a comprehensive improvement in environmental performance and energy efficiency. Therefore, it has been honored with the “Top Ten Science and Technology Innovation Awards for Carbon Peaking and Carbon Neutrality in Zhejiang Province in 2024”.



Certificate of honor for “Top Ten Science and Technology Innovation Awards for Carbon Peaking and Carbon Neutrality in Zhejiang Province in 2024”

In addition, the Company conducts regular air quality monitoring to ensure that production activities do not have a negative impact on employee health and surrounding communities.

Strict Wastewater Management

The Company keeps a watchful eye on the water use and indicator management in the production of cement products and applies digital tools to monitor water consumption data in real time, so as to minimize water waste. The Company's main pollutants in wastewater discharged are industry-specific pollutants reflected by indicators such as chemical oxygen demand (COD) and ammonia nitrogen content.

Wastewater drainage management

The Company strictly abides by the principle of “clean water and sewage diversion, rainwater and sewage diversion, separate collection, and processing by quality” to ensure the scientific and environmental management of wastewater discharges.

Clean water and sewage diversion

The Company effectively separates industrial and domestic wastewater at the source through a robust management system and equipment control measures, ensuring that all kinds of wastewater meet the discharge standards or can be reused after appropriate treatment. At present, all factories of the Company have been equipped with processing equipment for domestic wastewater, and all processed wastewater is reused. Wastewater of washing tanks from enterprises under the Company operating commercial concrete business can be reused after collection and processing.

Rainwater and sewage diversion

To reduce the risk of rainwater runoff pollution, the drainage system has been rationally planned to ensure that rainwater and sewage are discharged separately. Water quality monitoring wells are set up as required before rainwater and sewage pipes are connected to municipal rainwater and sewage pipes, which can monitor the collection and discharge of rainwater in real time. In the year, the Company carried out special management for unorganized emissions and diversion of rainwater and sewage, and all potential risks investigated were rectified, effectively enhancing the management of rainwater and sewage diversion.

Separate collection

In accordance with the requirements of environmental impact assessment and discharge license, the Company strictly implements the separate collection and treatment of wastewater, ensuring that the concentration, discharge methods, and total volume of wastewater comply with environmental standards. To prevent hazardous substances entering the surrounding area through rainwater runoff, enterprises discharging wastewater containing heavy metals and toxic and hazardous substances shall be equipped with rainwater collection facilities, and shall not directly discharge rainwater, so as to minimize the pollution to natural water and soil.

Processing by category

The Company, taking into account the characteristics of wastewater, employs a range of diversified treatment technologies, including physical, chemical, and biological methods, to effectively remove hazardous substances from wastewater. The quality of treated water is stable and meets the required standards for safe discharge or reuse. Such efforts further enhance the water use efficiency.

The Company has established a management objective to specify that the Company shall discharge wastewater in strict accordance with the pollutant discharge permit standards. In the year, the Company built corresponding facilities for centralized sewage processing and automatic monitoring equipment based on requirements of environmental impact assessment and sewage discharge license. The Company also networked with the monitoring equipment of the ecological and environmental protection authorities to achieve real-time monitoring of sewage data. Meanwhile, we have explicitly prohibited setting up sewage outfalls in the protection zone of drinking water sources. All other established sewage outfalls will discharge sewage after processing in strict accordance with discharge requirements.

By the end of 2024, the Company's four wet aggregate production lines had been equipped with wastewater treatment systems. The treated wastewater can be recycled to realize zero wastewater discharge.

 Case

100% recycling of wastewater from mixing plants contributes to green development

Tonglu Benteng Building Materials actively practices the concept of green development, and has launched a project for 100% recycling of wastewater from mixing plants. By jointly leveraging the sand and gravel separator and the bar screen grit chamber, the project effectively intercepts and filters wastes, and precipitates suspended matter to purify wastewater. The quality of treated water is monitored in real time and used in concrete production after meeting the standards, achieving closed-loop management of the entire process.


In recent years, relying on independent R&D and management system reform, the Company has continuously optimized sewage treatment and recycling technologies. By doing so, the Company effectively achieves multiple goals such as recycling water resources, reducing production costs, and improving resource utilization efficiency. By the end of 2024, the project had cumulatively reused wastewater for 21,291 times, with an average of 1.44 m³ of wastewater recycled each time. This had resulted in a total water saving of approximately 30,659 m³. The project has significantly reduced the Company's reliance on fresh water and contributed to meaningful achievements in energy conservation, emission reduction, and green transition.



Treatment process for the zero discharge of wastewater


Water quality monitoring and management

To ensure water safety, the Company has established a sound water quality monitoring and management mechanism. Based on this mechanism, the Company conducts regular water quality testing to ensure the sustainable use of water resources during production and operations.




Groundwater monitoring

- The Company annually engages qualified third-party professional organizations to conduct water quality tests on the extracted groundwater. These tests focus on whether the water quality meets the relevant national and local standards to ensure the safety and reliability of the water source.



Surface water monitoring

- The Company regularly carries out random sampling of production water taken from rivers and sends the samples to internal or external laboratories for comprehensive testing. This enables the Company to monitor water quality changes in real time and promptly identify and address potential risks.



Boiler water management

- To ensure the safe operation of production boilers and avoid water quality problems, the Company strictly treats the water used in boilers. Specifically, the Company adopts the industrial salt softening process to reduce water hardness, prevent scaling and corrosion, and ensure efficient and stable operation of equipment.

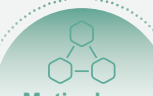
Reduction of water consumption

Faced with global water shortages and increasingly severe environmental challenges, the Company actively responds to the sustainable development strategy by continuously promoting water-saving management and technology innovation. In this way, the Company is committed to improving water use efficiency and reducing total water consumption.



Water-saving technology optimization

- Through technology improvement and equipment upgrade, the Company reduces unnecessary water consumption and increases the proportion of recycled water in the production process, maximizing the recycling of water resources.



Meticulous management of water use

- The Company employs digital monitoring methods to track water use data in real time, precisely analyze water use efficiency at each stage, and promptly identify and rectify abnormal water use.



Cultivation of water-saving awareness

- We carry out water-saving publicity and training across the Company to enhance employees' water-saving awareness, advocate a water-saving mode in work and daily life, and establish a water-saving management system with the participation of all employees.

Stronger Waste Management

Tianshan Material actively promotes waste management, focusing on the principles of “reduction, recycling, and harmless disposal” to optimize waste classification and recycling. The Company highly values the management of waste resources generated from cement products manufacturing, and standardizes the classification, separation and recycling of wastes, thereby protecting the soil environment around the production line while reducing resource waste.

Adhering to the principle of “transition of cement enterprises into urban solid waste purifiers”, we adopt cement kilns to co-dispose of domestic wastes, solid wastes and hazardous wastes. The co-disposal project closely integrates cement production and waste treatment, and utilizes the heat energy generated from the incineration of solid wastes for cement production and the “residue” after incineration as auxiliary raw materials for cement, achieving zero-emission treatment of solid wastes while saving social resources. In 2024, the Company set and achieved a management target of 100% disposal rate for solid wastes, and achieved this target.

The Company solves the problem of industrial and urban waste reuse and disposal based on the technological progress of solid waste consumption and resource recycling. In this process, the Company strictly adheres to relevant regulatory requirements for the treatment of hazardous wastes that cannot be recycled. The Company ensures that such wastes undergo accurate identification, standardized classification, and proper storage before engaging qualified third parties to conduct high-temperature incineration or harmless landfill treatment. This approach aims to minimize the potential impact on the environment and human health. Meanwhile, the Company has developed and released the “Safety and Environmental Protection Identification and Protection Standards”, which clarifies the requirements for hazardous waste management, so as to ensure the standardization and traceability throughout waste management.

By continuously optimizing the waste management process, the Company has established 57 cement kiln co-disposal production lines, with an annual disposal capacity of 5.96 million tonnes. In 2024, the Company disposed of 1.17 million tonnes of hazardous wastes and solid wastes through rotary kiln co-disposal, thus continuously promoting waste reduction and recycling and supporting the green and sustainable development of the Company.

In 2024



Company set and achieved, a management target of **100%** disposal rate for solid wastes



A total of **1.17** million tonnes of hazardous solid waste was disposed of through rotary kiln co-disposal



Case

The practices of Jiaxing Fengqiao South Concrete to build a “zero-discharge factory”

Jiaxing Fengqiao South Concrete closely follows the government's pace in creating a “waste-free city,” and strictly implementing its corporate responsibility for the prevention and control of environmental pollution from hazardous wastes and solid wastes. Jiaxing Fengqiao South Concrete has established a steering group for the creation of a “zero-discharge factory”, set up a working mechanism with clear division of labor and well-defined rights and responsibilities, and refined the work content.

Jiaxing Fengqiao South Concrete continuously increase its investment in environmental protection, using new sand and gravel separator and sewage reuse system to clean vehicles when they return to the factory. The system uses recycled wastewater for vehicle cleaning, capable of cleaning over 36 m³ of leftover materials per hour. The sand and gravel separated after cleaning are recycled for production, and the wastewater is reused. In addition, Jiaxing Fengqiao South Concrete strictly implements the diversion of rainwater and sewage. It has newly built a 210 m³ initial rainwater collection tank to ensure that the rainwater is discharged in compliance with required standards during heavy rainstorms. The wharf environment improvement project has been implemented to enhance the overall environmental hygiene there. Hoppers have been equipped with spraying systems for dust suppression, and spraying poles and dust monitoring systems have been installed on both sides of the wharf, so as to provide a dual guarantee for “zero-dust emissions” during the unloading process. Ship wastewater reception tanks have been purchased to ensure that all ship wastewater is properly collected.

 Case

Cement kiln co-disposal of solid wastes to build a “waste-free city”


Jiangxi Cement actively responds to the national call for the construction of ecological civilization and the recycling of solid wastes. It has successively completed the Nancheng South project with an annual disposal capacity of 100 thousand tonnes of hazardous wastes and solid wastes and the Sinoma Pingxiang project with an annual disposal capacity of 26.4 thousand tonnes of municipal sludge. The projects fully leverage the unique advantages of cement kiln co-disposal technology in the field of solid waste disposal, contributing to improving regional ecological environment and building a “waste-free city”.

Compared with traditional solid waste disposal methods such as incineration, the cement kiln co-disposal technology has significant advantages such as low disposal cost, strong operating stability, less land occupation and high recycling efficiency. Under the incineration conditions of high temperature (approximately 1,450 °C) and long retention time, the incineration state of solid waste remains stable, so that the organic components therein can be completely decomposed. This effectively prevents the generation of harmful gases such as dioxins and avoids secondary pollution. In addition, the inorganic components in wastes can be fully utilized as raw materials for cement clinker, achieving harmless disposal, reduction, and recycling of solid wastes.

By the end of 2024, Jiangxi Cement had cumulatively treated 8,530 tonnes of hazardous wastes, 15,267 tonnes of non-hazardous solid wastes, and 32,387 tonnes of municipal sludge. This has significantly alleviated the environmental pressure arising from hazardous wastes and solid wastes in the local area, reduced the ecological risks associated with waste landfill and incineration, and effectively contributed to the improvement of regional environment quality.



Jiangxi Cement contributes to building a “waste-free city”


 Case

Pursuing green development to help create a “waste-free city”

Shangchen New Materials is committed to developing circular economy. While saving energy and reducing emissions, it focuses on increasing the greening rate of the manufacturing process and technology, thus helping build Fuzhou into a “waste-free city”.

To solve the problem that the original dry-process sand production line could not dispose of the waste residue generated during aggregate production, Shangchen New Materials has actively explored new processes and carried out a technical reform to build a 1.4 million tonne wet-process sand production line for the disposal of abandoned mines and waste residue. It has been calculated that compared with the dry-process sand production process, the new process will increase the profit by about RMB 8 per tonne.

Shangchen New Materials has upgraded the original dry-process sand production line to a wet-process one. By implementing measures such as enclosing the belt conveyors and storage bins (sheds), and covering the transport vehicles with tarpaulins, effectively eliminating dust emissions during production, transportation, and loading processes. These measures have prevented dust pollution to the environment and achieved zero pollutant discharge.



Shangchen New Materials is dedicated to creating green factories and green mines

4

Establishing a New Talent Development Center

The Company highlights the importance of “strengthening the high-quality talent base” in its sustainable development strategy. To this end, the Company emphasizes employee development by integrating talent development into corporate strategy. We strive to create a diverse, equitable and inclusive workplace to facilitate the development of our employees. Meanwhile, we always prioritize the health and safety of our employees and actively promote the application of intelligent production safety management systems to ensure workplace safety. In this way, we have built an intrinsically safe system.

- Fulfilling Talent Strategy
- Employee Training and Development
- Employee Salary and Welfare Benefits
- Occupational Health and Safety

Fulfilling Talent Strategy

The Company is committed to building a diverse and inclusive workforce, maintaining zero tolerance for any form of discrimination or harassment, thereby ensuring that every employee feels fully respected and supported. In strict compliance with relevant employment laws and regulations, we effectively protect the legitimate rights and interests of our employees. Moreover, we categorically prohibit the employment of child labor and forced labor. We uphold the principles of equality, openness and impartiality in employment. We continuously refine our employee communication mechanism, actively embrace employee feedback, and enhance their sense of identity and satisfaction.

Employee Recruitment and Retention

The Company abides by the “Labor Law of the People’s Republic of China”, the “Labor Contract Law of the People’s Republic of China”, the “Law of the People’s Republic of China on Promotion of Employment”, and other laws and regulations. We also advocate the international initiatives for the protection of human rights such as the International Labor Organization Convention and the United Nations Convention on Human Rights. Moreover, we have established internal rules and regulations on salary and dismissal, recruitment and promotion, equal opportunities, diversity, anti-discrimination, anti-harassment, and other welfare benefits, such as the “Recruitment Management Measures” and “Labor Contract Management Measures”. Based on them, we protect the legitimate rights and interests of our employees and treat them fairly and equitably. In the year, the Company recruited 1,617 new employees.

For recruitment and hiring, the Company always adheres to the principle of fair competition and merit-based selection. We standardize management procedures for hiring, contract signing, probationary management, dismissal, etc. Authentic, accurate and valid personal information is required to be provided by all new employees upon hire and will be verified by the Company. Candidates whose information is found to be false will not be hired. In doing so, we protect the legitimate rights and interests of both the Company and our employees and regulate employment conduct.

In the year, the Company prepared and released the “Campus Recruitment Management Measures” and the “2025 Campus Recruitment Program” to clarify the recruitment process and responsibilities. In addition, we have formulated detailed recruitment plan and job description. To enhance the efficiency and quality of talent recruitment and create more job opportunities, the Company has implemented the following measures:

Introducing digital recruitment platform

We have introduced the digital recruitment platform for efficient and intelligent recruitment process. This platform integrates resume management, online assessment and video interview, which not only shortens the recruitment period, but also improves the candidates' experience and engagement.

Using AI-based recruitment tools

To improve the recruitment efficiency and accuracy, we adopted the AI-based technology to automatically conduct resume screening and preliminary interview this year to rapidly identify qualified candidates. The number of contracts signed through 2025 campus recruitment increased by 5% compared to previous year.



Company recruited
1,617 new employees



Case

Tianshan Material's excess achievement in 2024 campus recruitment program

In the year, Tianshan Material conducted targeted publicity to 75 universities to attract talents. Throughout the year, we organized and participated in more than 70 job fairs at key universities such as Wuhan University of Technology, Southwest University of Science and Technology, and University of Jinan. Through these activities, we recruited about 580 outstanding graduates from universities all over the country. Meanwhile, echoing the national policies, the Company recruited 29 graduates from universities or native places in the western provinces such as Xinjiang, Tibet and Qinghai. These graduates were allocated to key positions such as technology, R&D, marketing, sales, finance, and human resources, bringing fresh blood and vitality to the Company.



Campus recruitment of Tianshan Material in Southwest University of Science and Technology

The Company expressly prohibits the employment of child labor and forced labor. The Company strictly reviews the identity information of new employees to ensure that they are 18 years old or above. Meanwhile, the Company follows the principle of equality, voluntariness and consensus to ensure that all employees are employed voluntarily and to eliminate forced labor. If any violations of employment rules are discovered, the Company will report to the Human Resources Department for a thorough investigation. Following the investigation, we will take appropriate measures in accordance with relevant laws and regulations, which may include negotiating a solution and implementing compensation or indemnification. Furthermore, the Company will conduct in-depth analysis of the cause of the incident, and provide education and training as well as necessary disciplinary action to the relevant responsible persons. In the year, the Company had no child labor or forced labor.

The Company clearly specifies employees' working hours and leave hours to guarantee their rights to rest and leave. Management procedures of employees' leave and rest have also been improved. For overtime employees, overtime payments will be made in accordance with relevant management regulations on employee salary.

Diversity, Equity and Inclusion

In the year, the Company strictly abided by the “Policy Statement of Human Rights” (“Policy of Human Rights”) and other internal policies. This statement covers the operations of the Company and its subsidiaries, suppliers and other partners. The Policy of Human Rights includes the Company's commitment to adhere to all internationally recognized human rights principles as set forth in the “United Nations Universal Declaration of Human Rights”, the “Declaration on the Protection of Human Rights”, and the core conventions of the International Labor Organization. In the Policy of Human Rights, the Company also upholds diversity in employment and opposes discrimination, guarantees equal pay for equal work, and respects freedom of association for employees.

In order to ensure the effectiveness of the Policy of Human Rights, the Company regularly identifies and assesses potential human rights risks. The scope of identification includes the operation of the Company's businesses, upstream and downstream value chain, as well as new businesses (mergers and acquisitions and associates). Topics contain forced labor, child labor, freedom of association, collective bargaining, equal pay for equal work, and discrimination, and involve a variety of groups, including employees, women and children, original inhabitants, migrant workers, contract workers, and local communities. On an annual basis, we review the effectiveness of human rights management in accordance with the “Policy of Human Rights”, set targets and, based on these, continuously improve management capabilities. If violations of the “Policy of Human Rights”, such as child labor or forced labor, are discovered, we will immediately report them to the Human Resources Department for cause trace, and conduct a comprehensive investigation. Following the investigation, the Company will communicate with those responsible to find solutions, including providing compensation in accordance with laws and regulations, and will impose administrative penalties on the violators. They are also required to participate in training on respecting employees' rights and interests to prevent recurrence.

Employee Communication and Engagement

Tianshan Material continues to improve the democratic management system in enterprises with the workers' representatives congress as the core. The Company strengthens the establishment and development of trade unions at all levels, protecting employees' rights to know, to participate, to be heard, and to oversee. This ensures smooth feedback for employees' opinions and suggestions. In the year, the Company ensured the participation of employees in the decision making and management of daily operations through the following ways:

Appointment of worker directors and worker supervisors

The Company has appointed worker directors and worker supervisors in accordance with the law. Their rights include listening to the opinions and suggestions of the workers, representing them in exercising their rights to participate, to be heard and to oversee.

Improvement of trade unions

The Company has established trade unions, and equips them with appropriate part-time personnel to ensure their standardized daily operation. By the end of the year, the trade unions had 54,433 employees, with union membership rate of 98.9%.

Implementation of the workers' representatives congress

The Company has set up the workers' representatives congress and held annual congress meetings to report to the representatives on the production and operation of the Company. In addition, the Company collects opinions and suggestions from all employees at the meetings. The business departments concerned then make sure that the opinions expressed and suggestions made are implemented.

Improvement of factory affairs disclosure

The Company discloses major corporate matters and various matters involving the interests of employees in a lawful, timely, truthful and scientific manner and guarantees employees' rights to know about important matters.

Case

Effective implementation of the powers and functions of the workers' representative assemblies and the building of harmonious labor relations

In 2024, the Company revised the "Implementation Measures for the Workers' Representatives Congress". This revision aimed to continuously strengthen the democratic management system in enterprises with the workers' representatives congress as the fundamental form, ensuring that the workers' representatives congress was held in a standardized manner. We also work to expand channels for employees' suggestions, strictly enforcing the proposal mechanism of the Group's workers' representatives congress, and effectively implementing proposal handling and execution to actively promote harmonious labor relations. In the year, the Company exercised and implemented a total of 789 powers of workers' representatives congress in accordance with the law, and Jiangxi Nancheng South Cement Company Limited was awarded the "Demonstration Unit for Open and Democratic Management of Factory Affairs in Jiangxi Province".



Honorary credential of demonstration unit for open and democratic management of factory affairs





Protection of Employees' Rights and Interests

The Company values the development of a diverse and inclusive culture. We regularly train all employees on diversity, inclusion, anti-discrimination and anti-harassment. We also explicitly prohibit harassment (including sexual harassment) and discriminatory behavior in the "Policy of Human Rights".

Any employee who experiences harassment or discrimination can lodge a complaint by submitting a letter to the suggestion box or reporting the situation directly to the relevant leaders of the Human Resources Department, either in writing or verbally. The Company will organize the Human Resources Department to conduct a thorough investigation in collaboration with the Disciplinary Inspection Department. Once the investigation is completed, the complainant will be provided with a response, either verbally or in writing.

The Company places a high priority on safeguarding the rights and interests of female employees. We provide equal opportunities and treatment for women in key areas such as hiring, training, and promotion, and ensure equal pay for equal work. We also encourage and support female employees to develop their leadership and take up management positions. In the year, the Company and all its subsidiaries had a total of 1,124 senior managers, among which female managers were 109, accounting for up to 9.7%.

The Company values and protects the rights and interests of local residents, and we explicitly oppose employment discrimination on the basis of ethnicity, race, gender, age, and religious beliefs and employ them on an equal basis. The Company is also committed to developing communities in countries other than China. In projects in countries like Zambia, Nigeria and Mongolia, we actively engage in community development, helping residents improve infrastructure and partnering with local communities for shared growth.

In 2024, Tianshan Material proactively tackled various challenges in labor relations management. The Company addressed a significant number of issues related to employees' rights and interests through amicable communication and robust internal mediation mechanisms. A small fraction of these issues was escalated to professional labor arbitration and judicial procedures. Throughout the process, Tianshan Material remained steadfast in its commitment to safeguarding employees' rights and interests, fostering harmonious labor relations, and fulfilling its corresponding responsibilities and compensation obligations where necessary. Appropriate resources were utilized to ensure that the issues were properly resolved, thereby underscoring our unwavering dedication to creating a harmonious workplace.

Case

Protection of employees' rights and interests by Aksu Tianshan

Aksu Tianshan firmly believes in the philosophy that "employees are the cornerstone of the enterprise's survival and development." It actively leverages the role of the workers' representatives congress to safeguards employees' rights and interests, and broadens public channels to make democratic management more transparent. Moreover, it strictly enforces attendance policies to ensure timely salary payments, promptly pays all social insurance contributions to effectively protect employee interests, and upholds a culture of care through "visits to the sick, congratulation on festivals, holiday greetings, mourning for the deceased, and helps for those in need". Aksu Tianshan organizes a variety of activities, such as fun sports meetings, Mother's Day celebrations, and workers' representative congress, to enrich employees' lives. These activities strengthen employee unity.



In the year, the Company and all its subsidiaries



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Employee Salary and Welfare Benefits

Tianshan Material strictly complies with the “Labor Law of the People’s Republic of China”, the “Labor Contract Law of the People’s Republic of China”, the “Social Insurance Law of the People’s Republic of China”, and other laws and regulations. Based on them, we have established and improved internal policies such as the “Management Measures for Employee Salary and Benefits”, “Management Measures on Leave and Attendance”, and “Management Measures for Benefits of Headquarters Employees”. We are dedicated to developing a fair, rational, and competitive compensation and welfare benefits system, to ensure that all employees receive the treatment they deserve.



Salary and Performance Management

Tianshan Material has formulated internal policies such as the “Performance Management Measures”, the “Measures for Tenure System and Contract-based Management for the Manager-level Personnel of the Company”, the “Evaluation Measures for Business Performance of Manager-level Personnel of the Company”, and the “Implementation Measures for Annual Performance Evaluation of Departments and Employees at Headquarters”. Building on these documents, the Company has set up a multilevel and grade-based performance management system, using a variety of methods to manage and evaluate employees’ performance.

Manager-level personnel of the Company	<ul style="list-style-type: none">The manager-level personnel are subject to the tenure system and contract-based management, and sign the Letter of Responsibility for Business Performance during the Term, Letter of Responsibility for Annual Business Performance, and Job Appointment Agreement. Their tenure and annual business performance evaluation are implemented in accordance with the signed Letter of Responsibility for Business Performance, with evaluation indicators divided into organizational and individual indicators.
Middle-level cadres and employees of the Company	<ul style="list-style-type: none">The department heads at the Company’s headquarters are subject to annual evaluations, with results contingent upon annual evaluation results, the completion of annual department KPIs and key work, debriefing review, and department satisfaction.The department heads of regional companies and member enterprises are evaluated monthly or annually by their respective companies based on functional divisions, key work arrangements, and established evaluation methods.Other personnel are evaluated monthly or annually by their respective departments based on key departmental tasks, job responsibilities, and established evaluation methods.

Tianshan Material pays salaries to employees in full and on time based on their positions, job performance, and the Company’s salary policies. The Company makes reasonable personnel changes based on business development needs and employees’ circumstances to ensure the efficient operation of the team and meet employees’ career development needs. The Company signs labor contracts or agreements with flexible employment personnel in accordance with laws, clarifying the rights and obligations of both parties to ensure that their legitimate rights and interests are protected. In the year, the Company optimized the performance evaluation plan and the salary standard for annualized compensation employees, and strengthened the linkage between performance evaluation results and salary payment.

To share the fruits of the Company’s development with employees, the Company continuously improves its salary incentive policies and has established a salary system that primarily focuses on market-based incentives, supplemented by medium- and long-term incentives. For employees below the management level, the Company implements medium- and long-term incentive programs through various forms such as equity incentives, excess profit sharing, and phantom equity.

Employee Benefits

Tianshan Material provides employees with diverse welfare benefits, and has formulated internal policies such as the “Management Measures for Employee Salary and Benefits” and the “Management Measures for Benefits of Headquarters Employees”, to safeguard employees’ legitimate rights and interests. We provide work meals, health checkups, enterprise annuity and other benefits, and conducts activities such as high-temperature care, sick care, funeral sympathy, and wedding and birth blessings for our employees. The Company has established a Dietary Committee to actively listen to employee feedback on issues related to catering, continuously improve services, and ensure that employees are provided with healthy, nutritious, and delicious food.

We also take care of our employees’ physical and mental well-being. We provide fitness equipment and organize lectures on mental well-being irregularly to enhance employees’ physical health and help them reduce stress. With these efforts, we strive to create a healthy, energetic and positive workplace.

Case

Sinoma Yunfu advanced the development of healthy enterprise to safeguard employees’ physical and mental health

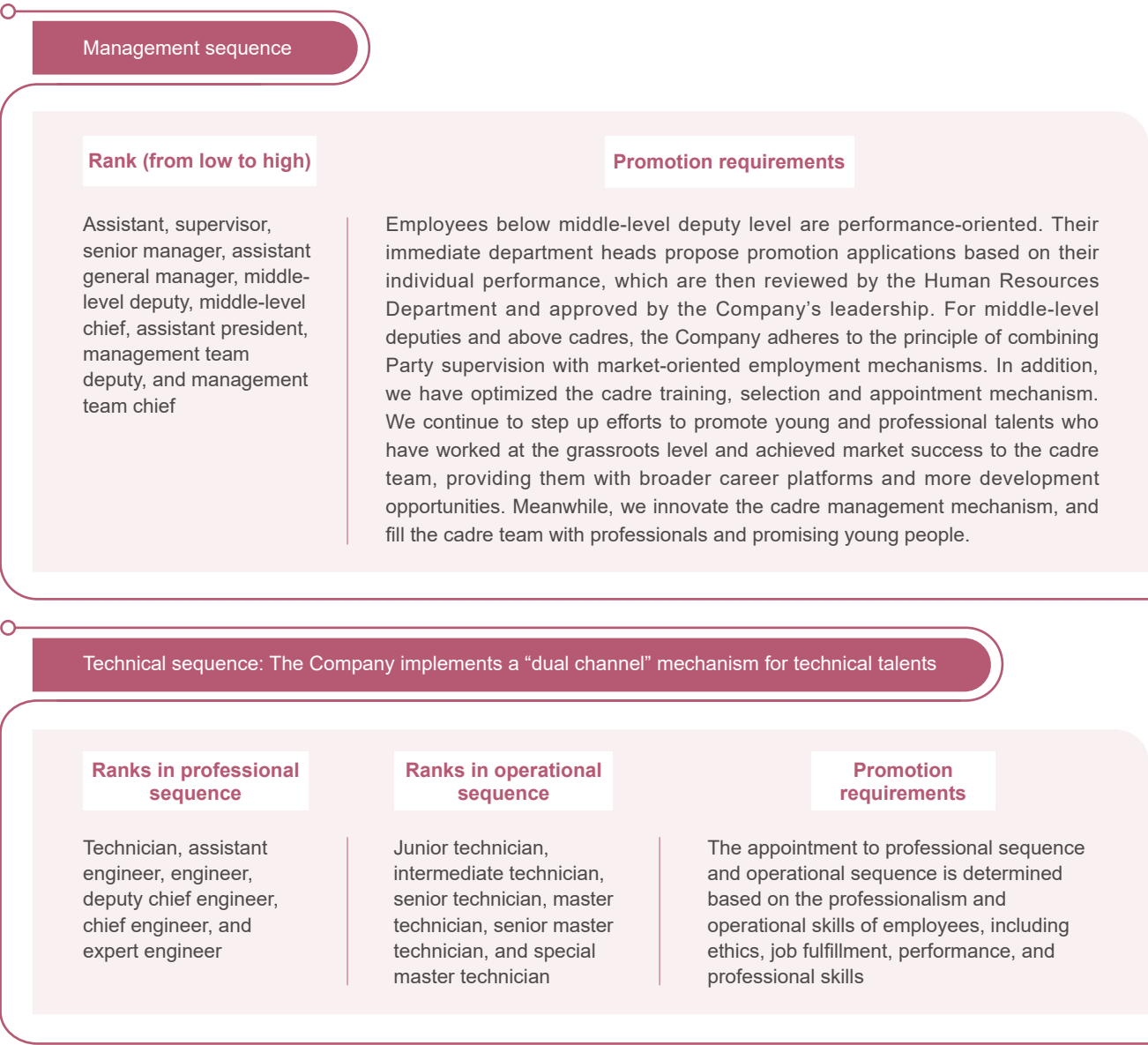
Sinoma Yunfu highly values the physical and mental health of its employees, and provides annual occupational health checkups. The company has upgraded the noise control technologies for production equipment and working environment, significantly enhancing operating conditions. Moreover, the company has installed fitness facilities, promoted healthy eating habits, and provided professional psychological counselling services. It has also organized a series of health knowledge activities, including health skills training, seminars and post first-aid skills competition. These initiatives have improved employees’ physical fitness and reduced their stress. For its efforts, the company has won the title of “Healthy Enterprise in Guangdong Province” for four consecutive years, and four employees were awarded “Occupational Health Expert in Yunfu”. Through these comprehensive measures, the company has fulfilled its corporate responsibility to safeguard employees’ physical and mental health, facilitating the healthy and sustainable development of both the company and its employees.

Employee Training and Development

Tianshan Material places great emphasis on employee growth and development. To this end, we have established a professional platform for qualified personnel management at all levels, creating more opportunities for employees to learn and improve through diversified training programs and clear promotion channels. The Company also gives employees a platform to display themselves, and helps them unlock their potential, thereby achieving the mutual growth.

Employee Promotion Mechanism

The Company has built a competency model in the Company headquarters, regional companies and member enterprises. By following the principles of introducing systematically, selecting competitively, cultivating comprehensively and assessing incentively, a platform for qualified personnel management at all levels has been built step by step to meet short-term and long-term qualified personnel needs for business development. Meanwhile, the Company has improved the career development system by developing differentiated promotion standards and channels for managerial and technical positions. This allows all employees to follow a development path that matches their job characteristics and clearly sets out their career development prospects.

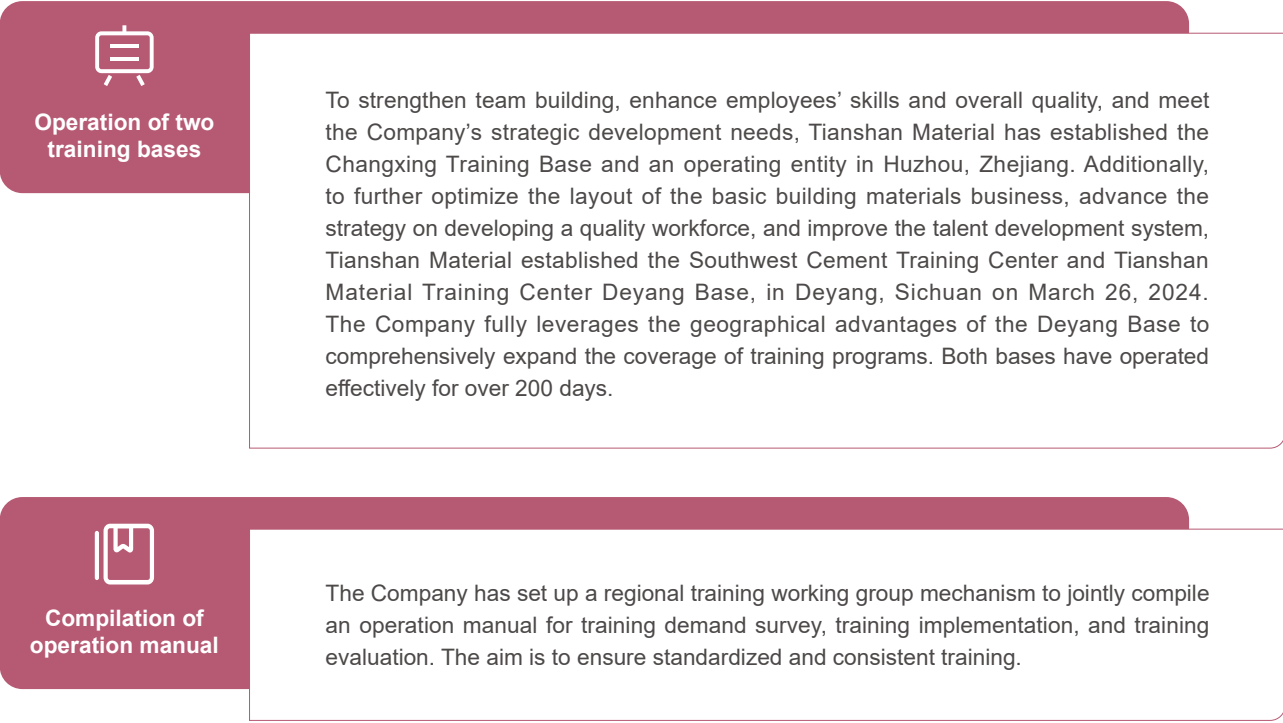


Employee Training System


The Company has formulated and implemented the "Training Management Measures". We have also established a three-tier (i.e., the Company headquarters - regional companies - member enterprises) training management system, which defines the full process from training needs analysis to effectiveness assessment. This system ensures systematic and standardized training.

The Company follows the principle of "Three Tiers and Three Definitions"⁹ and a training method of "mainly internal training sessions, supplemented by external training sessions". By fully utilizing resources at all levels, we have established a multi-channel, multiform, multilevel employee growth training platform with special emphasis. In this way, we can continuously cultivate professional talents and improve employees' skills. Relying on the three-tiered training system, the Company closely aligns its training efforts with the core training plans. Departments at all levels are responsible for planning and implementing corresponding training programs. Training formats include on-site training, online training, and other forms. The training content covers a wide range of areas, including functional management, professional technology, safety and environmental protection, dual-carbon field, and multi-skill training for front-line employees. In 2024, 96.57% of employees were included in the training, with a total of 1.222 million class hours. The completion rate of key training programs was 100%.

Tianshan Material continues to improve its training system. In the year, the highlights of employee training included:




⁹ "Three Tiers and Three Definitions": "Three Tiers": the Company headquarters - regional companies - member enterprises, "Three Definitions": defined location, defined position, and defined intention.

 Case

Tianshan Material advanced human resources system training course

Tianshan Material employs a practical training approach for its advanced human resources system training course. The four-month training includes four offline and four online seminars that closely focus on the four key human resources issues, i.e., performance improvement, talent introduction, talent development, and organization and personnel optimization. Corresponding action learning topics are tailored to these issues. The training is supplemented by five professional courses, including strategic human resources planning, organizational change, and lean human efficiency system. The aim is to deepen participants' understanding and application of the four core topics through systematic knowledge delivery and practical exercises. This approach comprehensively enhances the professional quality of the participants, and boosts the organizational and personnel efficiency.



The key performance indicators for talent attraction and retention in the Company in the year are shown in the table below:

	Training hours per employee (all types of training)	Total expenses for employee training and development	Employee satisfaction	Voluntary turnover rate (include voluntary turnover and retirement)
	23 Hour/person	4,270.2 RMB 10,000	98.5%	6%

Occupational Health and Safety


Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Company implements the critical deployment of production safety and ecological and environmental protection, forming the “22532” management idea: Adhering to “Two First”, believing in “Two Can”, highlighting “Five Enhancements”, accelerating “Three Shifts”, and achieving “Two Goals”. Through the application of the Group’s intelligent production safety management system and the ultra-low emission transformation, the Company strengthens the management at source. With a focus on the performance of responsibilities, the Company promotes the transformation of the safety and environmental protection management model to pre-event prevention to support the high-quality development of the Company.





The Company has formulated the “Occupational Health and Safety Policy Statement” (“Policy Statement”) and other internal policies. This Policy Statement applies to all employees of the Company headquarters, holding subsidiaries, suppliers, employees of contractors, associates and other business partners. The Board and management together regularly review and improve the implementation of the Policy Statement. The content of the Policy Statement includes the Company’s commitment to setting quantitative targets for occupational health and safety, to improving the related management system, and to encouraging employees or their representatives to provide feedback or suggestions.

The Company has set quantified targets of zero work-related fatalities, zero new case of occupational diseases and a minor and serious injury rate of ≤ 1‰. We also actively promote the safety culture and effectively fulfill our safety management responsibilities. In the year, the Company had 0 new cases of occupational diseases, and achieved a minor and serious injury rate at ≤0.015‰. The expenditure on production safety amounted to RMB 1,204 million.

In the year

 Company had 0 new cases of occupational diseases

 Achieved a minor and serious injury rate at ≤0.015‰

 Expenditure on production safety amounted to RMB 1,204 million



Production Safety Management System

We effectively fulfill our safety management responsibilities and continuously improve our safety management system. Tianshan Company has formulated internal rules and regulations such as the “Production Safety Responsibility System”, the “Production Safety Management Regulations” , the “Occupational Health Management System” and the “Health and Safety Management System of Related Parties”. With these policies, we clarify the basic principles, organizational structure, division of responsibilities, investigation and handling, and emergency response requirements for production safety, so as to standardize our management process.

The Company has thoroughly revised the existing indicator system, dividing the indicators into five categories, including production safety targets, control indicators, binding indicators, leading indicators and no-no indicators. For the production safety targets, the Company is determined to avoid production safety accidents of Class B or above, and comprehensively promote the transformation of production safety and environmental protection management to pre-event prevention. Key control indicators include zero major safety accidents, very low serious injuries, efficient rectification rate of general and major safety hazards, rectification rate of production safety problems and zero new case of occupational disease. The binding indicators specify the proportion of certified safety management personnel, the pass rate of safety education and training, the proportion of manufacturing enterprises that have implemented the intelligent production safety management system, and the warning response rate and KPI score of the system. A Category B or above accident, or concealing any accident or major negative public opinion event is considered a no-no indicator.

The Company has established a three-level safety management system encompassing “Headquarters - Regional Companies - Member Enterprises”, clearly defining the safety management responsibilities at all levels to ensure efficient communication across all levels. The system enforces “supervision and random inspection” at the headquarters level, “inspection and mutual inspection” at the regional company level, and “review and self-inspection” at the member company level, forming a comprehensive safety management system that guarantees the orderly advancement of safety work.

The Company has established the Production Safety Management Committee (“Safety Committee”) at the headquarters. It is the top decision-making body overseeing the Company’s production safety and occupational health, with the Company’s main responsible person serving as the director, main persons in charge as deputy directors, and department heads as members. Responsibilities include the deployment and oversight of the production safety related work. The Safety Committee holds meetings every quarter to learn the state’s production safety policies, summarize the production safety work in the last quarter, and deploy the key jobs for the next quarter to ensure robust implementation of safety responsibilities.

The Safety Committee has offices that are led by the Company’s Safety and Environmental Protection Department. Responsibilities include implementing the decisions of the Safety Committee and the routine management. Each regional company also has its own safety committee and an independent safety and environmental protection department, with dedicated staff responsible for regional safety management work. Each member company sets up their own Safety and Environmental Protection Department according to the actual needs, with sufficient staffing for safety and occupational health management to ensure the effective safety management within the enterprise.



Production Safety Management Measures

The Company continuously promotes normalized, standardized and technological management and the improvement of production safety. We seriously investigate hidden safety dangers and risks, and implement safety management responsibilities. In 2024, the Company formulated the “Measures of Tianshan Material for the Management of Production Safety Incidents” and the “Measures of Tianshan Material for the Management of Ecological and Environmental Protection Accidents”. These policies are aimed to optimize the grading standards for production safety and ecological and environmental protection accidents, standardize accident reporting procedures, and clarify the accountability rules in case of any administrative penalties. The standards also help foster and enhance safety awareness at all stages of production, thereby continuously mitigating production safety risks.

Implement production safety responsibilities

The Company works to better secure the implementation of production safety responsibilities and enhance the safety awareness of all employees. In alignment with the principle of “horizontal to the edge and vertical to the bottom”, Tianshan Material signs a letter of responsibility for production safety and occupational health goals with its member companies, clarifying the responsibility of every party involved for production safety. The Company has included contract workers and temporary workers in its unified management. Detailed policies are in place to clarify the responsibilities of the safety management department, the business management department and the local management department as a guarantee for production safety.

The Company has established a quarterly work meeting policy and a key work scheduling and reporting mechanism for the safety management system of the headquarters and regional companies. In 2024, a total of three quarterly work meetings were held to carry out “monthly implementation and quarterly scheduling” for a series of key matters, including the investigation and rectification of hidden dangers of major accidents, the investigation and rectification of hidden dangers in high-altitude corridors, general managers’ public classes, communication and conversation with cadres, and near incident reporting. In addition, the Company has vigorously developed CNBMG’s intelligent safety production management system and by the end of 2024, a total of 279 companies had launched the system. During the reporting period, 322,731 hazardous operations were reviewed and approved through the system; the AI alert comprehensive response rate reached 100%; 137,570 potential safety hazards were detected; and the rate of safety hazards detected and eliminated was 99.81%. In 2024, the Company conducted external safety audits for 129 entities in accordance with the “‘1+N+X’ Three-Year Audit Plan for Safety and Environmental Protection”, with a completion rate of 91%. Regional companies and member companies completed internal audits for 196 entities in total, and started to see the initial results of the audits.



Enhance implementation of the production safety management system

The Company attaches great importance to the implementation of the safety system. In 2024, the Company deployed sufficient safety management personnel to enhance safety management, including 1,540 full-time and 3,704 part-time employees. Among these persons, 779 were certified safety engineers (124 newly obtained certificates and 45 obtained qualifications for additional disciplines). In addition, the Company revised the “Measures of Tianshan Material for the Management of Hazardous Operations”, which defined the key links and processes such as operational risk identification, control measures, emergency response and monitoring, filling the gaps in the management of hazardous operations. The Company also carried out comprehensive safety performance assessment in 2024. Jiangxi Cement and Guizhou Cement were assessed for their performance and held accountable for substandard items, with a range of safety indicators directly linked to the performance of these regional companies.

In 2024, with the continuous implementation of the standardized production safety management system as the core, the Company further promoted the standardized operation and continuous improvement of the system. We newly recognized 38 enterprises that had standardized production safety management, and had 68 entities passing the due re-assessment, achieving 100% standardized production safety management for production-oriented enterprises.



Carry out special rectifications for safety hazards

The Company organized four safety training courses on the determination of major accident hidden dangers to improve the ability of personnel at all levels to investigate and rectify major accident hidden dangers. We invited experts from the Safety and Environmental Protection Research Institute of China Testing & Certification International Group Co., Ltd. (CTC) to conduct training on the hidden dangers of major accidents identified in the “1+N+X” safety audit. Meanwhile, the Company has prepared and issued the “Three-Year Action Plan of Tianshan Material for Addressing the Root Causes Endangering Production Safety (2024-2026)”, and organized supervision and inspection actions for the detection and rectification of hidden dangers of major accidents, with 100% of the hidden dangers rectified on schedule. In 2024, the Company organized special actions for the investigation and rectification of hidden safety hazards in construction projects, limited space operations, high-altitude corridors, and mines, and achieved a 100% on-schedule rectification rate.

The Company pays close attention to overseas production safety management, and makes efforts to build a Chinese-foreign integrated safety and environmental protection culture with the Company’s characteristics. In 2024, the Company saw remarkable improvement in its safety and environmental protection management, the intrinsic safety of production sites, and the safety awareness and skills of employees. This was demonstrated by the achievement of the five “zero” goals, i.e. zero production safety accidents, zero ecological and environmental protection accidents, zero security incidents, zero new occupational disease cases, and zero administrative penalty on safety and environmental protection.

In 2024, Tianshan Material continued to strengthen safety and environmental protection inspection and research. The work was done in a mode of “hearing reporting, checking records, inspecting the site, interviewing the staff, discussing safety matters, and organizing exams”, adopting a four-in-one inspection mechanism of “inspection, direction, training and service”. The inspection and research covered 32 member companies of regional companies, including GUCC and South Cement, aiming to achieve the goal of “focusing on individuals to drive overall advancement and enhancement”.

Guarantee employee health and safety

Employee health is always our first priority. The Company has formulated internal policies and regulations to fully guarantee employees’ health, such as the “Occupational Health Management System”, the “Personal Labor Protective Equipment Management System” and the “Management System of Health and Safety of Related Parties”. In 2024, the Company achieved a 100% coverage of the ISO 45001 Occupational Health and Safety Management System Certification for all entities at all levels.

The Company continues to step up occupational health management. We strictly implement the “three-simultaneous” management of production safety and occupational health for “new, renovation and expansion” projects, ensuring that the safety and occupational health protection facilities are designed, constructed, put into production and used at the same time as the main project. In response to the occupational health protection initiative, Tianshan Material fulfills its principal responsibilities as a corporate. This includes continuously improving internal rules and regulations related to workers’ health, strengthening occupational health supervision and management, and paying work injury insurance in full and on time, thereby protecting employees’ health and other rights and interests. In addition, the Company continues to improve its infrastructure. All necessary technical measures such as enclosure, spray sprinkling and sound insulation are taken to reduce the intensity of occupational disease hazards. Efforts are also made to create for employees a clean and hygienic work and production environment boasting rational layout and well-equipped facilities, to promote the sustainable development of the Company. In 2024, CUCC Juxian was recognized as a “National Demonstration Enterprise for Safety Culture Construction”. Shanya South, Guilin South, CUCC Qingzhou and CUCC Jining passed the re-assessment of “National Demonstration Enterprise for Safety Culture”. Huaikan South and CUCC Xichuan were recognized as Winner Companies in the National “Ankang Cup” Competition. The Safety and Environmental Protection Office of Chuzhou Huadong Materials and the Electric Team of CUCC Taishan were selected as Winner Teams in the National “Ankang Cup” Competition. CUCC Xintai, Old Town Southwest, Sinoma Hengda and Sinoma Yunfu were awarded the “Provincial Health Enterprises”.

The Company attaches high importance to the prevention and control of occupational diseases. We prevent, control and reduce occupational hazards in the following ways:

The Company continues to improve the facilities and first-aid equipment for dust proof, anti-poison, noise reduction and emergency management at production workplaces, while strictly complying with the requirements of labor protection to equip employees with work clothes, helmets, safety shoes, gloves, anti-noise earmuffs, anti-dust masks and other protective equipment with reliable quality. In addition, the Company requires every employee exposed to occupational hazards to sign the “Occupational Health Notice”, ensuring that they all understand the relevant risks and safety measures.

The Company annually provides a health checkup package for all full-time and outsourced employees, covering internal medical test, surgical test, eye tests (including the slit lamp exam), E.N.T exam, dental exam and ECG exam. Besides, the Company adjusts the items based on the age and sex of the employees to ensure targeted and comprehensive coverage of health checkups.

In accordance with the “Law of Occupational Disease Prevention” and the “Regulations on Supervision and Management of Occupational Health”, the Company regularly organizes occupational disease examinations for employees exposed to occupational hazards to understand their health condition. For employees with occupational contraindications, the Company will arrange a transfer for them. Meanwhile, the Company works with third-party institutions to regularly detect occupational hazards in the workplace, assess the risk level and take corresponding measures, to ensure a safe working environment.

The Company strictly complies with laws and regulations, pays work injury insurance premiums for employees every month, and reasonably arranges the working hours of employees to avoid overworking and safeguard the physical and mental health and legitimate rights and interests of employees.



Sinoma Cement is highly appraised by the host government for its outstanding performance in health, safety, ecological and environmental protection as well as social contribution, greatly improving the overseas brand image of the Company. China National Building Material Zambia Industrial Park was awarded the “Africa Safety Award for Excellence (AfriSAFE)”, Mengxin Company was awarded the Best Award of “Health and Safety” in Mongolia and the head of the Safety and Environmental Department was awarded the “Safety Contribution Award” in Tuv Province.



AfriSAFE for Zambia Industrial Park



Best Award of “Health and Safety” in Mongolia for Mengxin Company



“Safety Contribution Award” of Tuv Province to the Head of the Safety and Environmental Department



Tianshan Material places emphasis on the health and safety management of outsourced employees, and applies the same occupational safety management standards for them as for internal employees to ensure that they enjoy the same safety protection. The Company organizes safety education and training for outsourced employees before they take on the job, and conducts evaluation on their learning results and the safety risks to ensure that the outsourced employees fully understand the potential risks and safety requirements in the working environment.

To ramp up oversight of contractors' ability of health and safety management, the Company requires each member enterprise to strictly review the safety management qualification of contractors. At the contract signing stage, the Company incorporates occupational health and safety clauses into the contract, and requires contractors to sign the "Safety Agreement" to clarify their safety management responsibilities. Before a project starts construction, the unit in charge of the project shall review the safety certificates, tool lists and other materials provided by the contractor, and then submit the materials to the safety and environmental protection department for verification. The construction permit is issued only after the verification is passed. In this way, we guarantee the health and safety of outsourced employees. If a contractor is found with violations of safety management regulations, the Company will impose appropriate penalties in accordance with the terms of the "Safety Agreement" to ensure effective implementation of safety management measures.

The number of work-related fatalities and the lost time injury frequency rate (LTIFR) of the Company and contractors in 2024 are shown in the following table:

	Number of work-related fatalities in production safety liability accidents (excluding related parties)	Lost time injury frequency rate (employees)
0	Person(s)	0.0182 Case (s)/ million working hours
	Number of work-related fatalities (contractors)	Lost time injury frequency rate (contractors)
0	Person(s)	0.0209 Case (s)/ million working hours


During the year, the company's employees invested in safety as follows:

During the year, the company's employees invested in safety as follows:	RMB 10,000	4,372.42
Investment in employees' work safety liability insurance	RMB 10,000	70,601.80
Coverage rate of employees' work-related injury insurance	%	96.69
Coverage rate of employees' work safety liability insurance	%	41.11

Enhance safety management with advanced technologies


The Company continues to advance the construction of intelligent safety system. We have established a regular coordination meeting mechanism, and hold bi-weekly meetings on project construction advancement. We also actively promote the construction of cement grinding, commercial concrete and aggregate systems. In 2024, the Company completed the construction of intelligent production safety management system for 146 companies producing commercial concrete and aggregate, 119 mines and 68 grinding companies, including five cement kiln companies newly completing the system implementation. The Company comprehensively promotes the application of the Group's intelligent production safety management system, and intensifies online inspections. The companies found with deficiencies are urged to rectify the problems and address the safety hazards and violations in a timely manner.

Tianshan Material continues to enhance safety management with advanced technologies. We encourage companies to adopt advanced and applicable safety technologies, and promote the application of new equipment, process and standards for production safety. The Company also implements the strategy of "achieving mechanization and automation to reduce human involvement". Digital and intelligent means are adopted to prioritize prevention and continuously enhance the work of production safety.

 Case

Application of intelligent production safety management system at Aksu Tianshan Duolang Cement Co., Ltd.


To avoid safety hazards arising from the application of new technologies and equipment, and properly solve the contradictions between people, vehicles, facilities and environment within the factory, Aksu Tianshan Duolang Cement Co., Ltd. has established a comprehensive dual prevention mechanism for hidden hazards investigation and risk management and control in accordance with the GB/T33000 standard. This makes the Company a demonstrative enterprise of production safety management in the industry. The Company also uses artificial intelligence technology to identify and monitor risks and hidden dangers in various types of production.




Build up emergency response capability

The Company has established a risk identification and assessment mechanism to strengthen risk management and control. In accordance with the "Notice on the Recording and Reporting of Near Accidents", the Company summarized a total of 311 near accidents, and prepared, printed and released 10 issues of the "Safety Incident Risk Alert". Meanwhile, the Company actively carries out emergency drills. In 2024, our member companies carried out a total of 4,604 emergency rescue drills with 67,540 participants. The drills tested the rationality and effectiveness of emergency plans, and enhanced the ability of emergency response teams to handle emergencies, effectively improving the emergency management level of the Company.

In 2024



Our member companies carried out a total of 4,604 emergency rescue drills



Emergency rescue drills with 67,540 participants

Production Safety Publicity

The Company prioritizes safety culture development. To this end, the Company proactively organizes a variety of safety culture exchange initiatives and training programs, all aimed at continuously reinforcing employees' safety awareness. Through regularly safety knowledge seminars, emergency drills, and case study sharing sessions, the Company strives to educate employees on safety practices, deepen their understanding of potential safety risks, and improve their ability to respond. Moreover, we actively encourage employees to engage in the development of safety culture, fostering a collaborative effort to build a safe and healthy workplace.

Safety culture development

The Company keeps fostering a safety culture. We organize related activities during the “Production Safety Month” including safety quizzes to enhance employees’ awareness and ability of identifying and preventing safety risks. In the current year,

- The Company compiled and released a total of 13 issues of the “Safety and Environmental Protection Work Briefing”, introducing the excellent practices of member enterprises in production safety in a bid to drive member enterprises to rapidly improve their safety management capability by learning from each other.
- Based on the common problems, typical industrial accidents and seasonal risk characteristics found during inspections, the Company timely prepared and released 10 issues of “Warnings for Safety and Environmental Protection Accident Risks” to warn enterprises at all levels to enhance risk control and prevent the presence of accidents.
- The Company prepared and released “Compilation of Production Accidents in the Cement Industrial” and “Production Accident Cases in Commercial Concrete Enterprises”, covering 16 accidents of 379 types. The Company required all member enterprises to learn a lesson from those accidents and create a stable and favorable environment for safe production based on their own conditions.
- The Company has established the “zero violation” feedback mechanism to encourage employees to engage in safety management. In addition to the mechanism, the Company also promoted the safety culture through safety talks and the public safety lecture by the general manager. In this way, our employees have changed their mindset from “pursue safety for the sake of requirements” to “pursue safety for the sake of ourselves”.

Safety publicity

The Company places utmost importance on production safety and risk prevention training. We have established a “level-, category- and personnel-based” mechanism for safety and environment protection training. Moreover, we continuously enhance employees' safety knowledge through the approach of “mandatory examination and training through examinations”.

“Safety director talks about safety” initiative

A total of 335 participants engaged in a training and teaching competition, with 50 outstanding safety and environmental internal trainers recommended from regional companies. One specialized training session for internal trainers was conducted, aimed at cultivating a high-caliber internal trainer team.

Certified safety engineer training program

Two sessions of the certified safety engineer training program were successfully held, with a total of 278 participants. These programs effectively enhanced the expertise of professionals in the field of environmental safety management, thereby strengthening the Company's technical foundation in environmental and safety management practices.

Adjustment of safety and environmental expert pool members

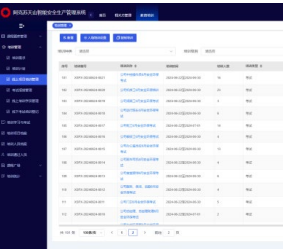
To fully leverage the technical support and innovative contributions of specialized talent in safety and environmental initiatives, the Company dynamically adjusted the safety and environmental expert pool in accordance with the “Tianshan Material Safety and Environmental Expert Management Policy”. Currently, the pool comprises 69 safety experts and 38 environmental experts.



Case

Company-wide safety and environmental examination initiative at Aksu Tianshan

To enhance company-wide safety awareness, Aksu Tianshan organized a specialized examination through its intelligent production safety management system. The examination featured role-specific questions, enabling employees to master knowledge relevant to their respective positions. This initiative aimed to enhance employees' grasp of production safety knowledge, empowering them to integrate safety knowledge into their daily operations and ensuring the practical transformation and utilization of this knowledge.



Case

Huanan Material's Production Safety Month to fortify defense lines for safe production

To enhance production safety and flood prevention efforts, Huanan Material launched a company-wide production safety month under the theme of “everyone aware of safety and able of emergency response - ensuring clear lifeline”. The initiative included safety lectures, case studies, hazard identification, and emergency drills. Additionally, the company's Safety and Environmental Protection Department organized targeted training on safety management for related parties, strictly implementing the “Ten Requirements for Safety Management of Related Parties”. This safety production month activities to enhance the safety awareness of all personnel, safety literacy, to lay a solid foundation for safe production work; at the same time strengthen the implementation of the responsibility of the relevant parties to manage the work has achieved substantial improvement, to achieve the goal of creating a corporate safety culture.



Case

Huadong Material' Suzhou Commercial Concrete Operating Platform – Key personnel safety skills enhancement program

To strengthen the demonstrative and supervisory role of “key personnel” in enterprise safety management, Huadong Material partnered with the CTC Safety and Environmental Protection Science Research Institute to provide comprehensive training for 120 key safety personnel from the company and its external partners. The training covered legal and regulatory requirements, hazard identification and risk grading and control, dangerous operations, and emergency response to accidents. Additionally, Huadong Material organized hands-on practical training sessions during inspections of key facilities at the Suzhou site, including the 10kV power room, transformer room, mixing building, and dock. This comprehensive training program enhanced the safety knowledge and hazard detection capabilities of the key personnel. It also deepened their understanding of the importance of production safety responsibilities.



5

Driving a New Journey of Co-creating Social Value

Guided by the sustainable development strategy of “delivering win-win cooperation benefits”, the Company continuously advances modernized governance and builds a responsible supply chain to fully ensure stable production and operation. On this basis, the Company has further established a reliable customer management system. Besides, the Company has been fulfilling social responsibilities in line with the core values of “innovation, performance, harmony and responsibility” to create broader and profound social value.

- Modernized Governance
- Responsible Procurement
- Customer Relations Management
- Responsible Business Operations

Modernized Governance

Tianshan Material places a strong emphasis on law-based governance. The Company has established and improved a management system that ensures compliance operations and lawful governance. By steadfastly upholding business ethics and strengthening information security measures, the Company ensures that compliance efforts are effectively implemented.

Compliance Management

Tianshan Material consistently adheres to lawful and compliance operations, striving to build an efficient compliance management system supported by comprehensive policies. The Company reinforces compliance publicity and ensures that compliance measures are firmly grounded in practice. To this end, the Company has developed a compliance manual, specifying the key compliance obligations and requirements of the Company, management and employees regarding corporate governance and operations, investment and development, human resources, finance and assets, trade secret protection and data security, intellectual property, business partners, procurement management, anti-commercial bribery and anti-corruption, mining compliance, production safety, quality management, environmental protection management, marketing management, anti-monopoly and anti-unfair competition, and overseas business management. In addition, the Company has issued a series of supporting compliance policies in terms of internal audit, risk management, confidentiality, and information security. These policies provide clear compliance requirements and guidelines, ensuring that all actions are rule-based and violations are effectively prevented. In 2024, the Company revised the “Compliance Management Measures” and formulated and improved the “Compliance Risk Identification List”, the “List of Key Job Responsibilities” and the “Business Process Control List”, covering three major business modules (cement, commercial concrete, and aggregates as three specific areas, and one general functional category) at three levels. The content includes, but is not limited to, sources of compliance obligations, non-compliant behaviors, and consequences of non-compliance.

The Company has established the Rule of Law Construction Working Organization and the Compliance Management Committee. These two organizations carry out the construction of the central enterprise under the rule of law and compliance management. We ensure the implementation of the responsibility of the first person responsible for the rule of law construction. In the decision-making process, the Company has set the review of legal compliance as an essential pre-procedure and “one vote veto” for all violations, and requires the Compliance Management Committee to fully perform its function. Additionally, the leadership of the Company and its subsidiaries has taken the lead by signing the “Compliance Commitment”, setting an exemplary standard and actively fulfilling their compliance pledges. This year, Tianshan Material signed a total of 29,858 copies of the “Compliance Commitment”.

The Company has three lines of defense against potential compliance risks, consisting of business departments, functional departments and supervision departments, in a bid to fully carry out compliance management:



The Company integrates compliance management into development strategies and annual plans and incorporates compliance performance into the performance evaluation system. Employees who adhere to behavioral standards and compliance regulations are recognized, while violators face appropriate penalties. By doing so, we incentivize employees to actively uphold compliance requirements.

Tianshan Material and its subsidiaries have established a robust compliance training mechanism. The Company holds quarterly and semi-annual compliance meetings, along with specialized general counsel meetings of the two-tier headquarters, to guide legal compliance efforts across subsidiaries. Training sessions on compliance management, compliance management system development, overseas compliance, intellectual property management, dispute management, policy interpretation, and legal compliance reviews of major decisions are provided to enhance employees’ compliance awareness and risk identification capabilities. Furthermore, the Company has established multiple communication channels, including regular meetings, OA, and corporate WeChat. These channels facilitate employee inquiries on compliance issues, reporting of violations, and submission of improvement suggestions, thereby fostering the dissemination and exchange of compliance culture. This year, Tianshan Material and its subsidiaries conducted various compliance training sessions, involving 20,218 participants.

Tax obligations

Fulfilling tax obligations in accordance with the law is the most fundamental social responsibility of enterprises. As a responsible global corporate taxpayer, Tianshan Material adheres to international tax regulations in its global transactions and fulfills reporting and tax payment obligations as stipulated by both domestic and international laws. We have publicly disclosed our “Tax Policy Statement” on the Company’s official website (For details, please see <http://www.sinoma-tianshan.cn>). By actively enhancing our tax management system, establishing tax management policies and standards, and implementing supporting tax-related processes, we ensure that the Company’s tax management operations are conducted in a standardized, orderly, and efficient manner.

Business Ethics

We remain unwavering in our dedication to upholding business ethics and operating at a higher standard of integrity. We strictly adhere to laws and regulations related to anti-unfair competition, anti-monopoly, anti-bribery, extortion, fraud, and money laundering. We continue to deepen systematic management, optimize diversified oversight and auditing, and improve complaint and whistleblowing mechanisms. These efforts aim to foster a work environment characterized by integrity and self-discipline. This year, there were no reported incidents of commercial bribery or corruption.

The Company has formulated and published the “Code of Business Conduct” and “Anti-Corruption Policy” for all full-time, part-time and outsourced employees. The two policies cover many aspects, including corruption, bribery, discrimination, information confidentiality, conflicts of interest, antitrust/anti-competition, money laundering and/or insider trading, reporting, environment, health and safety. The “Anti-Corruption Policy” is also applied to all stakeholders that have business with the Company and all subsidiaries. It clearly forbids bribes in the form of kickback, donation, sponsorship, political contributions or any other illegal and improper payments.

The Company integrates the “Code of Business Conduct” into employees’ performance assessment, which is directly connected to their salary and promotion. We hold a “zero-tolerance” attitude to any violation of business ethics. Any employees who are directly or indirectly involved in violation of the “Code of Business Conduct” are subject to administrative punishment including warning, record of demerits, demotion, removal and dismissal based on the severity of violations, with their salaries deducted in accordance with the company-related system. Moreover, the employees are disqualified for promotion and any award nomination during the effective period of disciplinary action.

We also require all suppliers to sign the “Integrity Commitment”. Once we are aware of a supplier’s violation of business ethics including corruption, we will impose punishment, such as request for correction, suspension of business, elimination of business and inclusion in the “blacklist of partners” in accordance with national laws and regulations and internal rules. We have established strict management process regulations for supplier access, inspection, performance audit and withdrawal management to improve the standardization and transparency of the procurement process. Meanwhile, the supervisory department of the Company assists business departments in supervision of bidding and other processes to ensure that employees of both parties conform to the “Code of Business Conduct” and protect the legitimate rights and interests of both parties.

Integrity training

The Company conducts regular integrity culture promotion activities in forms such as lectures, specialized training sessions, and case studies to educate and train all employees. These initiatives are designed to consistently foster a culture of integrity and establish clear boundaries to reinforce ethical awareness.

Integrity training for all employees

For new joiners	We guided them to fasten the “first button” of integrity - have the awareness of integrity and adhere to the principle of integrity when working.
For responsible persons	We supervised and urged them to fulfill their double duties of their positions and integrity building to carry out the Party management and governance. We required them to be aware of responsibilities, shoulder responsibilities and fulfill responsibilities to put their organization under sound management.
For employees in important positions	We regularly organized integrity training for employees in purchase, finance and other important positions and revealed integrity risks in business. We reminded business employees to constantly hold the discipline principle and conscientiously resist corruption to remain undefiled.



Highlights of this year’s training initiatives

- We hosted a company-wide conference on promoting integrity and combating corruption. Activities included watching educational films, conducting case studies, and signing the “Integrity and Anti-Corruption Responsibility Agreements”.
- We organized integrity lectures to share essential requirements and regulations for upholding integrity in the workplace.
- We conducted targeted training sessions on “Four Malfeasances” and the CPC Eight-point Decisions. The training provides comments and suggestions on meals, accommodation, courtesy and other aspects in the light of the problems identified in the daily inspections.
- We held the warning conference to share the typical cases handled by the disciplinary inspection committees at all levels and give warnings.
- We shared cases on the OA discipline inspection platform, which garnered over 103 thousand views.

Reporting channels

We have opened efficient channels for reporting violations of business ethics. We encourage our employees and partners to report any actual or suspected violations of the “Code of Business Conduct” through telephone, email, visit, mail and other means. Once receiving the reporting, the disciplinary inspection department analyzes the reported case and assigns the case to the appropriate responsible department based on the findings.

We place a high priority on the protection of whistleblowers and reporting content. In accordance with the “Rules for Protecting Whistleblowers and Accusers by the Central Commission for Discipline Inspection of the Communist Party of China and the Ministry of Supervisory of the People’s Republic of China”, we spare no effort in safeguarding the security and confidentiality of whistleblower information and forbid any forms of reiteration and framing on the whistleblower. By doing so, we strictly protect the privacy and lawful rights of whistleblowers.

Information Security

The Company has established the “Tianshan Material Network Security and Information Security Management Policy”. The policy is formulated to strengthen the management of network security and information security across Tianshan Material and its subsidiaries at all levels, thus ensuring the stable operation of network systems and the security of information data. The Company also established the Cybersecurity and Informatization Working Group. The chairman of the Company is the team leader and the president and the vice president in charge of the digital department are the deputy leaders. The Chief Data Officer (CDO) and the deputy general managers in charge of business departments are team members. We have established the responsibility system of information security management. The system clarifies the responsibilities of information security management positions, including network administrator, system administrator, database administrator and safety administrator. We have also included the number of information security and cybersecurity incidents into the annual KPI assessment of employees of the digital department. By doing so, we have strengthened their attention to information security and cybersecurity and further improved our prevention and control over the risks of information security and cybersecurity.

The Company employs advanced information security technologies to comprehensively protect privacy and data security. We have implemented data encryption, firewalls, and Intrusion Prevention Systems (IPS) to significantly enhance the defense capabilities of our network environment. To ensure the ongoing security of our systems and software, we regularly conduct updates and upgrades for systems and software. This has promptly patched known vulnerabilities and mitigated potential risks. In pursuit of enhanced information security management, we have also established stringent information segregation mechanisms and implemented precise access control strategies. These mechanisms effectively isolate sensitive information from routine operations and ensure that only authorized users can access specific sensitive data, thereby greatly improving data protection capabilities.

Furthermore, we perform regular comprehensive security audits and monitoring for information systems, ensuring their security and integrity. Through these activities, we can promptly identify and address potential security threats and vulnerabilities, and swiftly implement targeted measures for repair and optimization.

This year, Tianshan Material actively participated in the national cybersecurity initiative and organized cybersecurity training sessions. As a result, we have further strengthened our cybersecurity awareness and capabilities, and better safeguarded network security.

Information security feedback and handling

The Company emphasizes on the timely reporting and resolution of information security issues. To ensure this, multiple feedback channels and a rigorous handling process have been established. If an employee finds an information security issue, he/she can report it to the Digital Department through internal OA, email, WeChat, telephone and other means. Upon receiving a report, the Digital Department conducts an initial verification and investigation on the issue. If the department confirms it is an information security issue, the department will take corresponding measures. If the issue can’t be handled in a short time, the department will initiate the emergency plan. After the issue is handled, the department will feed back the result to the reporter and record the issue. This year, there were no reported data security incidents or breaches of customer privacy.

Third-party evaluation

To prevent the information technology system interruption or cyber attacks, we have established emergency response plans for information and cybersecurity events. We also test whether the emergency response plans work every year. We regularly engage a third party to scan the security vulnerabilities of our information technology system. Then, we improve present safety strategies and processes based on the safety risk report provided by the third party to strengthen our information and cybersecurity management. We have obtained the certification of cybersecurity protection III, and get timely re-certification as required. Upon reassessment, Tianshan Material has confirmed that five core systems that meet the second-level requirements in the national classified cybersecurity protection testing and evaluation.

Responsible Procurement

Staying committed to building an efficient and sustainable supply chain, Tianshan Material collaborates with partners to advance sustainability strategies, aiming for mutual benefits while creating positive impacts for society and the environment. We have formulated and published the “Supplier Code of Conduct” and “Sustainable Supply Chain Management Policy” for all suppliers. We require all suppliers to fulfill their commitment to employees’ rights, environmental protection, risk management and other aspects. We are committed to continuously optimizing supplier management and fully advancing the development of a green, low-carbon supply chain.

Supplier Management Structure

The Company has established a three-tier management structure for suppliers comprising headquarters, regional companies and member enterprises. We also conduct on-site reviews of our suppliers on an annual basis, and are committed to building a competitive and sustainable product supply chain.

Supply chain management departments of regional companies

- Develop more detailed supporting management measures according to the supplier management measures of the Company headquarters.
- Conduct qualification reviews and access assessments of suppliers, organize on-site inspections and evaluations of new suppliers by relevant personnel, and select qualified suppliers.
- Establish and maintain the database of suppliers in the region, including potential supplier database, potential qualified supplier database, qualified supplier database and ineligible supplier database.
- Evaluate suppliers of the materials collectively purchased by regional companies regularly, manage them based on evaluation results and ratings, and refine the supplier database of regional companies.
- Be responsible for the management of material procurement, logistics services, and other service suppliers in the region, and formulate corresponding procurement strategies and management plans.

Supply chain management departments of member enterprises

- Implement the supplier management systems of Tianshan Material’s headquarters and regional companies.
- Be responsible for the management of the enterprise’s material procurement, logistics services, and other service suppliers, and formulate corresponding procurement strategies and management plans.
- Establish, maintain the enterprise’s supplier database, and ensure timely updates and maintenance of the data.
- Evaluate cooperative suppliers regularly and manage them based on evaluation results and ratings.
- Participate in supplier evaluation and sourcing efforts of Tianshan Material’s headquarters as needed.

Supply chain management department of the headquarters

- Formulate and publish the supplier management measures and supervise the implementation; establish the lifecycle management mechanism, covering supplier registration and access, performance evaluation and elimination.
- Establish and improve the supplier evaluation system; establish the evaluation standards and process; regularly evaluate suppliers of the materials collectively purchased by the headquarters.
- Conduct qualification review and access assessments of suppliers of the materials collectively purchased by the headquarters, organize on-site inspections and evaluations of new suppliers by relevant personnel, and select qualified suppliers.
- Establish and maintain the database of suppliers, including potential supplier database, potential qualified supplier database, qualified supplier database and ineligible supplier database.
- Comprehensively manage suppliers of material procurement, logistics services, and other services, and formulate corresponding procurement strategies and management plans.
- Coordinate and instruct the supply chain management departments of regional companies and member enterprises.



Supplier Lifecycle Management

By incorporating ESG-related requirements into the supplier lifecycle management, the Company defines ESG management requirements for the processes of supplier access, cooperation, review, and exit. This approach aims to identify, assess, and manage environmental and social risks throughout the supply chain.



suppliers that received responsibility assessment and review	8,518
suppliers sustaining long-term cooperation with the Company	10,747
suppliers that passed quality management system certification	5,258
suppliers that passed occupational health and safety management system certification	5,258
suppliers that passed environmental management system certification	5,258
suppliers that passed energy management system certification	5,258
key suppliers that passed the online/on-site assessment	8,518
key suppliers assessed as having significant actual/potential negative impacts	32
key suppliers with rectification plans implemented	32
key suppliers with significant actual/potential negative impacts who have been terminated from cooperation	23

Supplier Risk Management

To ensure supply chain continuity and resilience against emergencies and market changes, while maximizing the protection of the Company's reputation and financial interests, the Company has developed a comprehensive risk management framework covering all aspects of the supply chain. The Company has established a specialized team dedicated to supply chain risk management. This team regularly organizes training sessions for employees, focusing on enhancing their awareness and response capabilities to various risks. By doing this, the team ensures that risk management practices remain effective and timely.



Diversification of suppliers

Multiple suppliers are selected to reduce dependency on any single supplier, thereby minimizing the risk of supply chain disruptions due to the failure of a single supplier. The Company has built a diversified supply chain system through strategic cooperation with large state-owned enterprises. By integrating the “Wo Zhao Che” platform within the Group and upstream and downstream industries, such as Nanjing Fiberglass Research & Design Institute Co., Ltd., the Company has optimized key resources, while extending and strengthening the industrial chain. This integration has also introduced competitive enterprises, further enhancing the robustness of the supply chain system.

Resilient supply chain development

The supply chain's resilience has been bolstered through our optimized logistics network, increased inventory levels, and robust backup plans. These measures enable the supply chain to remain stable against external shocks and quickly return to normal operations

Additionally, the implementation of supply chain risk management strategies and measures has continuously reduced the risk of supply chain disruptions. This has not only improved the reliability and stability of the supply chain but also enhanced its adaptability and flexibility in the face of emergencies and market changes.

Supplier Capability Development

The Company actively promotes ESG improvements among suppliers and is committed to building a green supply chain. To this end, the Company has taken a series of measures to help suppliers better understand and practice ESG concepts, and to enhance their management and practice capabilities.

The Company provides comprehensive ESG training and information support to help suppliers systematically understand the core content and requirements of ESG management through professional training materials. The Company also keeps suppliers regularly updated on the latest trends and practice cases in the building materials industry to enhance their awareness and attention to ESG. In the year, the Company developed an ESG scorecard for self-assessments and reviews of core suppliers, helping them clearly understand their performance, and identify strengths and weaknesses. Based on the assessment results, the Company provided targeted suggestions to motivate them to make improvements. The Company also provided comprehensive technical support to suppliers, including technical consulting, technology transfer and sharing, and joint R&D and innovation. This support aims to enhance suppliers' technical capabilities and ESG performance, thereby promoting the sustainable development of the supply chain. These measures help improved the ESG management level of suppliers and promoted the sustainable development of the entire supply chain, demonstrating the Company's leadership in this industry.

This year, a total of 1,622 key suppliers participated in capability building programs, with the training covering 28.37% of suppliers.

Protection of suppliers’ rights and interests

To effectively improve the efficiency of accounts payable payments, we have developed a detailed strategy. Firstly, we will categorize and assess the urgency of each payment to determine appropriate payment deadlines and schedules. Secondly, based on the Company's current cash flow, we will prioritize payments to ensure timely settlement of the most urgent accounts payable. Lastly, for payments that may not be made on time, we will actively negotiate with suppliers to explore feasible solutions, such as deferred or installment payments. The Company had no outstanding payments due to SMEs that that needed to be disclosed to the public through the National Enterprise Credit Information Publicity System.

Customer Relations Management

The Company is committed to establishing long-term, stable, mutually beneficial and win-win business partnerships with customers. In the year, continuous efforts have been made to optimize product quality, and strengthen intellectual property protection. We actively listen to our customers and continuously enhance our products and services by collecting and analyzing their feedback. This commitment helps us build a more robust and reliable product and service network, providing solid support for the Company's long-term sustainable development.

Product Quality Guarantee

Tianshan Material is committed to providing customers with high-quality and high-standard products and services. By setting stringent requirements for product quality while improving the efficiency and precision of quality management with information and intelligent technologies, the Company enhances product competitiveness and maintains the leading position in the industry.

The Company adheres to the principles of “improving quality and efficiency, embracing optimization and upgrade” and deeply implements a development strategy that centers on quality. To this end, we have developed and implemented a series of rules and regulations, such as the “Quality Management Measures” and the “Product Quality Supervision and Management Measures”, to ensure standardized and effective quality management. In terms of the commercial concrete business, the Company has further refined the quality management requirements and established a series of specialized policies, including the “Technology and Quality Management Measures of Commercial Concrete Business”, the “Inspection and Evaluation Outlines for Basic Technology and Quality Management of Commercial Concrete Business”, the “Quality Management Measures for Raw Materials of Commercial Concrete Enterprises”. These documents clearly stipulate the technical requirements, production processes, and raw material management of commercial concrete products. Moreover, the Company has established a comprehensive system for the retention of quality files. To maintain product quality, the Company implements stringent measures to tackle quality issues or incidents. Should such events arise, a thorough investigation is launched to identify root causes and hold responsible parties accountable under established regulations, ensuring ongoing product quality enhancement.

Fully embracing the ISO 9001 quality management system, the Company conducts regular sampling inspections of products from its subsidiaries, and continually assesses and updates relevant standards based on the analysis of sample performance indicators, as well as market trends, customer needs, and inspection results. Furthermore, for issues and shortcomings identified during inspections, we promptly refine our quality improvement measures. All of these efforts are aimed at boosting the quality and market competitiveness of our cement products. In 2024, the Company achieved a 100% comprehensive cement product pass rate, a 100% pass rate for national-level sampling inspections of main business products, a 100% pass rate for main business products submitted for inspections. No major liability incidents related to safety and quality of products and services have occurred.



Case

CUCC Tai'an intelligent control system achieves quality improvement goals

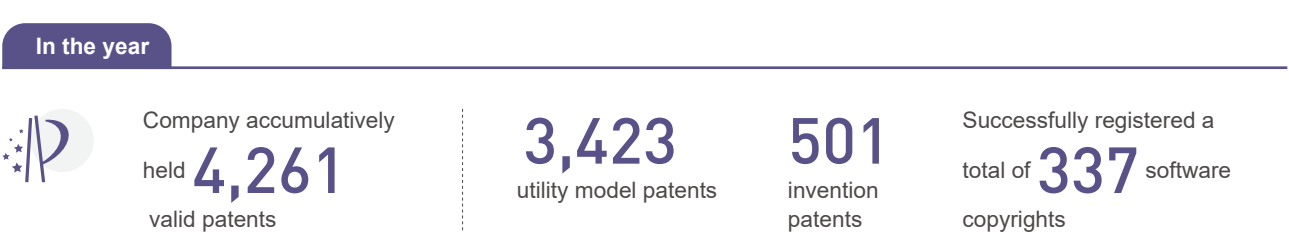
China United Cement Tai'an Corporation (CUCC Tai'an) launched a fully automated laboratory project to build an intelligent quality control system. This system establishes a quality model that tracks the entire material flow, from raw materials to finished cement, using big data to optimize plant-wide control. It enables rapid and accurate testing based on data from the automated lab and online analyzers, thereby improving testing efficiency and accuracy. The system also automatically records and stores test data, and generates standardized reports without manual intervention, streamlining data management and auditing.



Intellectual Property Protection

Strengthening the protection of intellectual property is crucial for driving product innovation and solidifying customer trust. The Company systematically analyzes and identifies the risks associated with intellectual property, and develops corresponding risk management strategies and countermeasures to keep risks identified always controllable, governed, and tolerable. For trademark management, the Company has established a trademark information database and implemented comprehensive measures to manage all aspects of the trademark, including trademark registration, trademark maintenance, trademark licensing, trademark disposal and trademark protection. Moreover, the Company has also formulated assessment and accountability mechanisms. Meanwhile, the Company continues to refine the “Trademark Management Measures” to protect intangible assets like the Company’s trademarks and enhance trademark management.

The Company continues to increase the investment in technological innovation, driving high-quality development through technological innovation. In the year, the Company accumulatively held 4,261 valid patents (including 3,423 utility model patents and 501 invention patents), and successfully registered a total of 337 software copyrights. Among them, Sanshi Material obtained the design patent for the independently developed Sealed Sampling Container for Concrete Raw Material Inspection from China National Intellectual Property Administration; Sinoma Yunfu successfully applied for two patents, i.e. “Anti-Blocking Mechanism for Bucket Elevator” and “Bag Insertion Device for Cement Production Packaging Machine”.



Voice of Customers

Upholding the “customer-oriented” service philosophy, the Company has formulated internal policies such as the “Customer Relationship Management Measures for Cement Business” and the “Customer Complaint Management Process Manual”. These documents clearly outline the handling process for customer complaints, including complaint channels, complaint receiving and registration, analysis and categorization, formulation and implementation of complaint resolution, and tracking and feedback of complaint handling results, forming a closed-loop management covering the customer complaint collection, response, processing, feedback and tracking of handling results. This ensures that the Company can respond swiftly to customer complaints and provides timely responses, thereby enhancing customer service efficiency.

For handling customer complaints, the Company actively facilitates access to service inquiries through multiple channels, including the 400 hotline, email, and the Internet+ customer management platform. Complaint types are categorized into quality, packaging, measurement, shipment service, sales personnel service, and flow direction complaints. Within 24 hours upon receiving a complaint, the complaint coordinators will work with relevant departments to verify the complaint, and propose solutions and emergency responses. They will also track the implementation and effectiveness of the complaint handling process.

For customer satisfaction, the Company partners with third-party agencies to conduct annual satisfaction survey. The survey is conducted anonymously. The survey covers various dimensions such as overall satisfaction, product quality, packaging quality, delivery service, technical service, sales personnel service, settlement and payment convenience and complaint handling. In the year, the survey covered 97% of our customers and our customer satisfaction reached 95%, 1 percentage point higher than the previous year.



Rural Revitalization Initiatives

In the year, Tianshan Material and its subsidiaries earnestly fulfilled social responsibility through actively engaging in 34 assistance projects in local communities and villages where operations were carried out. To enhance the quality of life for local residents and create more development opportunities, the Company continuously carried out rural revitalization projects. These projects covered several key areas, including strengthening infrastructure construction, providing educational support, and addressing agricultural product sales bottlenecks. Through these efforts, the Company effectively promoted the socio-economic development of the assisted areas.



In the year:

Number of counties receiving targeted assistance for rural revitalization: **3**; number of townships receiving targeted assistance for rural revitalization: **1**; number of villages receiving targeted assistance for rural revitalization: **30**; total assistance funds: RMB **2,284.4** thousand, of which direct invested funds: RMB **1,767.4** thousand, introduced funds: RMB **220** thousand, and consumption assistance funds: RMB **297** thousand;



Number of organizations receiving targeted assistance for rural revitalization: **28**; total amount of agricultural products from poverty alleviation areas that are sold with the assistance of the Company: RMB **4,836.8** thousand; provincial or ministerial awards: **2**; municipal awards: **1**.



Case

Hami Tianshan – “Leading Corporate Efforts to Support Rural Revitalization”

To implement the rural revitalization strategy and further promote the “Hundreds of Enterprises Helping Hundreds of Villages” initiative, Hami Tianshan has played a key role in leading corporate efforts to support rural revitalization. To help farmers in Taojiaguan Village to overcome the difficulty of selling watermelons, the company’s trade union purchased 3.1 tonnes of unsold watermelons and used them for heat stroke prevention and cooling at operation sites. This action, as part of the company’s efforts to advance rural revitalization, promoted the sale of agricultural products and drove the development of rural featured industries.



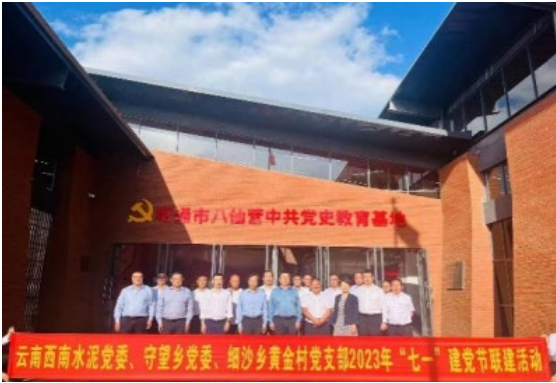
Case

Yunnan Cement - innovative ways to support rural revitalization

Yunnan Cement has persistently upheld and expanded its distinctive support models, continuously exploring and innovating ways to deepen targeted support efforts.

- The company conducted Party building and co-building activities, established libraries and activity rooms, and boosted the development of the beef cattle and kiwifruit industries.
- The company’s Party Committee Secretary made field visits to the assistance projects to advance industrial support, including mining resource development.
- The company have dispatched volunteers to provide educational assistance and renovate kindergarten facilities for six consecutive years.
- The company offered consumption support by purchasing agricultural products and organizing trade union activities.

Through these diverse initiatives, Yunnan Cement has promoted cultural co-construction, using cultural revitalization to drive rural revitalization. In this way, the company has continuously deepened the assistance effectiveness, making significant contributions to the local economic development and social progress.



Case

Jiahua Cement - support in infrastructure construction for rural revitalization

In October 2024, Jiahua General Cement Factory of Jiahua Special Cement Co., Ltd. donated 50 tonnes of M32.5 bagged cement, valued at RMB 13.5 thousand, to Jiangcun Village, Hulu Town, Shawan District, Leshan City, Sichuan Province. The donation was used for the construction of local rural roads. The donation alleviated the material shortage in local infrastructure construction, improving travel conditions for villagers. It also contributed to the development of a better support service system and a more convenient transportation environment, both crucial for rural economic development.



Infrastructure construction project for rural revitalization in Jiangcun Village, Hulu Town, Shawan District - road paving

Public Welfare Activities

Tianshan Material has continuously organized volunteer teams to carry out various public welfare activities, including blood donation, caring for poor children, visiting lonely seniors, and providing convenience services. These activities represent the Company's concrete efforts to deliver love to the society. In 2024, the Company donated RMB 32 million to Shanjian Public Welfare Special Fund of China Volunteer Service Foundation, which was used for poverty alleviation, volunteer teaching, employee care, volunteer service and other public welfare fields. Member enterprises actively took part in local social welfare activities in a coordinated manner, with a total donation of about RMB 42,855.3 thousand throughout the year. In particular, cement, ready-mixed concrete, limestone and other physical objects for the construction of public and social security equipment and facilities, equivalent to about RMB 6,540.6 thousand, were donated based on the industry characteristics. These measures reflected the Company's proactive commitment to social responsibility and its contributions to social development.

Case

Hefei South - humanitarian care for employees in need



Carrying forward the spirit of unity and mutual support in times of difficulty, the General Communist Party Branch and the Trade Union of Hefei South called on all employees to make charitable donations to help a colleague in need, Suqin. All Party members, cadres, and staff responded generously and every drop of their contributions was collected and delivered to the colleague and his family to help them get through the hard times. Hefei South has always paid close attention to the work and living needs of all employees, offering more care and assistance to those in need, and actively building a humanistic enterprise through concrete actions.

Case

Yulong Tongli - donation to the Queshan County Police Association to reward “righteous deeds”





Yulong Tongli adheres to the core values of socialism and encourages “righteous deeds”. In a concerted effort to promote police-business cooperation, the company donated RMB 50 thousand to the Queshan County Police Association. This donation will be used to reward outstanding cases of “righteous deeds”, further raising public awareness of righteous deeds and jointly promoting social harmony and public safety. Such action has deepened the cooperation between Yulong Tongli and the public security organ in Queshan County, laying a solid foundation for building a safe and harmonious community and a more positive business-local relationship.

Case

Ruichang Platform - warm-hearted assistance action

In October 2024, Party member representatives and volunteers from Ruichang Platform of Huadong Material delivered rice, cooking oil, and other daily necessities, as well as charitable funds, to the elderly in Beishan Village, Xiachaohe Village and Jinsi Village. In addition, the company launched a scholarship donation campaign, providing a total of RMB 50 thousand in tuition and living allowances for more than 20 impoverished students at Huangjin Township Central Primary School and Matou Middle School. These activities not only reinforced the company's sense of social responsibility and mission, but also strengthened its harmonious relationship with the local community, and promoted educational equity.



Case

Jinlei South Company - care for people in disaster area

Shuili Village in Xingning Town of Zixing City is the assistance target village of Jinlei South Company for rural revitalization. On July 27, 2024, it suffered a severe flood disaster as a result of Typhoon “Gaemi”. The company donated 144 tonnes of cement valued at RMB 49.3 thousand to support the post-disaster reconstruction there. The company's active participation in social welfare activities and relief donations has been recognized by the government and society at large.



People in the disaster area use the donated cement to rebuild their homes.

The village road rebuilt with the donated cement after the disaster

Appendix

Independent Assurance Statement

CECEP (HK) Advisory Company Limited (“CECEPAC (HK)” or “We”) has been engaged by Tianshan Material Co., Ltd. (“Tianshan Material”) to conduct an independent limited assurance engagement (“Assurance Engagement”) on the information and data related to sustainable development in Tianshan Material Co., Ltd. 2024 Environmental, Social and Governance (ESG) Report (“ESG Report”) and to disclose the results and conclusions of the assurance in the form of an independent assurance statement to the users of the ESG Report.

CECEPAC (HK) has been engaged to assure Tianshan Material adherence to the four AA1000 Accountability Principles (Inclusivity, Materiality, Responsiveness and Impact) set out in the AA1000 Assurance Standard v3 (“AA1000AS v3”). CECEPAC (HK) has also been engaged to provide limited assurance on the reliability and quality of specific performance information disclosed in the ESG Report that have been selected in accordance with the Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange (“Shenzhen Stock Exchange”) – Sustainability Report (For Trial Implementation) (“Sustainability Report Guideline”).

If there is any inconsistency or ambiguity between the English version and the Chinese version of this independent assurance statement, the Chinese version shall prevail.

I. Independence and Competence

CECEPAC (HK) was not involved in collecting and calculating data, or in the development of the ESG Report. CECEPAC (HK)'s activities are independent from Tianshan Material. There is no relationship between Tianshan Material and CECEPAC (HK) beyond the contractual agreement for providing this Assurance Engagement.

CECEPAC (HK)'s assurance team consists of professional personnel who are experienced in the industry and have received professional training in sustainability-related standards such as GRI Standards issued by Global Reporting Initiative, AA1000AS v3, Sustainability Report Guideline issued by Shenzhen Stock Exchange, ISO 17001, and ISO 9001, etc.

CECEPAC (HK)'s assurance team has rich experience in conducting assurance work and has a full understanding and practical ability of AA1000AS v3. Meanwhile, the assurance team of CECEPAC (HK) carries out assurance work on sustainable development issues in accordance with the internal assurance regulation of CECEPAC (HK).

II. Tianshan Material's Responsibilities

Tianshan Material is responsible for the preparation and presentation of the ESG Report in accordance with the Sustainability Report Guideline issued by Shenzhen Stock Exchange. Tianshan Material is also responsible for implementing internal control procedures and ensuring that contents of the ESG Report are free from material misstatement, whether due to fraud or error.

III. Assurance Provider's Responsibilities

CECEPAC (HK) is responsible for issuing an independent assurance statement according to AA1000AS v3 to the Board of Directors of Tianshan Material. This independent assurance statement applies solely to the ESG Report in the specified scope, expresses a conclusion on the assurance work, and does not serve any other intents or purposes.

CECEPAC (HK) ensures that all personnel involved in assurance work meet professional qualification, training and experience requirements, and are proficient in conducting assurance engagements. The results of all assurance and certification are internally reviewed by senior staff to ensure that methodologies used in the process are sufficiently stringent and transparent.

IV. Scope of the Assurance Engagement

- The scope of the Assurance Engagement is limited to the information and data in the ESG Report that relates to Tianshan Materia and its subsidiaries and does not include data or information provided by Tianshan Material's suppliers, contractors, and other third parties;
- Type 2 Moderate Level of Assurance was adopted to evaluate the nature and extent of Tianshan Material adherence to the four AA1000 Accountability Principles set out in the AA1000AS v3;
- Tianshan Material and CECEPAC (HK) reached an agreement to select the specific performance information in the ESG Report as part of the content for Assurance Engagement;

No.	Assurance Indicators	Unit	No.	Assurance Indicators	Unit
1	Total emission of nitrogen oxides (NOx)	tonnes	9	Number of companies having passed the quality system certification	companies
2	The expenditure on production safety	RMB one hundred million	10	Total energy consumption (including total natural gas consumption, total power consumption, total renewable energy consumption and total non-renewable energy consumption)	tonnes of standard coal equivalent
3	Number of work-related fatalities in production safety liability accidents (excluding related parties)	people			
4	Number of national green factories	factories	11	Thermal substitution rate (TSR) from alternative fuels	%
5	Number of factories passed the occupational health and safety management system certification	factories	12	Total greenhouse gas emissions	tonnes
6	Number of factories passed the environmental management system certification	factories	13	Greenhouse gas emission intensity	tonnes per RMB 1 million
7	The rate of safety hazards detected and eliminated	%	14	Total investment in public welfare (including material donations)	RMB ten thousand
8	The AI alert comprehensive response rate	%	15	Coverage of the key employee participated in the anti-corruption (anti-commercial bribery) training sessions	%

- The time scope of the Assurance Engagement was with respect to information disclosed from January 1, 2024 to December 31, 2024 only. We have not performed any procedures with respect to earlier periods or any other elements included in the ESG Report, and therefore, these do not constitute a part of our conclusions; and
- The scope of the Assurance Engagement is confined to the information and data provided by Tianshan Material. Any queries regarding the content or related matters within this independent assurance statement should be addressed to Tianshan Material only.

V. Methodology of the Assurance Engagement

CECEPAC (HK)'s Assurance Engagement was conducted at the headquarters of Tianshan Material and part of its subsidiaries. The assurance work included:

- An assessment on the suitability of Tianshan Material's stakeholder engagement participation process;
- On-site interviews with Tianshan Material's sustainability management and other personnel involved in the preparation and provision of the content and information in the ESG Report;
- An assessment on whether the reporting and management approach disclosed in the ESG Report responded to the principles of Inclusivity, Materiality, Responsiveness, and Impact as defined in the AA1000AS v3;
- Random sampling of sources of reliability and quality evidence pertaining to selected key performance indicators;
- Recalculation of selected key performance indicators; and
- Other procedures we deemed necessary.

The Assurance Engagement was performed and the conclusions within were based upon information and data provided by Tianshan Material, and on assumptions that the information provided was complete and accurate.

VI. Inherent Limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities.

VII. Conclusions

In accordance with the principles of Inclusivity, Materiality, Responsiveness and Impact in the AA1000AS v3, our findings and conclusions are detailed as follows:

Inclusivity

Tianshan Material has identified key stakeholders. Continuous communication with the key stakeholders is carried out in various way to understand their expectations and concerns. On this basis, Tianshan Material has formulated policies in consideration of key stakeholders' expectations and its impact on stakeholders. In our professional opinion, Tianshan Material adheres to the Principle of Inclusiveness.

Materiality

Tianshan Material conducted the material topic analysis for its ESG Report, collected opinions from key stakeholders, determined material topics through appropriate methods, and presented the results in its ESG Report. In our professional opinion, Tianshan Material adheres to the Principle of Materiality.

Responsiveness

Tianshan Material has established relevant communication channels for its key stakeholders to gather their concerns and has responded on material topics related to sustainable development to its key stakeholders. In our professional opinion, Tianshan Material adheres to the Principle of Responsiveness.

Impact

Tianshan Material has invested resources in understanding, measuring, assessing and managing the impacts caused by the company in order to achieve more effective decision-making and results-based management within the organization, and has appropriately disclosed the impacts in the ESG Report. In our professional opinion, Tianshan Material adheres to the Principle of Impact.

Specific Performance Information

Based on the procedures CECEPAC (HK) has performed and the evidence we have obtained, nothing has come to our attention that causes us to suspect the reliability and quality or the conformity with the preparation basis set out in the ESG Report of the 15 selected specified performance information of the ESG Report.



March 25, 2025

Hongkong, China

ESG Key Performance

Key Performance Indicators	Unit	2024	2023	2022
Leading the New Chapter of Green Development				
Embracing Green Actions				
Total greenhouse gas emissions	Tonne	146,604,719.03	166,579,684.27	188,226,668.00
Greenhouse gas emissions (scope 1)	Tonne	141,472,149.69	163,036,585.43	184,836,532.00
Greenhouse gas emissions (scope 2)	Tonne	5,132,569.34	3,544,098.25	4,235,019.00
Combined energy consumption	Tce	19,309,556.77	23,314,709.59	25,956,559.36
Combined energy consumption per million revenue	Tce/million revenue	221.96	217.12	195.78
Total non-renewable energy consumption	MWh	157,079,589.65	264,105,793.07	312,864,965
Total coal consumption	Tonne	21,784,398.18	27,650,916	30,220,942
Total gasoline consumption	L	184,690.00	263,940.00	364,140.00
Total diesel consumption	L	25,400,620.00	32,934,430.00	33,214,030.00
Total natural gas consumption	m³	1,872,100.00	2,804,000	5,505,400
Total power consumption	MWh	20,045,636.80	20,567,391.40	21,555,104.80
Total renewable energy consumption	Tce	64,789.76	21,630.77	23,734.84
Consumption of renewable resources as a proportion of total consumption of corresponding resources	%	0.34	0.09	0.09
Total direct energy consumption	MWh	133,351,169.70	169,275,522.20	185,002,135.30
Total indirect energy consumption ¹⁰	MWh	20,045,636.80	20,567,391.40	21,555,104.80
Purchased electricity consumption	MWh	15,312,201.70	14,356,101.00	14,771,652.80
Self-generated electricity consumption	MWh	4,733,435.10	6,211,290.4	6,797,789.23
Clean energy use	MWh	54,212.45	53,033.04	77,921.97
Including: natural gas consumption	m³	1,872,100.00	2,804,000.00	5,505,400.00
Including: percentage of natural gas consumption	%	35.80	57.21	76.46
Including: wind energy consumption	MWh	0	0	0
Including: percentage of wind energy consumption	%	0	0	0
Including: solar energy consumption	MWh	34,807.00	22,688.70	18,343.60
Including: percentage of solar energy consumption	%	64.20	42.78	23.54

¹⁰ Total indirect energy consumption includes purchased electricity consumption and self-generated electricity consumption.

Key Performance Indicators	Unit	2024	2023	2022
Developing Circular Economy				
Total water withdrawal	Tonne	961,173,442.25	1,055,005,407.81	1,127,148,466.85
Recycled water utilization rate of clinker-producing cement companies	%	92.18	93.56	92.45
Total water consumption	Tonne	75,169,699.00	79,353,902.00	85,135,405.00
Water consumption intensity	Tonne/million revenue	864.07	739.00	642.14
Reusing rate of the treated wastewater for commercial concrete business	%	100	100	100
Biodiversity Protection				
Land area affected by business operations	m²	11,576,100.00	9,877,700.00	11,132,500
Restored land area	m²	6,312,300.00	3,099,050.8	7,613,200
Investments in green mine construction and ecological restoration projects	RMB 10,000	8,638.76	3,052	7,557
National green factories	Number	54	53	26
National Ready-Mixed Concrete Green Demonstration Factory	Number	61	69	62
National green mines	Number	38	38	38
Provincial green mines	Number	103	98	78
Emission Compliance Management				
Total waste gas/total waste gas pollutant emissions	m³	493,427,362,600.00	575,146,395,700.00	687,118,979,200.00
Total Emission of Nitrogen Oxides (NOx)	Tonne	40,868.76	52,908	61,630
Total Emission of Sulfur dioxide (SO ₂)	Tonne	3,429.85	4,152	4,525
Industrial particulate matter emission	Tonne	3,307.06	5,138	7,113
Direct mercury emission	Tonne	2.59	2.03	0.39
Chemical oxygen demand (COD)emission ¹¹	Tonne	9.38	0.06	0.80
Proportion of companies meeting noise level standards	%	100	100	100
Proportion of recyclable cement packaging bags	%	100	100	100
Total amount of waste generated ¹²	Tonne	9,551,603.19	1,961,883.09	1,432,400.00
Self-produced hazardous solid wastes	10,000 t	0.07	0.09	0.24
Total hazardous waste generated per million revenues	Tonne/million revenue	0.01	0.01	0.02
Self-produced non-hazardous solid wastes	10,000 t	955.09	211.34	168.27
Total amount of non-hazardous waste generated per million revenues	Tonne/million revenue	109.79	19.68	12.69
Self-processed non-hazardous solid wastes	10,000 t	948.04	193.72	166.08
Absorbed and discharged volume of solid wastes	10,000 t	7,543.60	7,587.97	7,657.81
Absorbed volume of industrial wastes	10,000 t	6,405.10	7,209	7,139.70
Discharged volume of solid wastes	10,000 t	955.09	47.16	137.45
Discharged volume of other wastes	10,000 t	183.41	331.54	380.66
Amount of waste recycled	Tonne	9,480,423.96	1,921,585.55	1,407,800.00

¹¹ 2024 statistical caliber increase in domestic sewage discharges to the Park's wastewater treatment plants

¹² One additional plant (CNBM NEW MATERIALS CO., LTD.) in 2024, with the main waste being the comprehensive utilization of waste mines.

Key Performance Indicators	Unit	2024	2023	2022
Establishing a New Talent Development Center				
Fulfilling Talent Strategy				
Total number of employees	Number	55,034	61,662	67,956
Total number of employees by gender				
Male	Number	42,687	47,651	53,482
Female	Number	12,347	14,011	14,474
Total number of employees by employment type				
Full time	Number	54,760	60,321	65,089
Other (including part-time, intern and outsourced)	Number	274	1,341	2,867
Total number of employees by age				
30 and below	Number	5,380	6,491	6,795
Between 30 and 50	Number	34,184	38,070	43,493
50 and above	Number	15,470	17,101	17,668
Total number of employees by region				
Chinese mainland and Hong Kong, Macao and Taiwan	Number	54,914	61,545	67,848
Overseas	Number	120	117	108
Proportion of women in senior management of the Company	%	9.70	7.49	3.3
Employee Salary and Welfare Benefits				
Number of employee activities held and organized annually	Number	1,593	2,006	4,049
Number of employees participated in activities in the year	Person-time	69,540	81,935	107,952
Comforting special employees and helping employees with difficulties in a year	Person-time	1,543	3,108	2,550
Total expense on comforting special employees and helping employees with difficulties	RMB 10,000	174.09	268.5	317
Assistance to children's education of the difficult employees or enrollment scholarship for employees' children in a year	Person-time	434	589	627
Total expense on offering grants to the children of employees with difficulties in going to school or rewarding the children of employees to go to school	RMB 10,000	60.54	93.87	69
Helping employees with critical diseases in a year	Person-time	131	179	186
Total expense on helping employees with critical diseases	RMB 10,000	41.76	36.8	57
Employee Training and Development				
Number of employee trainings	Number	24,056	26,467	47,827
Employee training coverage/percentage of employees trained	%	96.57	98.29	97.00
Amount of training expenditure	RMB 10,000	4,270.20	3,017.95	4,243.00
Occupational Health and Safety				
New cases of occupational diseases	Number	0	0	0
Serious injury rate per thousand persons	‰	0.00	0.44	0.8
Accident rates of minor and serious injuries	‰	0.03	0.44	0.06
Investment in Workplace Safety	RMB 10,000	120,400	100,486	80,000
Lost work days due to work injuries	Day	11	18,030	30,000
Number of employees participated in occupational health and safety training	Person-time	863,374	663,943	1,068,530
Near accident rates of full-time employees	%	0.0187	0.024	0.02

Key Performance Indicators	Unit	2024	2023	2022
Occupational Health and Safety				
Near accident rates of contractual personnel	%	0.00	0.01	0
Number of work-related fatalities	Person-time	0	3	5
Death rate per thousand people	‰	0.00	0.05	0.07
Accumulated number of companies with occupational health and safety management system certification	Number	431	472	418
Driving a New Journey of Co-creating Social Value				
Modernized Governance				
Number of anti-corruption training sessions held and organized	Number	4,452	2,855	1,269
Total number of employees covered by anti-commercial bribery and anti-corruption training	Number	55,034	61,662	67,956
Percentage of employees covered by anti-bribery and anti-corruption training	%	100	100	100
Including: the total number of directors covered by anti-commercial bribery and anti-corruption training	Number	9	9	9
Percentage of directors covered by anti-bribery and anti-corruption training	%	100	100	100
Including: total number of management staff covered by anti-commercial bribery and anti-corruption training	Number	4,956	4,858	/
Percentage of management staff covered by anti-bribery and anti-corruption training	%	100	100	/
Percentage of employees in key positions covered by participation in anti-corruption (anti-bribery) trainings	%	100	100	100
Number of employees (including directors) who participated in anti-corruption training	Person-time	164,237	46,675	52,153
Amounts involved in litigation or significant administrative penalties due to the company's unfair competition behavior during the reporting period	RMB 10,000	0	0	0
Responsible Procurement				
Number of suppliers who have established long-term cooperation with the Company	Number	10,747	12,006	10,241
Including: Chinese mainland and Hong Kong, Macao and Taiwan	Number	10,719	11,973	10,239
Overseas	Number	28	33	2
Number of suppliers screened and controlled by the Company's environmental and social risks	Number	7,792	6,444	7,388
Including: Chinese mainland and Hong Kong, Macao and Taiwan	Number	7,698	6,444	7,386
Overseas	Number	94	0	2
Customer Relations Management				
Expenditure investments in scientific research and innovation	RMB hundred million	24.97	31.69	37.49
Number of R&D employees	Number	7,863	9,481	8,908
Percentage of R&D employees	%	14.28	15.38	13.54
National intelligent manufacturing demonstration factories	Number	2	1	1
Provincial intelligent manufacturing demonstration factories	Number	22	21	21
Digital mine	Number	21	15	10
Number of patent applications for inventions during the reporting period	Number	129	188	/
Number of patents for inventions granted during the reporting period	Number	85	92	/
Number of active patents during the reporting period	Number	4,261	3857	/

Key Performance Indicators	Unit	2024	2023	2022
Customer Relations Management				
Accumulated number of patents for utility models	Number	3,423	3,398	2,474
Accumulated number of invention patents	Number	501	429	278
Accumulated number of design patents	Number	11	11	15
Products recalled due to safety and health concerns	%	0	0	0
Lawsuits involving product and service safety and health	Case	0	0	0
Cement product overall pass rate	%	100	100	100
Number of complaints about products and services received during the year	Number	68	143	125
The percentage of complaints properly replied to and disposed accounted for	%	100	100	100
Number of complaints due to the disclose of customer information	Number	0	0	0
Responsible Business Operations				
Total amount invested in public welfare (including material donations)	RMB 10,000	4,285.53	4,967	6,569.84
Amount of targeted assistance/rural revitalization investment (including material donations)	RMB 10,000	3,377.73	3,531.7	3,276
Amount of educational investment (including material donations)	RMB 10,000	111.29	137.9	231
Amount of public facility construction investment (including material donations)	RMB 10,000	465.60	668.42	1,107
Other donations	RMB 10,000	330.91	629.35	1,787.84
Number of industrial assistance projects	Number	34	70	76
Number of people reached by rural revitalization	Number	3,400	3,684	3,520
Number of established volunteer organizations or groups	Number	13	41	64
Participation in volunteer activities	Person-time	2,405	3,680	5,486
Number of volunteers among employees	Number	1,159	3,233	3,833
Hours of volunteer activities	Hour	3,319	13,107	17,445
Total investment of all subsidiaries' annual support in volunteer activities from the Company in a year	RMB 10,000	3.83	3.1	40.7
Number of participations in or support activities related to the protection of the rights and interests of women, children or the disabled	Number	71	310	131
Number of entrepreneurial practice bases	Number	3	4	8
Student internship position situation	Person/day	14,760	20,200	22,597
Number of events participated organized by industry associations (above the provincial level)	Number	191	152	141

Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange - Sustainability Report (For Trial Implementation)

Chapter	Section	Guideline	Chapter in the Report
Chapter 3	Section 1	Article 20	Leading the New Chapter of Green Development
		Article 21	Feature: Fulfilling the New Mission on Climate Change
		Article 22	Feature: Fulfilling the New Mission on Climate Change
		Article 23	Feature: Fulfilling the New Mission on Climate Change
		Article 24	Feature: Fulfilling the New Mission on Climate Change
		Article 25	Feature: Fulfilling the New Mission on Climate Change
		Article 26	Feature: Fulfilling the New Mission on Climate Change
		Article 27	Feature: Fulfilling the New Mission on Climate Change
	Section 2	Article 28	Feature: Fulfilling the New Mission on Climate Change
		Article 29	Leading the New Chapter of Green Development
Chapter 4	Section 2	Article 30	Leading the New Chapter of Green Development
		Article 31	Leading the New Chapter of Green Development
		Article 32	Leading the New Chapter of Green Development
		Article 33	Leading the New Chapter of Green Development
	Section 3	Article 34	Leading the New Chapter of Green Development
		Article 35	Leading the New Chapter of Green Development
		Article 36	Leading the New Chapter of Green Development
		Article 37	Leading the New Chapter of Green Development
	Section 1	Article 38	Driving a New Journey of Co-creating Social Value
		Article 39	Driving a New Journey of Co-creating Social Value
		Article 40	Driving a New Journey of Co-creating Social Value
Chapter 5	Section 2	Article 41	Driving a New Journey of Co-creating Social Value
		Article 42	Driving a New Journey of Co-creating Social Value
		Article 43	Not Applicable
	Section 3	Article 44	Driving a New Journey of Co-creating Social Value
		Article 45	Driving a New Journey of Co-creating Social Value
		Article 46	Driving a New Journey of Co-creating Social Value
		Article 47	Driving a New Journey of Co-creating Social Value
	Section 4	Article 48	Driving a New Journey of Co-creating Social Value
		Article 49	Driving a New Journey of Co-creating Social Value
		Article 50	Driving a New Journey of Co-creating Social Value
Chapter 5	Section 1	Article 51	Building a New Blueprint for Our Vision
		Article 52	Driving a New Journey of Co-creating Social Value
		Article 53	Building a New Blueprint for Our Vision
	Section 2	Article 54	Driving a New Journey of Co-creating Social Value
		Article 55	Driving a New Journey of Co-creating Social Value
		Article 56	Driving a New Journey of Co-creating Social Value

Indexes of “Reference of ESG Indicators System for ESG Reports of Listed Companies Controlled by Central Enterprises”

Disclosure Information		Chapter in the Report
Environmental Indicators		
Level I	Level II	
Source Consumption	Water Resources	Leading the New Chapter of Green Development – Developing Circular Economy
	Materials	Leading the New Chapter of Green Development – Developing Circular Economy
	Energy	Leading the New Chapter of Green Development – Embracing Green Actions
	Packaging Material	Leading the New Chapter of Green Development – Emission Compliance Management
Prevention and Control of Pollution	Wastewater	Leading the New Chapter of Green Development – Emission Compliance Management
	Waste Gas	Leading the New Chapter of Green Development – Emission Compliance Management
	Solid Waste	Leading the New Chapter of Green Development – Emission Compliance Management
Climate Change	Greenhouse Gas Emissions	Feature: Fulfilling the New Mission on Climate Change
	Emission Reduction Management	Feature: Fulfilling the New Mission on Climate Change
	Environmental Rights Transaction	Feature: Fulfilling the New Mission on Climate Change
	Climate Risks Management	Feature: Fulfilling the New Mission on Climate Change
Biodiversity	Impacts of Production, Services and Products on Biodiversity	Leading the New Chapter of Green Development – Biodiversity Protection
Measures for Resource and Environment Management System	Low-carbon Development Goal Formulation and Strategic Measures	Feature: Fulfilling the New Mission on Climate Change
	Resource Management Measures	Leading the New Chapter of Green Development – Embracing Green Actions, Developing Circular Economy
	Energy saving and carbon reduction statistical detection & assessment reward and punishment system	Feature: Fulfilling the New Mission on Climate Change
	Green Action and Measures	Leading the New Chapter of Green Development – Embracing Green Actions
	Green and Low-carbon Certification	Leading the New Chapter of Green Development – Innovate Low-Carbon Products
	Environmental Legitimacy and Compliance	Leading the New Chapter of Green Development – Emission Compliance Management
Social Indicators		
Level I	Level II	
Employees' Rights and Interests	Recruitment and Employment	Establishing a New Talent Development Center – Fulfilling Talent Strategy
	Employee Salary and Welfare Benefits	Establishing a New Talent Development Center – Employee Salary and Welfare Benefits
	Employee Health and Safety	Establishing a New Talent Development Center – Occupational Health and Safety
	Employee Development and Training	Establishing a New Talent Development Center – Employee Training and Development
	Employee Satisfaction	Establishing a New Talent Development Center – Fulfilling Talent Strategy

Disclosure Information		Chapter in the Report
Product and Service Management	Product Safety and Quality	Driving a New Journey of Co-creating Social Value – Customer Relations Management
	Customer Service and Rights	Driving a New Journey of Co-creating Social Value – Customer Relations Management
	Innovative Development	Driving a New Journey of Co-creating Social Value – Customer Relations Management
Supply Chain Safety Management	Supplier Management	Driving a New Journey of Co-creating Social Value – Responsible Procurement
	Supply Chain Management	Driving a New Journey of Co-creating Social Value – Responsible Procurement
Social Contribution	Tax Payment	/
	Community Co-building	Driving a New Journey of Co-creating Social Value – Responsible Business Operations
	Public Welfare Activities	Driving a New Journey of Co-creating Social Value – Responsible Business Operations
	Responding to National Strategies	Driving a New Journey of Co-creating Social Value – Responsible Business Operations
Governance Indicators		
Level I	Level II	
Governance Strategy and Organization Framework	Governance Strategy and Procedure	Driving a New Journey of Co-creating Social Value – Modernized Governance
	Organizational Structure and Functions	Driving a New Journey of Co-creating Social Value – Modernized Governance
	Remuneration Management	Establishing a New Talent Development Center – Employee Salary and Welfare Benefits
Regulating Governance	Internal Control	Driving a New Journey of Co-creating Social Value – Modernized Governance
	Integrity Building	Driving a New Journey of Co-creating Social Value – Modernized Governance
	Fair Competition	Driving a New Journey of Co-creating Social Value – Modernized Governance
Investor Relations Management and Shareholders' Equity	Investor Relation Management	Building a New Blueprint for Our Vision – Investor Communication
	Shareholders' Equity	Building a New Blueprint for Our Vision – Investor Communication
	Creditors' Equity	Building a New Blueprint for Our Vision – Investor Communication
Transparency of Information Disclosure	Information Disclosure System	Building a New Blueprint for Our Vision – Investor Communication
	Information Disclosure Quality	Building a New Blueprint for Our Vision – ESG Awards and Recognitions
Compliant Operation and Risk Management	Compliant Operation	Driving a New Journey of Co-creating Social Value – Modernized Governance
	Risk Management	Driving a New Journey of Co-creating Social Value – Modernized Governance

Feedback

Dear Reader,

Thanks for your time! Thanks for reading Tianshan Material Co., Ltd.'s 2024 Environmental, Social and Governance Report. To provide you and other stakeholders with more valuable information, and effectively promote the Company to improve its ability and level of corporate social responsibility, we sincerely look forward to your comments and suggestions.

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You could also provide your valuable comments or suggestions via telephone, email or express delivery.

You could scan the following QR code to give us online feedback on the Report:

