





Compliance Governance

Sustainable Development Governance

15

Compliance System Operation

Governance-Integrity System Building

Stakeholder Communication

Materiality Assessment

About the Report 01 Glossary 03 Management's Message 07 The Overview of 09 Low Carbon Culture **New Tianshan ESG** Key Performance 13 Highlights

Environment Protection 29

Addressing climate change

Green production

Ecological Protection



Health and Safety

Safety System

Safety Actions

Occupational Health

Safety Culture

59

73

Quality Refinement

Management Refinement

Leading Role in Transformation

Responsibility Supply

Employee Development

87

95

Employment Practices

Employee Growth

Employee Care

Social Contribution

Rural Revitalization

Social Investment

Public Welfare Programs

Appendix

103

About the Report

The Report is the second environmental, social and governance report (hereinafter referred to as the "ESG Report" or the "Report") of Xinjiang Tianshan Cement Co., Ltd. (hereinafter referred to as "New Tianshan", the "Company" or "we"). The Report provides an update on the Company's sustainability efforts in 2022. In this 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 practices and achievements in compliance and governance, environmental protection, health and safety, high-quality, employee development and social contribution for the period from January 1, 2022 to December 31, 2022 (hereinafter referred to as the "current year" or the "reporting period"). 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 New Tianshan and all its subsidiaries.

- - ⇒ - Principles and Basis

In the process of developing the Report, we mainly refer to the *Guidelines for Self-Regulation of Listed Companies on Shenzhen Stock Exchange No. 1 -- Standardized Operation of Listed Companies on the Main Board (2022)*, the *GRI Sustainability Reporting Standards (GRI Standards)* of the *Global Sustainability Standards Board (GSSB)* and the United Nations Sustainable Development Goals (SDGs) for 2030.

- 10 - Data Description

The Report is an actual feedback of New Tianshan's economic, environmental and social responsibility 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 affiliated companies. Unless otherwise specified, the monetary amounts mentioned in this report are measured in RMB.

-♥- Confirmation and Approval

The Report was confirmed by the Management and approved by the Board of the Company on March 20, 2023.

- 👥 – 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 Xinjiang Tianshan Cement Co., Ltd. (http://www.sinoma-tianshan.cn/), Shenzhen Stock Exchange (http://www.szse.cn) and Cninfo (www.cninfo.com.cn).



Contact Information



If you have any comments or suggestions about this report, please feel free to contact us through the following ways:

Contact persons: Ye Hong

Address: China National Building Material, No. 70, Expo Hall Road, Pudong New Area, Shanghai

Tel: 021-68989175

E-mail: tsgfyehong@126.com

Glossary

03

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

1	CNBMG	refers to	China National Building Material Group Co., Ltd.
2	Sinoma	refers to	China National Building Material Company Limited
3	New Tianshan	refers to	Xinjiang Tianshan Cement Co., Ltd.
4	Company Charter	refers to	Xinjiang Tianshan Cement Co., Ltd.
5	CUCC	refers to	China United Cement Corporation
6	Zhonglian Tongli	refers to	Henan Zhonglian Tongli Material Co., Ltd.
7	South Cement	refers to	South Cement Co., Ltd.
8	Zhejiang Cement	refers to	Zhejiang South Cement Co., Ltd.
9	Jiangxi Cement	refers to	Jiangxi South Cement Co., Ltd.
10	Zhongnan Cement	refers to	Hunan South Cement Co., Ltd.
11	Southwest Cement	refers to	Southwest Cement Co., Ltd.
12	Yunnan Cement	refers to	Yunnan Southwest Cement Co., Ltd.
13	Guizhou Cement	refers to	Guizhou Southwest Cement Co., Ltd.
14	Jiahua Special Cement	refers to	Jiahua Special Cement Co., Ltd.
15	Xinjiang Cement	refers to	Xinjiang Tianshan Cement Co., Ltd.
16	Sinoma Cement	refers to	Sinoma Cement Co., Ltd.
17	Sanshi Material	refers to	Zhejiang Sanshi South New Material Co., Ltd.
18	Huanan Material	refers to	South New Material Technology Co., Ltd.

19	Huadong Material	refers to	Huadong Materials Co., Ltd.
20	CUCC An County	refers to	China United Cement An County Corporation
21	CUCC Chuzhou	refers to	China United Cement Chuzhou Corporation
22	CUCC Jiyuan	refers to	China United Cement Jiyuan Corporation
23	CUCC Linyi	refers to	China United Cement Linyi Corporation
24	CUCC South Shandong	refers to	China United Cement South Shandong Corporation
25	CUCC Nanjing	refers to	China United Cement Nanjing Corporation
26	CUCC Concrete Nanjing	refers to	China United Concrete Nanjing Co., Ltd.
27	CUCC Nanyang	refers to	China United Cement Nanyang Corporation
28	CUCC Qingzhou	refers to	China United Cement Qingzhou Corporation
29	CUCC Tengzhou	refers to	China United Cement Tengzhou Corporation
30	CUCC Ulanqab	refers to	China United Cement Ulanqab Corporation
31	Huanghe Tongli	refers to	Huanghe Tongli Cement Co., Ltd.
32	Shawan Tianshan	refers to	Shawan Tianshan Cement Co., Ltd.
33	CUCC Luoyang	refers to	China United Cement Luoyang Corporation
34	Yulong Tongli	refers to	Zhumadian Yulong Tongli Cement Co., Ltd.
35	Sinoma Anhui	refers to	Sinoma Anhui Cement Co., Ltd.
36	Changshan South	refers to	Changshan South Cement Co., Ltd.
37	Shanya South	refers to	Hangzhou Shanya South Cement Co., Ltd.
38	Huaikan South	refers to	Huzhou Huaikan South Cement Co., Ltd.

39	Jiande South	refers to	Jiande South Cement Co., Ltd.
40	Nancheng South	refers to	Jiangxi Nancheng South Cement Co., Ltd.
41	Jiangshan South	refers to	Jiangshan South Cement Co., Ltd.
42	Sanming South	refers to	Fujian Sanming South Cement Co., Ltd.
43	Shaoyang South	refers to	Shaoyang South Cement Co., Ltd.
44	Zhuge South	refers to	Lanxi Zhuge South Cement Co., Ltd.
45	Linli South New Material	refers to	Hunan Linli South New Material Technology Co., Ltd.
46	Suzhou Tianshan Cement	refers to	Suzhou Tianshan Cement Co., Ltd.
47	Ili Tianshan	refers to	Ili Tianshan Cement Co., Ltd.
48	Erlangshan Cement	refers to	Sichuan Erlangshan Labahe Cement Co., Ltd.
49	Old Town Southwest	refers to	Lijiang Old Town Southwest Cement Co., Ltd.
50	Yiliang Southwest	refers to	Lijiang Yiliang Southwest Cement Co., Ltd.
51	Sichuan Desheng Cement	refers to	Sichuan Desheng Group Cement Co., Ltd.
52	Fumin Jinrui	refers to	Fumin Jinrui Cement Building Materials Co., Ltd.
53	Sichuan Golden Cement	refers to	Sichuan Golden Cement Co., Ltd.
54	Yunnan Xingjian Cement	refers to	Yunnan Xingjian Cement Co., Ltd.
55	Zunyi Saide	refers to	Zunyi Saide Cement Co., Ltd.
56	CUCC Baoding	refers to	China United Cement Baoding Corporation
57	Taojiang South	refers to	Hunan Taojiang South Cement Co., Ltd.
58	Zambia Company	refers to	China National Building Material Zambia Industrial Park

05

59	Nigeria Company	refers to	Sinoma Nigeria Company Ltd
60	Yunnan Far East Yaxin	refers to	Yunnan Far East Yaxin Cement Co., Ltd.
61	Changde South	refers to	Hunan Changde South Cement Co., Ltd.
62	Pingxiang New Era	refers to	Pingxiang New Era Concrete Co., Ltd.
63	CUCC Yinan	refers to	China United Cement Yinan Corporation
64	Lisen Group	refers to	Sichuan Lisen Building Materials Group Co., Ltd.
65	CUCC Anyang	refers to	China United Cement Anyang Corporation
66	China Building Materials Academy	refers to	China Building Materials Academy Co., Ltd.
67	SZSE	refers to	Shenzhen Stock Exchange

Management's Message

The year 2022 was an extraordinary year.

It was the first year of complete operation of New Tianshan after major asset reorganization. Despite the impact of slowdown of macroeconomic growth and worsening of overcapacity in the industry, the Company held its original intention and mission, actively fulfilled its social responsibility, followed the pace of the times and further clarified its strategic positioning of "building an international first-class cement company with Chinese characteristics", the two battles of "improving quality and efficiency, optimizing and upgrading" and the implementation path of "focusing on the main business, making it stronger and better". Despite the difficulties, we firmly strove to meet the challenges and made every effort to improve production and operation, business integration, planning and development, reform and innovation, as well as party construction and discipline inspection.

In the past year, we took ESG management as an important strategic pillar and implementation measure to lead the Company's reform and innovation, transformation and upgrading to enhance its sustainable development capability. Adhering to the mission of "materials create a better world" and the core concept of "making the best use of resources and serving the construction", we have taken "excellence in operation, refinement in management and robustness in organization" to improve our corporate governance. We have been striving to build an environment-friendly industry and become a basic facility equipped for modern cities with the transformation of "high-end, intelligent and green" and actively fulfilling our social responsibility based on the concept of "employees and enterprises grow up together". All managers and employees have concentrated their efforts on promoting the high-quality

07

development of the Company and performing the responsibility of the corporate citizens to contribute to the social welfare.

During the past year, we systematically improved the Company governance system, comprehensively reviewed the compliance governance system and the ESG work reporting system, thus forming a hierarchical work mechanism for fulfilling our roles and responsibilities. The Board was debriefed of the Company's ESG work report and each had its own role according to the ESG work operation mechanism. In this way, we effectively identified and managed the material issues in sustainable development to achieve the continuous improvement of our ESG performances. We continued to promote the achievement of 2025 Green Development Goals, established and improved incentive and binding mechanisms, and insisted on continuous progress to effectively improve the sustainability of the Company.

Last year, we kept steady compliance governance, strictly adhered to the bottom line of compliance operation, built ESG governance structure and set a solid foundation for sustainable development. We practiced environmental protection, insisted on green, low-carbon and recycling intensive production and operation to protect lucid water, lush mountains, blue sky and clear ocean. We strengthened health and safety management, secured safe production and occupational health. We pursued high quality, guaranteed a high-level product and service delivery with Three Precision Management 2.0 and led the transformation of the industry. We stressed staff development and training, insisted on people-oriented, and grew up together with staff. At the same time, we persisted in contributing to the society and devoted ourselves to rural revitalization, social development and sunshine public welfare.

Our efforts have been recognized by many government agencies and social organizations, especially in terms of sustainable development. We have completed the disclosure of information of listed companies with high quality and released the first ESG report, which showed the achievements of the Company in improving governance effectiveness, practicing green environment protection and fulfilling social responsibility. Our case of Deepening ESG system building as a Step towards Word-Class was elected as one of the "Excellent ESG Practice Cases of Listed Companies". In the "2022 Forbes China Top 50 Sustainable Industrial Enterprises Awards", we were successfully awarded as a model sustainable industrial enterprise in China. Moreover, we persisted in good corporate governance and won the Shenzhen Stock Exchange's A-class top rating for the 4th

consecutive year, the "Golden Round Table Award" for the best board in listed companies and the "Tianma Award" of the Securities Times for the best board.

In the future, New Tianshan will closely comply with the national industrial policy direction and sustainable development trends, seize the opportunity of future technological progress and technology upgrade, keep on fighting for "improving quality and efficiency, optimizing and upgrading", promote green and low-carbon sustainable development and continuously improve the operational efficiency and development quality. At the same time, we will work hand in hand with regulators, industry associations, partners and employees to create greater value for society and strive to become a world-class cement company.

08



The Overview of New Tianshan

Founded in November 1998 and listed on the Shenzhen Stock Exchange (SZSE) in 1999 (stock code: 000877), New Tianshan is the core enterprise in infrastructure materials of CNBMG and the largest cement company in the world with a complete industrial chain, covering the manufacturing and sales of cement, clinker, business mix and aggregates.

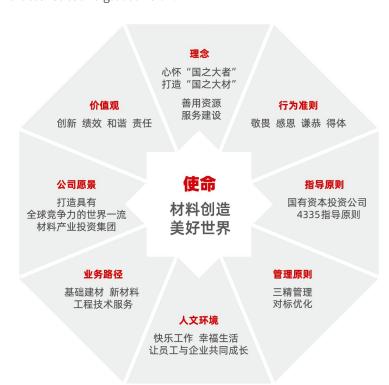
In 2022, New Tianshan further optimized its organizational structure and continued to promote and basically completed the equity integration of regional companies. As the world's largest cement company with a complete industrial chain and a national layout, the core advantages of our main business and our profitability, comprehensive competitiveness and sustainable development capacity have been further enhanced.

As of the end of the reporting period:



Value & Concept

New Tianshan thoroughly implements the core concept of "making the best use of resources and serving the construction", focuses on the business fields of cement, clinker, business mix and aggregates, keeps reinforcing its core competitiveness, keeps promoting high-quality development, insists on deepening sustainable management, promotes green and low-carbon development, strives to develop in high quality and builds a first-class cement company with Chinese characteristics and global vision.



ESG Working Overview

During the Reporting Period, New Tianshan kept steady compliance governance, built the sound ESG governance structure, established an Environmental, Social and Governance (ESG) Committee and formulated the "Implementation Rules of the Environmental, Social and Governance Committee of the Board of Xinjiang Tianshan Cement Co., Ltd.", laying a solid foundation for sustainable development. The Company practiced environment and climate protection with "Carbon Peaking and Carbon Neutrality" goals, insisted on green, low-carbon, clean, efficient and recycling intensive production and operation and actively promoted green concept. The Company promotes standard, comprehensive and thorough safety actions and awareness training to guard workplace health and safety by focusing on production safety and employee occupational health. The Company pursued high quality, guaranteed a high-level product and service delivery with updated Three Precision Management and led the industry's high-end, intelligent, low-carbon transformation and created responsible supply and win-win cooperation. The Company stressed staff development, insisted on people-oriented, and grew up together with staff. At the same time, the Company persisted in contributing to the society and devoted itself to rural revitalization, social development and sunshine public welfare.

Annual Honorary Awards

The Company has been recognized by governmental and other institutions in various fields for its sustainable development strategy. The Company and its subsidiaries received a number of honorary awards as well as being listed in relevant rankings in 2022, including:





The Company was selected as a model sustainable industrial enterprise in China in the "2022 Forbes China Top 50 Sustainable Industrial Enterprises Awards"



The Board won the "Golden Round Table Award" for the best board in listed companies and the "Tianma Award" of the Securities Times for the best board



"Forest Factory Guarding Green Home" filmed by Sinoma Cement won the "Excellent Work Award" of the 4th "Belt and Road" 100 Countries' Short Video Contest



the Company Jiahua Special Cement was honored the title of "Quality Stability Benchmark Enterprise" in 2022 and approved to undertake the "High Value Patent Layout Project" in Sichuan Province



The case of "Deepening ESG System Construction and Promoting Towards World Class" compiled by the Company was recognized as one of the "Excellent ESG Practice Cases of Listed Companies"



Shanghai South, Zhonglian Tongli and Linli South New Material won the first prize of Excellent Achievements in Expertise Reform and Development of China in 2022



Huikan South was awarded "Pilot Model of Industrial Internet Platform + Quality Management Solution" by the Office of the Ministry of Industry and Information Technology and "Cement Full Process Intelligent Green Factory: Smart Factory Case" by the Department of Raw Material Industry of the Ministry of Industry and Information Technology



Taojiang South was awarded "Water Efficiency Leader Enterprise in Hunan Province" and Changde South was awarded "Water Saving Enterprise in Hunan Province"



The Company was rated as top A-class in information disclosure by the SZSE for the 4th consecutive year



2 teams were awarded the National Pioneer Worker, 1 enterprise won the Provincial May Day Labor Certificate, 4 groups were awarded the Provincial Pioneer Worker and 5 persons were awarded the Provincial May Day Labor Medal



Zunyi Saide Cement Co., Ltd. was approved by the Department of Raw Materials Industry of the Ministry of Industry and Information Technology as a typical case of digital transformation of intelligent manufacturing in building materials industry in 2022.



PO42.5 and PC42.5 products of each subordinate cement enterprise of Jiangxi Cement were certified as low carbon products

ESG Key Performance Highlights

Environment **E**



Total greenhouse gas emissions

187,382,300 tons

decreased by 13% compared to last year

Comprehensive energy consumption per unit product of clinker

107.49 kg

decreased by **1.9** kg of standard coal compared with last year

Recycled water utilization rate of clinker-producing cement companies

92.45%

the wastewater reuse rate of business mix service reached 100%

Unit clinker nitrogen oxide (NOx) emissions

0.28 kg decreased by

5

20.14% year-on-year

Unit clinker sulfur

0.02 kg

20.79% year-on-year

dioxide (SO₂) emissions

decreased by

SO₂

0.03 kg

emissions

decreased by

20.06% year-on-year

Unit clinker particle

New national green plant

39

NOx

Green demonstration plants for business mix

Provincial green mines





144 green building materials products certified for business mix,

46 newly added in 2022



The Company approved

28 green mine construction

Total investment **75.57** million yuan

Total environmental protection investment

1,455.48 million yuan

Ecological restoration area covered

8,549,500 square meters

Increased by

2,976,300 square meters compared with last year



Society S

1,068,530

Employee participations in occupational health and safety training

The percentage of complaints properly replied and disposed accounted for

100%

Conducted

33,212

inspections for safety and environmental protection,

7

Comprehensive cement products pass rate

100%

On average

employee

2,366,115

hours of training were attended by employees,

amounted to

in safety and environmental protection

in management

299,271 hours

1,378,944 hours

in other areas

56,604 hours

potential hazards, pandemic prevention and control

in skills and operations

630,296 hours

million RMB

Total public welfare investment (including material donations)

65.70



17,445

working hours of volunteer activities in the year

Governance G



1,269

35 hours of training per

anti-corruption training sessions conducted

Conducted anti-corruption training with

100%

Conducted anti-corruption training with

100%

52,153

employee participation in anticorruption training



Conducted

corporate compliance governance training sessions covering

31 topics

4,730

employee participation in compliance governance training





Compliance Governance

- Sustainable Development Governance
- Compliance System Operation
- Governance-Integrity System Building
- Stakeholder Communication
- Assessment of Important Issues

New Tianshan keeps improving the construction of its compliance and governance system and actively fulfills its corporate responsibilities. The Company integrates sustainable development into corporate governance, enhances the ESG governance and integrity system construction and continuously promotes stakeholder communication to boost industrial development.



I. Sustainable Development Governance

Continuous Improving Governance Structure

New Tianshan strictly complies with the laws and regulations such as the Company Law, the Securities Law, the Code of Corporate Governance for Listed Companies in China and the Company Charter. It has established a corporate governance structure with clear responsibilities and high efficiency based on scientific method. At the same time, the Board diversity policy is implemented with full consideration of members' skills, industry experience and background.

The Board of New Tianshan consists of nine directors, including three independent directors and one worker director. The Board members are experienced in the cement industry, finance, risk management and legal fields to enhance the Company's development and promote the achievement of strategic goals from a broader and diverse perspective.

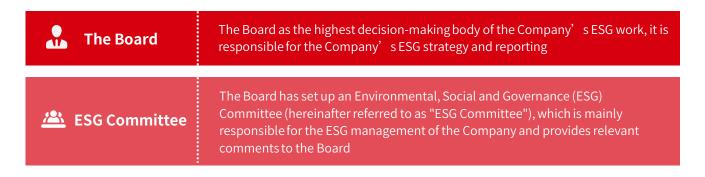
		Title		Professional Competence		
Position	Name		Education	Cement Industry Experience	Risk Management	Finance Management
Chairman	Chang Zhangli	Senior Engineer	Bachelor's Degree in Engineering; Master's Degree in Business Administration	Ø	⊘	⊘
Vice Chairman	Liu Yan	Senior Engineer	Master's Degree in Engineering	Ø	Ø	
Director	Xiao Jiaxiang	Professorate Engineer	Master's Degree in Engineering; PhD	Ø	Ø	
Director	Cai Guobin	Accountant	Bachelor's Degree in Economics; Master's Degree in Business Administration	Ø	Ø	Ø
Director	Zhao Xinjun	Senior Engineer; Senior Economist	Master's Degree in EMBA			
Worker Director	Sui Yumin	Professorate Senior Engineer	Bachelor's Degree in Silicate Engineering (Cement); Master's Degree in Business Administration	Ø		Ø
Independent Director	Kong Xiangzhong	Professorate Senior Engineer	Bachelor's Degree in Engineering	Ø		
Independent Director	Lu Zhengfei	/	Master's Degree in Economics (Accounting); Doctor's Degree in Economics (Business Management)		Ø	⊘
Independent Director	Zhan Lei	/	Bachelor's Degree in Law		Ø	

In 2022, the Company continued to deepen the construction of compliance system, systematically sorted out the corporate governance system to be established for companies listed on Shenzhen Stock Exchange, revised 26 relevant rules and policies including Rules of Procedure of Shareholders' Meeting, Rules of Procedure of the Board, Rules of Procedure of the Supervisory Board, Rules of Work of the President, covering 11 systems for information disclosure, 11 systems for compliance management and 4 systems for investor relations management.

Building ESG Governance System

To actively fulfill its corporate citizenship responsibilities, achieve the balanced development of corporate and society, better practice ESG concepts and strategies and improve the Company's competitiveness in sustainable development, 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.

The Company formulated and implemented the "Rules of the ESG Committee of the Board" and "Management Rules for the ESG Working Group" of Xinjiang Tianshan Cement Co., Ltd., which defines the Company's ESG governance structure and promotes the implementation of its ESG management issues.



Its main duties include:

To review the Company's ESG-related policies and strategies to ensure that they comply with laws, regulations and standards	To assess and sort out the ESG- related risks and opportunities of the Company and make recommendations to the Board	To review the Company's ESG management and internal supervision system and make recommendations to the Board on its appropriateness and effectiveness
To review and supervise the goals and implementation of the Company's ESG-related work, assess the work and make recommendations to the Board	To review the Company's ESG reports disclosed to the public and make recommendations to the Board	To guide the setting of the Company's ESG management vision, objectives and strategies and make recommendations to the Board
To assess the manner in which 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	To regularly assess the adequacy and effectiveness of the Company's ESG structure and make recommendations to the Board (if required)	Other job duties delegated by the Company's Board



ESG Working Group

The ESG Working Group, as the executive team of the Company's ESG work, 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

Its main duties include:

To organize and carry out the ESG work of the Company in accordance with the overall ESG management goals, strategies and guidelines approved by the ESG Committee and formulate relevant systems and processes to be submitted to the ESG Committee for review and approval

To organize, coordinate and supervise the implementation and execution of ESG-related work by all levels of the Company

To review the progress of achieving ESG goals, assist the ESG Committee in reviewing the progress of ESG goals and regularly evaluate the effective operation of the ESG structure of the Company

To coordinate the compilation and review of the annual ESG report and submit it to the ESG Committee for review

To report regularly to the ESG Committee on ESG management (including but not limited to assessment, ranking and management of significant ESG related issues) To communicate with stakeholders on ESG matters and present feedback concerning important ESG matters or the Company's business to the ESG Committee, management or relevant departments, etc.

To execute other ESG-related work as requested by the Board, including but not limited to providing ESG-related training to the Board and ESG Committee, and making recommendations on the criteria for evaluating ESG (including climate change) factors in the process of reviewing and supervising the Company's strategies, key action plans, annual budgets, performance goals, etc.

To supervise and check the implementation of the resolutions of the ESG Committee on ESG matters by the members of each ESG working group

Other duties and responsibilities delegated by the Board or the ESG Committee

II. Compliance System Operation

The Company strictly complied with relevant laws and regulations, reinforced the leading role of the system and improved the governance structure. The Company managed all levels and emphasized the awareness of legal compliance operations to avoid possible risks of violation.

Constructing Three Lines of Defense

The Company has set up a Rule of Law Construction Working Organization and Compliance Management Committee to carry out the construction of central enterprises under the rule of law and compliance management and promote the implementation of the responsibility of the first person responsible for the rule of law construction. The Company has set the review of legal compliance as a mandatory preprocedure and "one vote veto" for violations, and fully implements the Compliance Management Committee function.

The first line of defense

All business departments of the Company and member enterprises. Responsible for risk identification, assessment and control in operation and business process, collecting and reporting risk points and making timely corrections.

Second line of defense

Second line of defense: Legal Compliance Department. Responsible for performing the internal control and compliance functions of the business line through business management, supervision, inspection and organization of correction.

Third line of defense

Third line of defense: Discipline Inspection, Audit and other departments. Responsible for supervision to urge the relevant departments or enterprises to make immediate corrections to the observed problems and conduct strict accountability for those causing losses in accordance with regulations, etc.

Develop Compliance Awareness

The leaders of New Tianshan and its affiliated enterprises take the lead in signing the "Compliance Commitment", showing the role of model and actively practicing the compliance commitment. New Tianshan signed a total of 42,290 copies of the "Compliance Commitment".

The Company has been holding monthly meetings on rule of law construction and conducting special training on compliance to continuously reinforce the compliance awareness of the staff, keep the concept of compliance in mind and develop a corporate culture of compliance with the law. During the reporting period, the Company conducted a total of 31 internal and external training themes on compliance management system construction, experience sharing on major

dispute case management, standardized operation of listed companies, anti-monopoly compliance training, legal risk prevention for directors, supervisors and senior executives in their duties and practical operation of investment and M&A of the Company, etc. In addition, the Company conducted a total of 4,730 compliance training sessions.



Compliance Commitment

Compliance training sessions

42,290

4,730

III. Governance-Integrity System Building

In order to further strengthen the prevention and control of integrity risks, the Company has formulated and improved the "New Tianshan Cement Party System of Responsibility for Integrity Building", "Comments on the Implementation of the Main Responsibility for Integrity Building of the Party by the Discipline Inspection Committee of New Tianshan Cement" and other systems and codes. The Company integrated the Party conduct and integrity construction and anti-corruption work into the business conduct from internal to cooperation with external partners to commit to creating a fair and upright corporate environment.

Supervision Measures

To deeply promote the construction of a healthy New Tianshan system and create a strong atmosphere for anti-corruption and integrity promotion, the Company continued to publicize integrity, regularly conducted warning conferences to raise the awareness of integrity and carried out case warning education at the annual meetings of finance, marketing, production, safety and other business departments to strengthen the focus of integrity education. The Company firmly implemented the pre-appointment integrity talk system to fasten the "first button" of integrity for leaders and strengthen the awareness of integrity. The Company has carried out monthly talks on the construction of the Party conduct and integrity in the monthly operation analysis meeting and got the all the members of the Company involved. The Company has regularly organized anti-corruption meetings. During the reporting period, the Company held 1 meeting of the Party Conduct and Integrity Construction and Anti-Corruption Working Group, 2 meetings of the Party Conduct and Integrity Construction and Anti-Corruption Leading Group to hold the main responsibility and 2 meetings of the Coordination Group of the Party Conduct and Integrity Construction and Anti-Corruption Work to form the "Great Supervision" pattern.



The Company has required its members to sign written documents on the prevention of corruption and misconduct to improve organizational and personal awareness of integrity. The Party Committee of New Tianshan signed the "Responsibility Statement on Party Conduct and Integrity Construction" with 15 regional companies; 5,745 copies of the "Commitment Statement on Integrity and Self-discipline of Leading Executives" were signed at all levels. The Company has innovated to promote the management of responsibility for integrity in key fields and signed "Responsibility Statement for Integrity in Practice" with 9,533 employees in marketing, procurement and finance systems of all levels of enterprises by referring to the contract model.

Case: Pilot work on prevention and control of integrity risk points



In 2022, the Company encouraged regional companies to carry out pilot work on prevention and control of integrity risk points. Zhonglian Tongli carried out the pilot work of integrity risk prevention and control, where Huanghe Tongli identified 304 risk points from 136 positions in 13 departments, formulated 686 prevention and control measures, made 48 suggestions to optimize the process and revised 22 items in the system catalog; CUCC Luoyang identified 406 risk points, sorted out 387 prevention measures and revised 17 items in the system catalog.

Pilot work on prevention and control of integrity risk points of the marketing system of Zhejiang Cement. After six months of pilot work, a total of 99 risk points were identified, including 34 minor risk points, 46 medium risk points and 19 serious risk points. Therefore, the integrity risk control of the marketing system of Zhejiang Cement was implemented to the positions and responsible persons and the overall early warning and control ability was significantly improved, contributing to a fair and honest marketing environment and ensuring high-quality development of the enterprise.

Supplier Integrity Management

New Tianshan firmly believes that the sound and sustainable development of the enterprise cannot be achieved without good cooperative relationships among all parties. We optimized our supply chain management, established a complete supplier assessment and management system to create a fair business environment.

We required parties engaged in business with the Company to sign the "Integrity Commitment Statement", in which the suppliers themselves commit to operate with integrity, regulate their business behavior and prevent corruption. If a supplier violates this commitment, it will be condemned to correction, suspension of business, elimination of business and inclusion in the "blacklist of partners". During the reporting period, the Company signed 27,231 copies of "Integrity Commitment" with its partners, achieving a complete coverage.



We have established strict management process regulations for supplier access, inspection, performance audit and withdrawal management and we kept improving the standardization and transparency of the procurement process. Meanwhile, the supervisory department assists business departments in process supervision of bidding and other processes and endeavors to ensure fairness.

IV. Stakeholder Communication

During the reporting period, based on the development strategy and main business of New Tianshan, the Company has identified and determined the important stakeholders that can reflect the impact of the Company on economy, environment and society through internal and external analysis, daily communication with stakeholders and interviews with each department.

We have further improved the communication channels and modes of communication between the Company and stakeholders. We have also responded

positively to demands that we have gathered via participation in various industry seminars, academic conferences and other large-scale communication activities. In the process, we have also received strong support from the government, market, customers, employees and external partners, providing a strong guarantee for the Company's steady, healthy and rapid development. As the national policy keeps positive, the regional demand gradually revives and the industry pattern is optimized, New Tianshan will welcome a brighter tomorrow with more confidence and determination.

Case Study: The 3rd "Resource Utilization Day" Open Event



From August 26 to September 26, 2022, New Tianshan organized and attended the 3rd CNBMG "Resource Utilization Day", which attracted more than 20 affiliated companies from over 20 cities in 2 countries to participate in the event. The event was themed "Intelligent Manufacturing" and invited representatives of stakeholders to visit intelligent factories and green factories and have a look at high-end equipment, digital intelligent construction, environmental protection and high-tech materials, new age workers, etc. By visiting the modern intelligent cement factory, they could have a better understanding of the cement enterprise and learn about the green development of New Tianshan in the green factory.





Case: Various forms of promoting "the concept of harmonious coexistence between cement industry and nature"



Through "New Cement Story" and "Cloud Tour", New Tianshan told investors the story of harmony between cement industry and nature in a more popular and warm way to change the traditional understanding of high pollution and emission in cement industry. The "Cloud Tour" covered 15 companies and presented the new cement story with pictures, videos, figures and development changes in an objective and realistic context.









Case Study: Employees enjoying the "garden factory" personally



To build an environment-friendly industry, New Tianshan has built garden factories. The Company encouraged employees to take videos on the appearance of the plant, so as to share the Company's strategic determination and practical achievements in implementing the idea of ecological civilization, maintaining the strategic resolution of ecological civilization construction, green development and high-quality development.



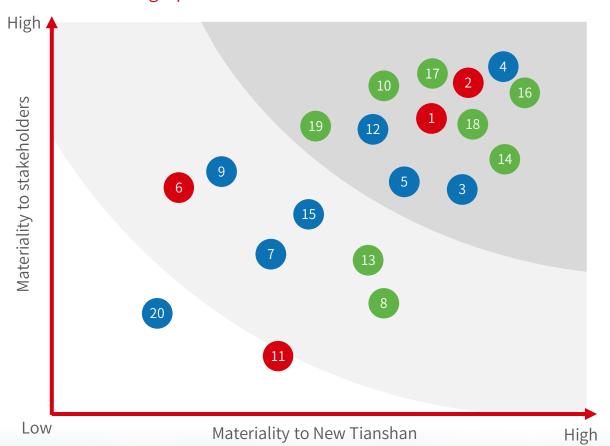
During this reporting period, the main stakeholders and their key issues of concern and communication methods are as follows:

Stakeholder	Focused Topics	Communication Method
Director	Company strategy and planning Articles and important systems of the Company Important organizational restructuring and personnel arrangement Major investment and financing matters Business quality Compliance with the law Quality assurance of products and services	Shareholders' Meeting Board Meeting Board special committee meetings Board Consultation
Company Management	Optimization, upgrading and green transformation of production and operation Company governance and reform innovation Employee occupational safety and health compliance by law Anti-corruption and integrity promotion	Management Meeting Work reporting and communication Governance and integrity training and management, etc.
Employees	Employee occupational health and safety Employee career development and training Labor regulations HR Management	Safety training and practice Career development seminars Support for employees in difficulty Employee representative meetings and seminars, etc.

Stakeholder	Focused Topics	Communication Method	
Government and Regulatory Agencies	Compliance by law Quality assurance of products and services Greenhouse gas emission and management Water use and management Employee occupational health and safety Ecology and natural resource protection	Reporting on work and regular communication with regulators Participation in conferences and major events Environmental information disclosure Publishing compliance reports and accepting supervision	
Shareholders/ Investors	Quality of operations Green transformation Compliance by law Quality assurance of products and services Greenhouse gas emission and management Wastewater drainage and management Solid waste disposal and management Labor regulations Optimization and upgrading	Publication of periodic reports Holding shareholders' meeting, performance presentation analyst presentation, road show Investor group reception day activities Communication channels such as interactive platform, investor hotline, director secretary email	
Customers	Quality assurance of products and services Anti-unfair competition Compliance by law Anti-corruption and integrity promotion	Customer research Customer complaint handling and callback Regular disclosure of corporate information	
Business suppliers/ contractors Compliance by law Anti-corruption and integrity promotion Quality assurance of products and services Supply chain management		Supplier management assessment and communication Contract negotiation and daily meetings Regular disclosure of corporate information	
Green transformation Community/industry associations Green transformation Sustainable development Anti-unfair competition Compliance by law		Industry communication and seminar Regular disclosure of corporate information	
Press	Ecology and natural resources protection Optimization and upgrading Green transformation Quality assurance of products and services Solid waste disposal and management Wastewater drainage and management	Press interviews Press releases and announcements	
Research institutes such as universities/research institutes	Research innovation and investment Quality assurance of products and services Ecology and natural resources protection	Research cooperation and communication Regular disclosure of corporate information	

V. Materiality Assessment

Matrix graph of material ESG issues of New Tianshan



Environmental Issues	Social Issues	Governance Issues
8 Wastewater drainage and management (Green production)	3 Quality assurance of products and services (Excellence in management)	1 Anti-corruption and integrity promotion (Integrity system construction)
10 Ecology and natural resources protection (Ecological protection)	4 Employee occupational health and safety (Occupational health)	2 Compliance by law (Internal control compliance)
13 Solid waste disposal and management (Green production)	5 Labor regulations (Employment standards)	6 Anti-unfair competition (Transformation leadership)
14 Greenhouse gas emission and management (Green production)	7 Employee career development and training (Safety culture)	11 Information security (Compliance system operation)
16 Waste gas emission and management (Green production)	9 Scientific research investment and innovation (Transformation leading)	
17 Energy use and its management (Green production)	12 Supplier Management (Responsible Supply)	
18 Responding to climate change (Responding to climate change)	15 HR management (Employee development)	
19 Water use and management (Green production)	20 Community investment and engagement (Social investment)	





Environment Protection

- Addressing climate change
- Green production
- Ecological Protection
- Low Carbon Culture

Practicing climate and environment protection and promoting green development are crucial to the sustainable development of companies.

New Tianshan adheres to the core philosophy of "making the best use of resources and serving the construction", focuses on the goals of "carbon peaking and carbon neutrality", sticks to the principle of protecting ecological resources and actively promotes low-carbon and green development with energy saving and emission reduction and cooperative disposal as the main guidelines.



I. Addressing climate change

New Tianshan fully understands focuses on the impact of climate change on the environment and human beings. We are committed to minimizing the impact of our business on climate and the environment through systematic governance, comprehensive strategies, proper risk management and more enthusiastic targets control. In accordance with the Task Force on Climate-related Financial Disclosures (TCFD) recommended disclosure framework, we have developed a four-dimensional disclosure framework that includes "Governance," "Strategy," "Risk Management," and "Metrics and Targets" to report on our work and progress.

Governance



31

Addressing climate change is an important part of the Company's ESG work, and the climate change-related management follows the ESG governance framework. The ESG Committee is informed of climate-related issues through reports from the ESG Working Group. In accordance with actual business needs, the ESG Committee will review and participate in the identification and assessment of climate change-related risks and opportunities, and examine and evaluate the progress of annual climate change-related goals. The ESG Working Group is responsible for organizing, coordinating and supervising the management of the Company's climate change-related issues and reporting to the ESG Committee.

As climate change has become widely concerned by all society, New Tianshan is gradually establishing a low-carbon friendly development strategy in accordance with the national 14th Five-Year Plan and the goal of "Carbon Peaking and Carbon Neutrality", taking into account its own business characteristics. In addition, all secondary subsidiaries are required to carry out the corresponding short-, mid- and long-term strategic planning to improve the climate and environment through practical actions.







During this reporting period, New Tianshan conducted an analysis to identify and assess various risks and opportunities related to climate change in order to gain a more comprehensive understanding of the potential risks and opportunities for the Company. A total of six key transformation risks and two physical risks were identified, and the following table shows the specific results of the identification and assessment.

Risk Type	Risk Issues	Potential Impact on the Company				
Transformation Risks						
Policy and Law	Stricter policies and supervision on existing products and services	 Need to invest in technological innovation Corporate business may need to be further directed towards energy efficiency and low carbon attributes to respond to regulatory requirements 				
	Stricter emission and disclosure standards	Need to invest more in technology, thereby increasing operating costs				
	Applying a price on greenhouse gas emissions	Increased government levies related to carbon as a result of climate change, leading to higher operating costs				
Technology	Stricter emission and disclosure standards	 Need to invest more in low carbon environmental technologies Need to invest more in clean energy, circular economy 				
Market	Rising prices of raw materials and energy	 Need to develop alternative material technologies and reduce the extraction and use of raw materials Adjust and optimize energy structure and improve energy risk response capability 				
	Gradually stricter market demands for low carbon and environmental performance of products	 The risk of being replaced for existing products, the need to improve the green product development system and increase the low-carbon and environmental characteristics of products Increase the proportion of green procurement and manage supply chain environmental risks 				
Reputation Risk	Reputation risk due to commercial activities	If the enterprise is listed as a heavily polluting enterprise, or if any environment-related violation is found, the image and reputation risk of the enterprise shall be potentially increased				
Entity Risk						
Acute	Extreme weather such as floods and typhoons	Sharp decrease in sales and increase in operating costs due to suspension of downstream construction operations caused by extreme weather, and the need to prepare extreme weather response plans in advance				
Chronic	Increasingly high temperature and frigid weather	 Potential safety problem in employee working environment, the need to invest more in employee health and safety Declining stability of energy supply, the need to adjust and optimize the energy supply channel 				

At the same time, the Company identifies the following opportunities in terms of resource use efficiency, products and services:

Opportunity Type	Opportunity Issues	Potential Impact on the Company
Resource Utilization Efficiency	More efficient production and distribution processes	 Optimization of production processes and technology to improve production capacity and efficiency Increased investment in response to changing market trends
	More efficient transportation methods	Reduce operating costs by adopting more efficient transportation methods
	Use green recycling technologies	 Reduce the impact of operations and production on the environment Improve resource use efficiency while reducing costs
	Reduce water consumption	 Reduce the pressure on water access for production and operations Reduce operating costs
Products and Services	Develop/expand low-emission goods and services	 Create a first-mover advantage in the industry and improve the company's reputation and social image Provide low-carbon products or services to the market, respond to market demand, enhance corporate competitiveness and increase revenue

During this reporting period, the Company carried out identification and assessment of corresponding risks and opportunities of climate change, and listed the related climate risk response measures:

Keep a close eye on the latest relevant laws and regulations, regulatory requirements and climate targets of China and the places of operation and formulate corresponding plans and measures in response to the newly introduced or latest requirements.

Actively promote the construction of green factories, green mines and ecological parks and increase investment in the R&D, promotion and application of environment protection technologies.

Increase the utilization of renewable energy sources such as hydropower, wind power and photovoltaic.

Improve the energy efficiency of enterprise production via improving production processes, increasing equipment efficiency and using energy-efficient equipment.

Develop emergency response plans for extreme weather to respond to potential extreme weather events caused by climate change and reduce production disruptions and losses.

Closely observe the carbon trading situation, trading mechanism and carbon price in the cement industry to enhance carbon sink capacity and achieve income and efficiency gains from carbon trading.

Improve employees' awareness of climate risk management via employee training to prevent risk from happening at the employee level.

In 2022, the Company formulated and released the "14th Five-Year Carbon Peaking and Carbon Neutrality Plan", focusing on the three major directions of energy transformation, product innovation and carbon sequestration technology, and proposed to achieve the overall goal of reducing the average unit clinker CO₂ emissions by 6.24% by 2025 compared with 2021. Specific planning objectives and implementation measures are as follows:

Metrics and Targets

Energy Transition

Actively promote fuel substitution and build a number of projects for garbage generated fuels, biomass fuels, waste tires, etc. Large-scale utilization of new energy technologies, including photovoltaic, wind power and energy storage, as well as improving energy management and energy efficiency and piloting the construction of "zero electricity purchase" factories and "zero carbon" mines to lead the industry's low-carbon transformation.

Product Innovation

Strongly promote raw material substitution, accelerate the research and application of low-carbon clinker technology, and apply innovative processes and low-carbon materials to fuel the cement low-carbon industry development.

Carbon Sequestration Technology

Carry out carbon dioxide capture, utilization and storage projects step by step, and continue to implement CUCC Qingzhou's 200,000 tons per year of carbon capture by oxyfuel combustion pilot project to gather experience for promotion and imitation. Actively pilot the construction of green mines and green factories and enhance the carbon sequestration capacity of enterprises in grass and forest.





Environment Protection Health and Safety Quality Refinement Employee Development

Green Development Commitment

Aim to achieve the following carbon emission intensity by 2025:

Average unit clinker CO₂ emissions to

815_{kg}



Average ton of cement CO₂ emissions of

reducing by

from 2021



Carbon dioxide emissions of 10,000 yuan output amount decreased by



6.24%

By 2025, achieve the following goals of energy efficiency improvement and energysaving technology reform:

Comprehensive energy consumption per unit of output value decreased by



The proportion of cement clinker production capacity that reaches the energy efficiency benchmark level exceeds



21.52% from 2021

40%

By 2025, achieve the following in the construction and operation of demonstration projects:



"Zero power purchase" factories

"zero carbon" mines





Carbon capture projects.

Green mines meet the 100% standard.

In accordance with the goal plan, New Tianshan will gradually achieve the goals of the 14th Five-Year Plan to address climate change. During the reporting period, :CO₂ emissions per

unit of clinker were $825\,$ kg, decreased by $1.78\%\,$ from 2021; total CO $_2$

emissions were decreased by 13% from 2021.



II. Green production

New Tianshan strictly complied with the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on Conserving Energy, the Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution, the Law of the People's Republic of China on Prevention and Control of Water Pollution, the Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste, and other environment protection laws, regulations and local

management requirements. The Company actively responded to the "Comments on Complete and Accurate Implementation of the New Development Concept to Achieve Carbon Peaking and Carbon Neutrality", "Implementation Plan of Carbon Peaking in the Building Materials Industry" and other relevant policy guidance and carefully followed industry and local standards and requirements such as "Emission Standards for Air Pollutants in Cement Industry".

In terms of top-level design

the Company has crafted the layout and prepared the "Green Low-carbon Development Plan", which is incorporated into the Company's "14th Five-Year Plan" to promote the work in the field of ecological and environmental protection in the "14th Five-Year Plan".

In terms of management system

we have set up a leading group for ecological and environmental protection, improved the professional management system for ecological and environmental protection, set up independent safety and environmental protection management organizations in 415 member enterprises, established an environmental protection committee consisting of 37 experts and compiled and issued 12 ecological and environmental protection management systems. By the end of 2022, a total of 445 plants had acquired ISO 140001 environmental management system certification to manage the environment in accordance with international standards.

For daily management, we required that:

Regional companies to continuously improve the construction of ecoenvironmental protection system and strictly implement it and to add energy conservation, emission reduction and eco-environmental protection indicators to the production and operation goal responsibility statements of regional companies, which would be assessed and implemented to member enterprises at all levels.

Each subsidiary to sign an energy conservation and emission reduction goal responsibility statement with the local government, compact the main responsibility of energy conservation and emission reduction and improve environmental protection, potential hazard inspection and daily management.

Each regional company to formulate and record the emergency plan for ecological and environmental emergencies in accordance with its actual situation, carry out emergency drills for environmental emergencies simultaneously and improve the environmental emergency disposal capability.

Low carbon transformation development

New Tianshan accelerated the green and low-carbon transformation around the two action areas of carbon reduction and carbon sequestration. In terms of carbon reduction, the Company actively conducted the substitution of raw combustion materials, continuously improved the efficiency of energy use, expanded the application of renewable energy and committed to promoting the green and low-carbon development of cement business. In terms of carbon sequestration, the Company continued to implement carbon capture demonstration projects to gather experience for replication. We also actively piloted the construction of green mines to improve the Company's carbon sequestration capacity in grass and forest.



Case: Zhejiang Cement actively builds a "carbon neutral model forest"



Fujian Sanming South Cement Co., Ltd, a subsidiary company of Zhejiang Cement, signed a cooperation agreement with Qingliu County Forestry Fund Station in Sanming, Fujian to build a carbon neutral model forest, with a construction area of 278 mu and an investment mode of buying out the carbon sink for 25 years to establish a "carbon neutral model forest", which could reduce CO_2 emission by 220 tons per year through the construction of the model forest and greatly enhance the social benefits of the enterprise.







I. Development of alternative raw materials

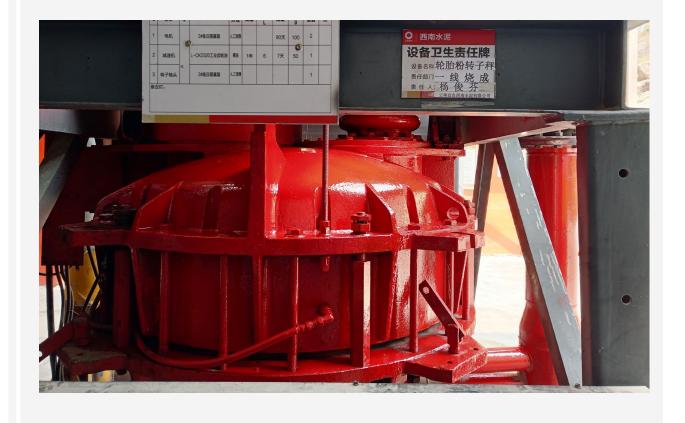
We believe that alternative raw fuel is a very costeffective means of carbon reduction for cement production. During this reporting period, we utilized 4.21 million tons of alternative raw materials and 107.1 thousand tons of standard coal as alternative fuel, which can reduce 2.03 million tons of carbon dioxide. Among them, we utilized calcium carbide slag to replace silicate raw materials to produce 2.36 million tons of cement clinker, reducing CO₂ emissions by 1.04 million tons. With the favorable policy of waste utilization in China, the relatively continuous and stable supply and the improving implementation of waste classification, providing strong support for alternative raw fuel sources, we expect that alternative materials will be used on a larger scale in the future to promote CO₂ emission reduction.

Case: Yunnan Cement alternative fuel carbon reduction project



Fumin Jinrui and Yiliang Southwest, subordinate enterprises of Yunnan Cement, launched a pilot project of alternative fuel combustion in Yunnan. After long-term market research, they purchased cleaner waste tire powder with higher combustion value and mixed it with coal to make alternative fuel for the kiln tail preheater decomposer for trial.

At the beginning of the project, the tire powder was successfully used to replace 9,523 tons of raw coal consumption in both regions, reducing CO_2 emissions by 20,100 tons and converted carbon emission reduction revenue of more than 1 million RMB. As an excellent alternative fuel carbon reduction case, this project has now been promoted at the Company level and the mixing ratio will be gradually increased in the future.



II. Improving Energy Use Efficiency

We valued the energy consumption management of production lines. During the reporting period, we have achieved the goals for 52 clinker lines and 90 cement mills. At the same time, we made efforts to improve the energy efficiency of each energy-consuming step, explored the potential of energy saving and carbon emission reduction, implemented kiln system optimization, grate cooler renovation and fan energy-saving technical reform, etc., which were expected to

save 393 million kWh of electricity, 112.6 thousand tons of standard coal and 0.304 million tons of carbon dioxide per year. In 2022, the integrated energy consumption per unit product of clinker reached 107.49 kg of standard coal, decreased by 1.9 kg of standard coal from last year, and the integrated electricity consumption per unit product of clinker reached 51.76 kWh, decreased by 2.2 kWh.

Case: CUCC vertical mill final grinding project



In 2022, CUCC South Shandong, a subsidiary of CUCC adopted the first external circulation cement vertical mill final grinding system in China, with remarkable energy saving and carbon reduction benefits. Compared with the traditional internal circulation vertical mill, the new equipment system has improved technical performance, is well adapted to materials and is easy to realize intelligent control to achieve higher grinding efficiency and reduce the consumption of wearresistant materials and significantly lower the power consumption of material conveying, which in turn improves the energy efficiency of the grinding process. Compared with the cement tube mill system, the cement vertical mill system can achieve energy saving of 14.88 kWh per ton of P.O42.5R cement product produced, while reducing CO₂ emissions by 14.83 kg. By the end of December 2022, the project has reduced the cumulative CO₂ emissions by more than 55.4 thousand tons.

per ton of P.O42.5R cement product produced

achieve energy saving of

14.88_{kWh}

Reducing CO₂ emissions by

14.83_{kg}

III. Expanding Renewable Energy Applications

We fully understand the importance of low-carbon energy transformation to industrial production and actively lay out renewable energy power generation projects. During the reporting period, we completed the installation of 20.79 MW of photovoltaic power generation, which generated 18.34 million kWh and reduce CO_2 emissions by 12.9 thousand tons, and

completed the bidding for 14 photovoltaic power generation projects with a total installed capacity of 71.33 MW. We actively promoted the development of low-carbon transformation in all steps of production and transportation and explored opportunities for expanding renewable energy applications in various fields.

Case: CUCC Anyang green tram project



Relying on its rich mineral resources, CUCC Anyang owns mine reserves of 545 million tons and built the largest construction aggregate production base in northern Henan, with more than 2,400 vehicles of ore transported per day. In order to effectively solve the pollution of heavy diesel exhaust emission, CUCC Anyang focused on promoting the green adjustment of transportation structure and gradually replacing the Company's internal diesel vehicles with clean new energy vehicles. In 2022, a total of more than 210 new energy vehicles were adopted, saving about 4,300 tons of fuel annually and making the Company's due contribution to the realization of carbon peak and carbon neutrality.





IV. Promoting the Layout of Carbon Capture Projects

We are well aware of the difficulty and high cost of carbon emission reduction in the cement industry as a hard-to-abate industry. We accelerated to pursue the carbon capture, utilization and storage technology in cement kilns, reinforced the cooperation with the chemical utilization, geological utilization and biological utilization industry chain and aimed to build several benchmark projects to lead the low-carbon sustainable development of the industry.

Case 1: CUCC carbon capture and purification project



The 0.2 million tons per year CO_2 capture and purification green emission reduction model project of Qingzhou Zhonglian Cement, a subsidiary of Zhonglian Cement, was being submitted for review of preliminary design and is expected to officially start construction in June 2023. After the project is completed, it would recycle and produce 0.1 million tons of industrial-grade CO_2 , 95 thousand tons of food-grade CO_2 and 0.5 tons of ready-to-use dry ice per year, which will strongly promote the low-carbon development of cement industry.





It was worth mentioning that the project adopted the most advanced production process known to date, adopting simultaneous oxygen-enriched combustion at the kiln head and kiln tail in the clinker calcination section, which effectively enhanced the combustion speed of pulverized coal, improved the sintering quality of clinker and increased the heat exchange efficiency, thus achieving energy saving and consumption reduction in the production process. It was estimated that after the completion of the technical transformation of the system, the energy consumption per unit ${\rm CO_2}$ product would be reduced by more than 25% compared to the chemical absorption method.

Case: Zhonglian Tongli cement kiln carbon capture project



In November 2022, CUCC Jiyuan completed the construction of the cement kiln carbon capture project, which took metallurgical solid waste steel slag powder and CO_2 from the flue gas of cement kiln tail as the main raw materials and carried out gas-solid reaction in the carbon capture device by adding a small amount of special catalyst, which could produce 0.3 million tons of carbon capture steel slag per year and directly reduce 16 thousand tons of CO_2 . Carbon capture steel slag can be used as low-carbon cement and concrete admixture to reduce the cost of raw material production.

This project was the first project in China to realize the practical industrial application of carbon capture and the first industrialized production line in the world to use steel slag for carbon capture, which contributed to CUCC Jiyuan's carbon emission reduction goals and carbon trading., accelerated the green transformation of the enterprise with good environmental and social benefits.





Case: Zhonglian Tongli green and intelligent cement grinding production line put into operation



In August 2022, CUCC Baoding Co.,Ltd., a subsidiary of Zhonglian Tongli, officially put the green and intelligent cement grinding production line into operation. The project integrates advanced technologies such as green environment protection, solid waste utilization, energy saving, emission reduction and intelligent production, with all indicators at the leading level in China. After operation, it can handle 0.4 million tons of urban solid wastes and industrial waste slags.







Resource and Environment Management

We valued resource conservation and recycling, and formulated reasonable countermeasures and measures for the sustainable use of resources based on the actual situation to realize the recycling of water resources and solid waste and protect the environment around the production line while developing resources properly.

recycled water rate reached 92.45%; the wastewater reuse rate reached 100%

I. Water Resources Management

New Tianshan strongly promoted the recycling of water resource, adopted and optimized the treatment process of wastewater system on a large scale to reduce the direct drainage of wastewater and reused the recycled wastewater for production to achieve "zero drainage" of production water and efficient recycling of water resources. At the same time, the Company built rainwater collection systems such as reservoirs to efficiently utilize natural resources while

protecting the ecological environment and reducing the risk of flooding. During the reporting period, the Company's cement enterprises improved their water extraction compliance and the recycled water rate reached 92.45%; the business mixing enterprises enhanced the construction of interception and drainage facilities within their factories and the wastewater reuse rate reached 100%.

Case: Yunnan Cement rainwater collection and recycling pond project



The rainfall in Yunnan is seasonal, and there is usually a big difference in the amount of water between rainy season and dry season. In order to solve the problem of unabundant surface water during the dry season, Yunnan Xingjian Cement, a subsidiary of Yunnan Cement, invested in the construction of a rainwater collection and recycling pond with a reservoir area of 8,860 square meters and an area of 24,000 square meters, which was estimated to store 15,000 cubic meters of water to meet the demand for recycled water and green water for part of the production system, while relieving the load of the water supply network, protecting the natural ecological environment, reducing water waste and reducing the risk of rainwater flooding during the rainy season. After the reservoir was put into use, it was expected to recycle about 45,000 cubic meters of seasonal rainwater each year, which could save water resources costs nearly 35 thousand



Environment Protection Health and Safety Quality Refinement Employee Development

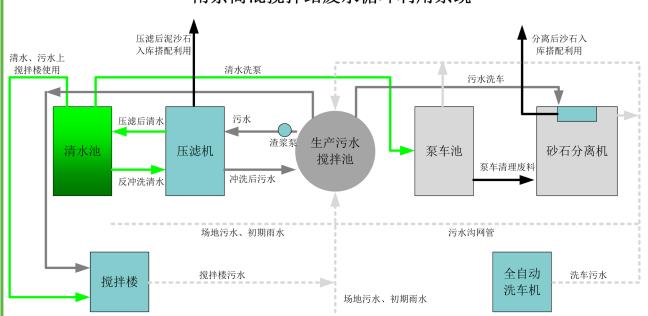
Case: Huadong Material enhanced recycling of rainwater and sewage and waste treatment and recycling system



CUCC Concrete Nanjing, a subsidiary of Huadong Material, installed the rainwater collection and reuse system, where rainwater entered the integrated treatment pond through the lifting pump, and the rainwater was purified and then flowed into the production line as production water for recycling. The suspended matter in the rainwater was treated and transformed into mud cake for recycling, making efficient use of natural water

resources. It also has installed a full set of waste treatment and recycling system in each site, including sand and gravel separator, slurry water filter press and other related facilities, which effectively reduced the production of waste in the mixing station and subsidized the existing waste, realized the reuse of production sewage and waste, truly achieved zero discharge and reduced production costs.

南京商混搅拌站废水循环利用系统



Wastewater recycling system diagram

Case: South Cement factory recycled water with "zero drainage"



Sinoma Anhui, a subsidiary of South Cement, invested about 5 million RMB to install 64 sets of high-pressure electrostatic water processors in three circulating pools (power generation 1# circulating pool, power generation 2# circulating pool and clinker production line circulating pool) to regularly drain the water in the power generation circulating pool and remove sludge and debris in the water. The production sewage entered the clinker circulating pool after the system treatment and could be re-entered into the production line

circulating water system as production water, which saved 0.8 million yuan in annual water treatment costs and achieved the goal of "zero drainage" of circulating water in the plant.





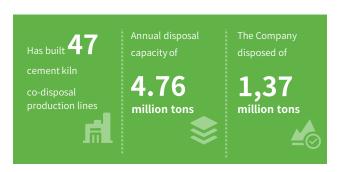


II. Solid Waste Management

New Tianshan valued the recycling of waste resources in cement production and carried out the work of waste classification, separation and recycling to reduce the waste of resources while protecting the soil environment around the production line and achieving efficient production. the Company

The Company adhered to the principle of "transformation of cement enterprises into urban solid waste purifiers" and actively adopted cement kilns to co-dispose of domestic waste, solid waste and hazardous waste. The co-disposal project closely integrated cement production and waste treatment, utilizing the heat energy generated from incineration of solid waste for cement production and the "residue" after incineration as auxiliary raw materials for cement production, achieving zero emission treatment of solid waste while saving social resources.

The Company solved the problem of industrial and municipal waste reuse and disposal based on the technological progress of solid waste elimination and resource recycling. It actively carries out cement kiln codisposal of waste and has built 47 cement kiln codisposal production lines with an annual disposal capacity of 4.76 million tons. During the reporting period, the Company disposed of 1.37 million tons of hazardous solid waste via rotary kiln co-disposal.



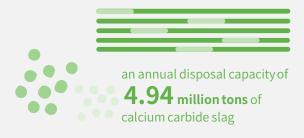


Midong Tianshan calcium carbide slag production line

Xinjiang Tianshan Cement Co., Ltd.

made full use of the environmental management capacity of the calcium carbide slag clinker production line and contributed prominently to local environmental protection in terms of haze control, energy saving and waste elimination. The Company had 5 calcium carbide slag clinker production lines, with an annual disposal capacity of 4.94 million tons of calcium carbide slag. 2.75 million tons of calcium carbide slag were consumed in 2022 and a total of 37.68 million tons of calcium carbide slag were consumed since its completion.

The Company had **5** calcium carbide slag clinker production lines



Efficient waste concrete recycling by Sanshi Material

Sanshi Material reused the waste concrete and waste slurry generated during the production process into the production of commercial concrete through environmental protection equipment and facilities such as waste concrete crushing system, sand and gravel separation and sewage recycling system, ensuring 100% recycling of resources.



CUCC Nanyang

promoted the use of industrial solid waste to replace traditional mineral raw materials: With quality assurance, CUCC Nanyang adopted steel plant waste slag and steel slag for batching in raw material preparation and power plant fly ash and desulfurization gypsum for batching in cement making. The industrial solid wastes is scientifically and reasonably reused and the environmental pollution problem is effectively solved, realizing the recycling of natural resources - industrial products - renewable resources.

Clean and Pollution Reduction Production

The Company focused on pollution emission management, independently developed and introduced advanced green environmental protection processes, which greatly reduced pollution emissions. During the reporting period, the Company signed the Energy Conservation and Eco-environmental Protection Goal Responsibility Statement with each regional company, specifying the target of reducing NOx, SO_2 and particle emissions per unit product by 5%, 3% and 2% respectively in 2022 compared with the previous year.



According to the ultra-low emission standards and implementation progress requirements of various regions, the Company has accelerated the ultra-low emission transformation of cement enterprises and implemented the upgrading and renovation of environmental protection facilities represented by SCR, denitrification tubes, wet desulfurization and other technical routes. In addition, 26 enterprises in Zhejiang, such as Shangya South and Zhuge South, have completed the first stage of on-site acceptance of ultra-low emission. The Company formulated and implemented the Xinjiang Tianshan Cement Co., Ltd. "20th Party Congress" and Other Key Periods of Atmospheric Pollution Control Work Plan to ensure the pollution prevention and control work in key areas and key enterprises in key periods.

Through measures such as ultra-low emission transformation, control of sulfur content of raw combustion materials and upgrading of existing dust collection equipment, ton of clinker NOx, SO_2 and particle emissions decreased by 20.14%, 20.79% and 20.06% year-on-year respectively by the end of the reporting period.

The end of the reporting

20.14%

20.79%

20.06%

Particle emissions

Pollutant Emission Management Measures

Ultra-low emission and emission reduction technology:

Implementation of emission reduction technology transformation for new dry process cement clinker line to reduce NOx and ammonia fugitive emission concentration.

Dust collection bag expansion and transformation:

Implementation of dust collection bag expansion and transformation, optimization of production lines and substantial reduction of enterprise particles emissions.

Denitrification transformation:

Application of reliable denitrification technology to convert polluting waste gas into harmless gas and reduce waste gas emissions.



Desulfurization transformation:

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

Case: Zhejiang Cement deep denitrification ultra-low emission project



To follow the idea of ecological civilization and the concept of green development, Zhejiang Cement actively explored a new scheme of deep denitrification ultra-low emission in cement industry. From 2020, Zhejiang Cement took the lead in testing a high-efficiency denitrification pipeline furnace project in its subsidiary enterprise Jiangshan South, which successfully achieved the expected target of NOx emission concentration less than 50mg/m³, while the ammonia spraying volume is less than 3kg/t clinker, and ammonia escape is significantly lower than the standard requirement, and this project can reduce NOx emission by 400 tons per year. Compared with the SCR technology solution commonly chosen by the industry, this project shifted denitrification from back-end treatment to front-end control, which was based on the principle of system process, to achieve ultra-low NOx emission reduction in the process of cement calcination through in-system reduction and in-system purification.



Case: South Cement's Green Factory promoted high-quality development



Suzhou Tianshan, a subsidiary of South Cement, has been adhering to the sustainable development path of "green, low-carbon, recycling and development", actively implementing the green plant feasibility program, creating a management system, making raw materials harmless, making energy low-carbon, making production clean, etc. to boost the building of green factory and promote sustainable development.

In terms of management system creation

Suzhou Tianshan has created and ran the three-inone management system, energy management system, and certification of the limit of toxic and hazardous substances in cement, etc. Based on the system standard, Suzhou Tianshan has continuously improved itself and the industry standard.

In terms of harmless raw materials

it adopted industrial waste as mixed materials, turning waste into treasure and saving resources and alleviated the problems of environmental pollution and land occupation. It adopted recyclable and recycled materials, which was in line with the circular economy model.

In terms of energy low-carbonization

it implemented technical improvement projects such as energy-saving renovation of the fan of cement grinding system to improve energy consumption efficiency. The electricity consumption reached the national level energy consumption standard and was at the leading level in the industry. The "Air Pressure Online" intelligent control cloud application system was built and the energy conservation and emission reduction solutions were timely determined through operation and power consumption analysis.

In 2022, Suzhou Tianshan achieved 100% comprehensive utilization rate of solid wastes, and 3.09 kg of standard coal/ton of comprehensive energy consumption of products, achieving remarkable progress in energy saving and consumption reduction and clean production technology innovation and application. The Company was evaluated as a four-star cloud enterprise and pilot enterprise of provincial integration of the two standards in 2022. It was also awarded the title of "Green Factory of Jiangsu Province".



III. Ecological Protection

New Tianshan adhered to the value order of "environment, safety, quality, technology and cost", focused on ecological protection, abided by the ecological red line, strictly implemented ecological and environmental protection measures in all aspects of production and operation, reasonably exploited and focused on restoration work to reduce the potential impact of the Company's business on the environment, and strive to achieve green operation.

The Company has formulated the "New Tianshan Cement Eco-environmental Protection Accident Management System" to assess and hold accountable those responsible for ecological and environmental penalties of member enterprises and conduct

interviews and reminder conversations with the leaders in charge of regional companies and the main persons in charge of enterprises that have repeatedly incurred ecological and environmental administrative penalties to raise the awareness of safety and environmental protection responsibilities of all employees. The Company regularly visited the families of front-line employees to show their daily work to their families and communicate with them in depth, giving full play to the safety supervision, reminding and spurring role of families and relatives and calling on employees to strengthen their awareness of red lines, keep a clear head, standardize operations and build a firm line of defense for ecological protection.

The Company required all subsidiaries to strictly follow the requirements of relevant green mine construction documents and compile "one enterprise with one policy and one mine with one plan" for green mines or ecological restoration plans, which enabled enterprises and mine contractors to clearly define their responsibilities and actively cooperate to carry out ecological protection work. All levels enterprises of New Tianshan strictly followed the requirements of "controlling and restoring while mining", set up the relevant biodiversity impact assessment in accordance with the requirements of laws and regulations, tried to fix the relevant ecological problems, prevented geological disasters, restored the original appearance of the mine, ensured the biodiversity of the area and realized the sustainable development and utilization of the mine. During the reporting period, the Company approved 28 green mine construction and ecological restoration projects with an investment of 75.57 million RMB. The ecological restoration area increased by 2,976,300 square meters compared with last year.



The Company also focused on greening the surrounding areas of the mines and the park, planting trees over a large area to fully green the open space in the park, which improved the environment while actively enhanced the carbon sequestration capacity of the Company's grass and forest.

While strongly promoting the construction and operation of green mines, the Company also paid attention to the intelligent, standardized and regulated management of mines. For details, please refer to Chapter IV Quality Excellence, Section II of Transformation Leadership of the Report.

2022

2

15

. 3

38

accumulativel

provincial green m

Case: Comprehensive construction of Zhejiang Cement green mine



Zhejiang Cement actively promoted the construction of green mines, through the development of mine remediation and upgrading plans, urged the relevant departments to strictly implement the progress according to the plan and formed a brief report on the progress to the responsible person to achieve the whole process of green mine construction management tracking. It currently has 7 limestone mines in mining, including 5 national green mines and 2 provincial green mine. In 2022, 41.85 million RMB was invested in the construction of green mines and all mines passed the green mine look-backinspection



By the end of 2022, the restoration and treatment area of the mines owned by Zhejiang Cement was about 350,000 m². The platform was planted with heather, acacia and ginkgo plants, and the slopes were re-greened by hanging net spraying grass seed shrubs, etc. The limestone mines were planted with 180,400 m² and the slopes were sprayed with 124,070 m²; the sand shale mines were planted with 2,700 m² and the slopes were sprayed with 38,600 m².

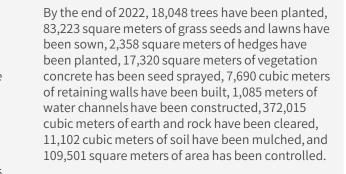




Case: Zhonglian Tongli Dushan Mine national green mine



Adhering to the concept of "green water and mountain are treasures", Zhonglian Tongli Yulong Tongli Dushan Mine launched the construction of national green mine since July 2018. It held the principle of "controllingwhile mining" to ensure the close integration of resource development and environmental protection and carried out mine restoration projects involving side slope clearing, earthwork, interception and drainage, retaining wall, planting and reforestation, ecological greening and maintenance works, mine road works and pit water management works, etc.



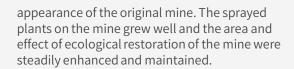




Case: Mine ecological restoration project in Southwest Cement mines



CUCC An County, a subsidiary of Southwest Cement, introduced guest soil seed spraying method and carried out ecological restoration of about 40,000 m² of permanent side slope of the mine, which thoroughly improved the overall







Case: Huanan Material comprehensive ecological management and renovation



Linli South New Material, a subsidiary of Huanan Material, cooperated with Chinese Academy of Sciences, building integrated base of production, study, and research to further explore ecological restoration of mine resources and deep processing of limestone and introduced advanced technology in ecological restoration, recycling and reusing 500 tons of waste materials every day to achieve zero pollution and zero emission. The whole park featured a dust suppression system with intelligent induction monitoring, which could real-time

monitor the air quality 24 hours a day and cooperate with the production line to automatically suppress dust by spraying. As a result, the emission of PM2.5 was controlled under the national standard. The Company firmly adhered to the principle of restoring while mining and has restored an area of 103,000m² with a restoration rate of 100% since its operation. The park has also been renovated in a garden style while retaining its original natural ecology.



Case: Zhonglian Tongli mine ecological control



Since 2019, CUCC Jiyuan, a subsidiary of Zhonglian Tongli, has been focusing on green mining on one hand and mine restoration and treatment on the other, combining the seedlings of drought-tolerant trees, shrubs and groundcovers with planting trough technology for restoration and treatment in the form of high-density agglomerate spraying, with more than 80% of the vegetation taking root and becoming green in the year of sowing, eliminating the hidden danger of geological disasters, making good use of the regional land use function, and putting "ecological green" on the mine again. With the successful completion of the first and second phases of the restoration and management project, Zhaozhuang Mine got a new look. A picture of the harmonious coexistence of man and nature drew like: acacia, cypress, white pine and other plants were swaying in the spring breeze and many wild animals such as rabbits, pheasants and badgers made this place their home.

With the in-depth promotion of the third phase of the project, the Company solidly mended the shorts of the ecological chain around the mine. Zhaozhuang Mine would have greener mountains and greener water. The effect of improving the ecological function of the whole area has become more and more prominent. It has played a leading role in the local ecological governance of Jiyuan.







IV. Low Carbon Culture

New Tianshan integrated low-carbon concept into daily management and continuously promoted green operation. The Company organized the staff to carry out activities such as tree planting, ecological and environmental protection propaganda to create a good ecological and environmental culture at all levels of the enterprise.



Case: Jiangxi Cement daily green low-carbon propaganda



On August, 2022, Nancheng South, a member enterprise of Jiangxi Cement, successfully held the 3rd "Best Use of Resources Day" with the theme of "Smart Manufacturing" and "Green Environment Protection", in which interpreters introduced the production process, intelligent construction and extension of cement industry chain to the guests, aiming to raise the public awareness of cement enterprises and enhance the popularization of science in the field of materials. It reinforced the enterprise's social responsibility, the employees' sense of identity and belonging and better spread the good image of intelligent upgrading, green environment protection, safety and health, openness and tolerance.







Case: "6.5 World Environment Day" publicity campaign



Old Town Southwest, a subsidiary of Yunnan Cement, together with Lijiang Environmental Protection Bureau, organized the "6.5 World Environment Day" publicity campaign and jointly carried out environmental education activities in various forms such as hiring external expert lecturers, theoretical knowledge learning and distributing publicity and learning manuals to improve employees' environmental awareness and ability.

CUCC Chuzhou, a subsidiary of South Cement, together with the local Ecological and Environmental Bureau, successfully hosted the "6.5" Environment Day and Environmental Protection Publicity Week in Chuzhou City, where environmental protection workers popularized ecological and environmental protection knowledge to the public, raised public awareness and guided the community to fulfill their environmental protection responsibilities.





Case: Zhongnan Cement daily green low-carbon publicity



Shaoyang South, a subsidiary of Zhongnan Cement, paid attention to daily publicity and set up slogans, publicity boards and other eye-catchingsigns in the factory to subconsciously raise employees' awareness of environmental protection.





Case: Green concept first in Southwest Cement



Sichuan Desheng Cement, a subsidiary of Southwest Cement, advocated harmonious coexistence with nature. It kept the concept of green development first and regarded low carbon and environmental protection as the fundamental content of high quality development. Through the bulletin board and multimedia platform, it vigorously advocated the practice of high-performance, zero-pollution work philosophy and simple and moderate, green and low-carbon lifestyle. It became a practitioner and disseminator of green development consciously.

After several years of training and practice, the employees have formed a consensus that green is the "lifeline" for sustainable development, the "happiness line" for the long-term interests of employees and the "ecological line" for fulfilling the social responsibility of central enterprises. Only by resolutely following the road of green development can the enterprise's foundation be kept evergreen and the enterprise be driven to grow steadily and far.









57 新疆天山水泥股份有限公司 58



Health and Safety

- Safety System
- Safety Actions
- Occupational Health
- Safety Culture

The safety and health of employees is the cornerstone of sustainable development of New Tianshan, the Company conscientiously implements the important decisions and deployments of the Party Central Committee and the State Council on production safety, fully comprehends the main idea of the Group's work conference, adheres to the "2253" management idea, establishes a long-term and orderly production safety system, and safeguards the construction of a world-class cement enterprise.

Management Idea

"Two first"

Pursuing the value concept of "people first and life first"

"Two can"

Believing in the management orientation of "all accidents can be prevented and all accidents can be avoided"

"Five priorities"

Highlighting the five priorities of "responsibility implementation, system perfection, awareness enhancement, strict regulation, and safety leadership strengthening"

"Three major changes"

Realizing the three major changes of "perfect organization, smooth system and safety and stability" for safety management

Safety management goals

work-related fatalities

new cases of occupational diseases

≤0.8/1,000 Serious injury

rate

During the Reporting Period, with the efforts of all employees, the Company has achieved 0 new cases of occupational diseases and 0.06% of minor and serious injuries rate. Our company attaches great significance to production safety management and has invested 0.8 billion yuan in production safety during the reporting period.

I. Safety System

Institutional system enhancement and organizational framework perfection

Our company continues to perfect and optimize the production safety management of manufacturers, strictly complies with the requirements of relevant national, provincial, municipal and group related laws and regulations, such as Work Safety Law of the People's Republic of China, and develops the basic internal management system such as Production Safety Responsibility System and Production Safety Management Regulations for Engineering Projects in conjunction with the actual operation situations, which clarify the basic principles of production safety, organizational framework, division of responsibilities, management requirements, investigation and treatment, crisis and emergency disposal, and accountability and punishment for incidents, etc., and puts forward detailed provisions on enterprise production safety management and engineering project production safety management.

The Company issued "List of Safety and Environmental Protection Management Systems of Regional Companies and Member Enterprises under Xinjiang Tianshan Cement Co., Ltd." to guide enterprises at all levels to optimize safety management systems respectively. By listening to the opinions of all employees and collecting and organizing specific suggestions, the Company compiled "20 Regulations of Zero Tolerance for Safety Behavior of Xinjiang Tianshan Cement Co., Ltd." to regulate the daily work behavior of employees and promoted the enterprise's implementation of the regulations. During the Reporting Period, our company issued and implemented 17 safety production management regulations to perfect the Company's production safety management system.

Through the safety management mode of "introductions of new perspectives and new requirements, and promotions of new changes and new enhancement", the Company optimized the innovative safety inspection process, established the Company safety management committee and a set of overall unified and effective three-level control and management organization system, namely "company headquarters + regional companies + member enterprises", i.e. "supervision and random inspection" at the level of headquarters, "patrol inspection and mutual inspection" at the level of regional companies, and "review and self-inspection" at the level of member enterprises, and clearly assigned responsibility for safety and environmental protection management to enterprises at all levels, providing a powerful guarantee for the production safety and stability of enterprises. During the Reporting Period, the Company established 415 safety management organizations in accordance with the principle of "establishing as many as possible", with 1419 professional safety managers and 61 safety experts.



Overall deliberate planning, high-level decisions and deployments

The Company always adheres to the policy of "safety first, prevention oriented and comprehensive management" and the companies at all levels conduct high-level deployments and conscientiously implement decisions. In terms of decision-making and supervision of production safety, the Company has established the working mechanism of Party Committee for studying major issues of production safety, listened to safety reports regularly and organized relevant monographic study meetings. Meanwhile, the Company held regular monthly meetings to enhance the supervision and guidance function of the headquarters. In terms of the

implementation of safety, the Company held annual production safety meetings, issued documents such as "Activity Program for Production Safety Centralized Rectification Month of Xinjiang Tianshan Cement Co., Ltd." and "Action Implementation Program for Production Safety Improvement Year of Xinjiang Tianshan Cement Co., Ltd.", and emphasized the annual work highlights of production safety year. During the Reporting Period, the Party Committee of the Company has listened to the production safety report twice and conducted 6 times of monographic studies and deployments on production safety.

II. Safety Actions

Establishment of assessment mechanism, serious accountability management

According to the principle of "horizontal to the edge and vertical to the bottom", the Company signed a Safety Target Responsibility Agreement with each member enterprise every year, and the main responsible person of each enterprise signed a Safety Target Responsibility Agreement with each department and primary staff level by level. The Company insists on the principle of result-oriented, focuses on process control, develops and implements monthly assessment of production safety target indicators, and incorporates the results into the monthly production and operation

performance of member enterprises to improve the overall safety management effect. In case of work-related fatalities, the Company promptly conducts a serious accountability process for the person in charge, requires all accident-related employees to analyze the causes of accidents, draw lessons and rectify vulnerabilities, and informs all staff of the specific situation to avoid the recurrence of similar accidents. During the Reporting Period, New Tianshan signed a total of 69,438 Safety Production Target Management Responsibility Agreement.

"Safety Production Target Management Responsibility Agreement" During the Reporting Period, New Tianshan signed a total of

69,438

Safety Production Target Management Responsibility Agreement.



Highlighting hidden danger troubleshooting, promoting prosperity from science and technology

The Company promotes normalized, standardized and technological management of production safety, focuses on grading, management and control of safety risks, and organizes comprehensive hidden danger troubleshooting regularly. In accordance with the overall requirements of "full coverage, zero tolerance, strict law enforcement, and focus on effectiveness", enterprises at all levels under the Company continue to enhance the hidden danger troubleshooting for each part, each link and each position of the whole production and operation process, carry out comprehensive risk identification and rectifies hidden dangers thoroughly according to seasonal inspection,

holiday inspection, various professional inspections (electrical, dust and poison prevention, pressure vessels, fire prevention, dangerous chemicals), and comprehensive inspection, and synchronize the latest information to the Company's safety management platform to realize closed-loop management. During the reporting period, 42 enterprises under 10 regional companies have carried out safety supervision and inspection, and a total of 1,010 various hidden dangers were identified, with a rectification completion rate of 99.4%; and the cement enterprise standard-reaching rate of production safety standardization of the Company reaches 100%.

a total o

1,010 various hidden dangers were identified

The rectification completion rate

99.4%

the standard-reaching rate of production safety standardization of the Company reaches

100%



Promoting the creation of "zero violation" and implementing safety mechanism

The enterprises at all levels actively respond to the "zero violation" requirement, establish the working mechanism of "monthly promotion and quarterly dispatch", and carry out the employees incentive plan

Enterprises under Guizhou Cement and Yunnan Cement have developed and introduced "Ten Prohibitions for Safe Production" and assessment standards; simultaneously to steadily promote the "zero violation" activity. The employees transform their thinking awareness from "asked to be safe" to "I want to be safe".

Zhonglian Tongli has issued the "Zero Violation Action Implementation Program" and "Ten Prohibitions for Production and Operation Safety (Trial)" to continue to enhance the risk management and control of high-risk operations and employee behaviors.

During the
Reporting Per

"Zero Violation" outstanding individuals

1,793

"Zero Violation" outstanding organizations the positive incentive for the enterprises at all levels reaches

9.21 million yuan

Case: Establishing the intelligent safety platform

Huaikan South, a subsidiary of South Cement, integrates intelligence into safety management construction and develops an intelligent safety platform. The Company implements "security access control" and "energy isolation" management policies for high-risk areas, and "risk warning" management for medium-risk and low-risk areas, and promptly reminds personnel who mistakenly enters dangerous areas through camera intrusion, video forensics, sound and light alarms and other equipments, and pushes the precise positioning of the risk warning information to the safety supervisors simultaneously to reduce the safety





risks effectively.



CUCC Ulanqab, a subsidiary of CUCC, has installed a man-vehicle early warning system for motor vehicles in the plant area, which adopts wireless pulse technology and has 360° collision warning. By installing a control host on the vehicle, the relative distance between the signal of the bracelet worn by the operator and the machine within a 50m radius is monitored in real time to realize the alarm and braking function of the operating machine. Smart helmets were equipped for employees in highly remote positions, based on IOT + smart hardware, configured with high-definition micro cameras, lighting, laser lights, GPS positioning, local storage, wireless 4G network transmission, pool power supply and other hardware devices. Smart safety helmets accessed the background management platform via 4G wireless network, which can realize automatic data collection, uploading and voice safety prompting, and managers can track personnel situation in real time through cell phones and provide scientific on-site management and guidance.









Huadong Material promoted the three-dimensional integrated alert system for aggregate yards to various commercial concrete enterprises to assist safety management by technical methods.

Health and Safety Quality Refinement Employee Development Environment Protection

Case: Safety risk solutions of Guizhou Cement



Guizhou Cement completed the full coverage of energy isolation work for 28 regional enterprises, and invested a total of 11.43 million yuan in 10 aspects including energy isolation devices, locking devices, lockers, installation and renovation, and publicity and training, to ensure the tabulation, standardization and visualization of all complex locking processes, and get rid of the missing-lock dilemma of equipment and personnel in the complex locking process of multi-person operations. While facilitating rapid identification of hazardous energy contained in operations by operators and managers, the unified work management standard and assessment standard are covered to provide a useful experience for shortcomings improvement in terms of safety risk management.





Case: QR code safety intelligent management of Southwest Cement



安全带检查信息

In order to ensure comprehensive coverage of patrol inspections for production safety, Sichuan Golden Cement, a member enterprise of Southwest Cement, has developed more than 2000 QR codes to apply to fire equipment, safety belts, training and education, related party management, gas detection in limited space, vehicle movement and risky operation safety control, etc. Safety inspection, document saving, etc. can be completely achieved by smartphones, with high employee acceptance and management efficiency. The backend management can realize reminding and screening functions and the full-coverage ledger can ensure zero deficiencies in safety management.







Case: New Tianshan Cement highlighted the responsibility of hidden danger inspection



During the reporting period, New Tianshan Cement established the inspection mechanism of "supervision and random inspection" at the headquarters level, "inspection and mutual inspection" at the regional level, and "self-inspection and review" at the enterprise level. Through the combination of video inspection and field inspection, 42 member enterprises of 10 regional companies, including CUCC, Xinjiang Cement and Guizhou Cement, were inspected and researched by "listening to reports, reading records, checking the site, asking employees, discussing about safety and getting examinations", issuing 42 notices for rectification of hidden dangers and investigating a total of 1,010 hidden dangers. 1010 items, with a 99.4% rectification rate of hidden dangers. 16 inspection teams were set up to organize cross-checking of safety and environmental protection between regions. 63 member enterprises were inspected, 737 safety hazards were identified, and the rate of correction of hazards was 100%.











III. Occupational Health

Strengthening health and safety protection in the workplace and improving employees' safety awareness are key aspects of ensuring occupational health and safety, and the Company is committed to providing a safe, healthy and comfortable working environment for every employee. By the end of the Reporting Period, the certification rate of occupational health and safety management system for the manufacturing enterprises at all levels has reached 97.02%.

The certification rate of occupational health and safety management system for the manufacturing enterprises at all levels has reached



97.02%

Focusing on law and regulation compliance and perfecting management system

The Company strictly complies with the laws and regulations related to occupational health and safety that have a significant impact on the Company, including but not limited to national laws and regulations and industry safety standardization guidelines such as "Work Safety Law of the People's Republic of China", "Law of Occupational Disease Prevention of People's Republic of China",

"Measures for the Supervision and Administration of 'Three Simultaneities' of Facilities for the Prevention and Control of Occupational Diseases of Construction

"Regulations on Work-Related Injury Insurances" and

Projects". Meanwhile, the Company conducts further research and analysis on the production characteristics of the building materials industry, develops and implements regulations such as "Occupational Health Management System", "Personal Labor Protective Equipment Management System", "Management System of Health and Safety of Related Parties", and "Management System of 'Three Simultaneities' of Occupational Health" to continuously enhance the occupational health protection and management for employees, so as to prevent, control and mitigate occupational disease hazards effectively.

Implementation of preventive measures, occupational safety protection

The Company has developed a complete occupational health management system, focusing on occupational health and safety prevention and reducing the

possibility of employee injury while perfecting production safety management.

The Company continues to improve and upgrade the supporting facilities and first-aid equipments for dust-proof, anti-poison, noise reduction and emergency management at production workplaces, while strictly complying with the requirements of labor protection to equip the operators with work clothes, helmets, safety shoes, gloves, anti-noise earmuffs, anti-dust masks and other labor-protective equipments with reliable quality.

In accordance with the "Law of Occupational Disease Prevention" and "Regulations on Supervision and Management of Occupational Health", the Company organizes occupational disease medical examinations for employees in hazardous places to confirm their health status, and transfers employees with occupational contraindications to other positions; at the same time, the Company cooperates with a third party to detect the factors that can cause occupational hazards in the workplace, assess the occupational hazards level of the workplace and take countermeasures.

The Company conducts occupational health checkups for employees before and after employees' on-boarding process every year, and signs an occupational health notification agreement with each employee who works at hazardous position.

The Company complies with laws and regulations, pays work injury insurance premiums for employees every month, and reasonably arranges the working hours of employees to prevent them from overwork.

IV. Safety Culture

Refining the safety culture and developing firm foundation of production safety

The Company gives top priority to and conscientiously deploys safety culture promotion work and carries out various safety culture communication activities. During the Reporting Period:

The Company has compiled and issued a total of 18 issues of the "Safety and Environmental Protection Work Brief Report of Xinjiang Tianshan" to promote the excellent practices of member enterprises in production safety, mutual supplement and learning among enterprises, and rapidly improve their own safety management capability through communications and improvements

Based on the common problems, typical industrial accidents and seasonal risk characteristics found during inspections, the Company has timely prepared and issued 9 issues of "risk warnings for safety accident" to warn enterprises at all levels to enhance risk control and prevent the presence of accidents;

The Company promotes the implementation of "20 Rules of Zero Tolerance" in enterprises at all levels: Sinoma Anhui has developed a mind map display board about "20 Rules of Zero Tolerance"; Jiande South has customized "20 Rules of Zero Tolerance" thematic mouse pads and distributed them to all employees; Shawan Tianshan invited the children of employees to shoot the "Children's Words on Safety: Zero Tolerance" micro-videos and introduced videos to all employees;

The Company takes the "Production Safety Month" as an opportunity to promote production safety lectures and grassroots-taking activities of leading cadres: CUCC issues "Two Entries and Two Coverages" guidance for Enterprises"; Zhongnan Cement carries out position-standard-reaching activities for all staff in member enterprises with seven steps and five stages; Jiahua Special Cement insists on carrying out safety behavior observation activity, "I participate" activity and near miss detection activity throughout the year, enhancing the safety management basis.

The enterprises at all levels under the Company actively promote "party building and safety" activities: Zunyi Saide has integrated safety concept in party building, broadening the connotation and extension of "pre-accident, during accident and post-accident" in safety management; Jiangshan South has integrated affection into safety management and actively developed "affectionate safety culture"; Nancheng South has carried out "village and household entry and safety sending" activity; Ylli Tianshan has carried out "five help one" activities led by party members in the work teams.

The Company has established working communication groups for the principals of safety and environmental protection departments of enterprises at all levels to learn mutually and improve safety management capability among member enterprises.

Enhancing safety training, improving safety accomplishment

The Company actively carries out daily training, education and assessment for occupational health, and compiles and distributes training materials such as "Manual for Required Knowledge of Production Safety", "Production Safety Accident Cases Compilation of Cement Enterprises" and "Accident Cases Compilation of Commercial Concrete Enterprises" to all employees for further study, and implements the management mechanism of "replacement of inspection with examination, replacement of training with examination" to enhance the basic knowledge of safety education. During the Reporting Period, 837 middle-level and higher-level managers have participated in the random examination organized by the Company, with a pass rate of 97%.

Jiangxi Cement and the member enterprises thereof have printed and distributed the "Manual for Required Knowledge of Production Safety" to employees for further training and learning, and actively carried out thematic education and training about new "Work Safety Law" and the "Manual for Required Knowledge of Production Safety". The enterprises at all levels have carried out the activity of "Big Reflection and Discussion" and put forward suggestions and suggestions on the safety development of the Company.



All member enterprises under CUCC have conducted

8,155 times of safety education and training lectures trained

219,047 people



Xintai CUCC and CUCC Rizhao, have won

The first prize

in the national cement industry safety knowledge competition.

Case: TPM training of CUCC



CUCC Tengzhou, a subsidiary of CUCC, has generally improved the safety operation skills of the employees through the retraining on the principle, structure and safety operation procedures of each equipment in the process of TPM (Total Productive Maintenance) promotion and implementation, as well as the identification and control of safety and environmental risk factors existing in the equipment.





Case: Training for Certified Safety Engineer



The Company had organized the training for certified safety engineer in September, 2022, and invited senior training experts of certified safety engineer to provide professional guidance about four courses: "Technical Basis of Production Safety", "Laws and Regulations of Production Safety", "Production Safety Management" and "Professional Practice of Production Safety", and a total of 2,550 people at the headquarters of regional companies and member enterprises have attended the online and offline training.



Case: Special training for production safety centralized rectification month



During the production safety centralized rectification month, the Company carried out special training for all safety managers. 1,832 full-time and part-time safety managers at all levels have participated in the training and examination, with examination pass rate of 96.9%; 549 enterprises at all levels have carried out safety knowledge re-education and retraining, and a total of 2,308 times of various safety knowledge trainings have been carried out, with a total of 127 thousand people involved in trainings and examination pass rate of 100%.

Case: Thematic training about "Activities of Production Safety Improvement Year" carried out by South Cement



In 2022, Huaikan South, a subsidiary of South Cement, integrated the "Activities of Production Safety Improvement Year" into "Three-Year Action for Special Rectification of Production Safety", successively completed "April - Production Safety Centralized Rectification Month", "Safety and Environmental Protection Organization Setting and Staffing", "June - Production Safety Month" and other works, established a normalized learning and education mechanism, and promoted the implementation of education and training via live publicity, monographic teaching, reflective discussions, training and examination, case education, system perfection and other methods, and the Company has organized 36 times of special trainings for production safety, with a total of 2,750 people completing the study of "Manual for Required Knowledge of Production Safety", and the passing rate of random inspection is 100%, and organized 36 times of special examinations for production safety with a 100% standard-reaching rate, and all staff have further deepened their perspective of the concept of production safety.

Meanwhile, according to "Production Safety Accident Cases Compilation of Cement Industry" issued by New Tianshan, and in accordance with the requirement of "accident in one factory, education for thousands of factories", our company continues to give top priority to the safety accident warning education for all employees, and organizes 116 times of warning case studies throughout the year, and further promotes all staff to develop self-safety awareness and enhance accident prevention ability in production safety through accident warning, self-examination and rectification.







Quality Refinement

- Management Refinement
- Leading Role in Transformation
- Responsibility Supply

The "Three-refinement Management", with the connotation of "business refinement, management refinement and organization refinement", was first introduced by the enterprises under New Tianshan, awarded the first prize of Innovation Achievement for National Enterprise Management Modernization, became the winning formula for the Company to obtain profits, and widely recognized and applied in various industries. In 2022, our company continued to summarize, refine, innovate and optimize through management practice to promote the iterative upgrading of the "Three-refinement Management" system of New Tianshan and further enhanced the overall competitiveness of the Company.



Health and Safety Quality Refinement Employee Development Environment Protection

(I) Management Refinement

New Tianshan insists on carrying out the enterprise management refinement model with "Three-refinement Management" as the guidelines, taking business refinement as the motive power, management methods refinement as the core, and organization structure refinement as the guarantee, promoting the quality and efficiency of products and services, providing high-quality products, optimized customer service and complaint processing management, innovating management methods, continuing to improve the overall competitiveness of the Company and creating more social value.

Three - refinement Management 2.0

The Company continues to implement in-depth exploration during operation and management practice, and clearly determines the reform strategy with "1.9.3.1" (i.e. 1 strategic vision, 9 major business reforms, 3 major reform systems and 1 set of empowerment guarantee) as the core to improve and reform the organizational structure, management and control mode and business process, promote the Company to gradually reform from organizationdriven to process-driven and then upgrade to data-driven, accelerate the implementation of organizational change and process change results of management consulting, promote the implementation of "Three-Refinement Management 2.0", strive to realize the goal of "management output and standards output", further improve the overall quality and business level, provide higher-quality products and services, and lay a solid foundation for sustainable development.

"世界一流的水泥公司"

建立以运营卓越为核心的竞争优势水泥 与商混业务向产品领先与客户亲密转型

战略与投资	技术与工程	营销与销售	生产与交付	供应链管理	企业管理	人力资源	财务管理	风控监督
建设 战略投资决策体系	建设 集成产品研发体系	建设 营销服务体系	建设 智能生产运行体系	建设 集中采购服务体系	建设 战略绩效运营体系	建设 员工生命周期体系	建设 业务财务融合体系	建设 大监督闭环体系

组织变革(实现组织精健化) 专业分工、柔性配置、高效运转、动态演进 流程变革(实现管理精细化)

数据变革(实现经营精益化) 战略引领、流程打通、业务协同、管理闭环 目标牵引、指标调控、数据洞察、价值显化

IT赋能

平台支撑

建设7大平台,两线并举推动信息化升级与数字化转型

治理保障 强化架构统一,实现生产信息化与管理信息化融合

(1) Business Refinement

The Company is committed to enhancing the construction of the industrial ecology, optimizing the business environment, improving the business quality from three aspects: fulfillment of industrial responsibilities, internal company management, and data management system innovation, and making continuous progress toward highquality sustainable development. The Company is firmly committed to the implementation of the value concept of "the interests of the industry are higher than the interests of the enterprise, and the interests of the enterprise are nurtured in the interests of the industry" and the business concept of "Price-Volume-Profit", achieving reduction and upgrading by continuously eliminating outdated production capacity, limiting new production capacity and insisting on staggering peak production, continuing to practice and promote industry self-regulation, and promoting the rational regression of industry value.

The Company gives priority to the external communication, actively learns excellent domestic and international experience, continues to benchmark world-class cement enterprises, determines external benchmarks, and perfects the benchmarking system from 3 aspects: operation efficiency, operation management and control, and ESG management. The Company integrates the quality management experience into its own management and continues to improve operation management and sustainable development level.

The Company actively focuses on core markets, enhances the maintenance of core customer relationships, and continues to innovate and optimize business strategies to increase market share. The Company promotes the standardization and refinement of the marketing and supply chain systems, enhances market research and determination and strategy research, and continues to improve the business quality. In terms of the industrial value chain, the Company actively takes advantages of the Group's industrial coordinated development, expands diversified businesses, promotes the integration of market resources, implements optimization and upgrading of the business environment and resource distribution in multiple business fields, and generates positive scale effect and coordinated benefits to effectively respond to changes in the macroeconomic situation.



(2) Management Refinement

The Company advocates the refinement of all elements and processes, continues to promote production refinement, precise management and control, green-credit policy, and reform and innovation, comprehensively promotes management refinement by learning from the excellent practical experience of leading counterparts, and continues to deepen management-improvement actions.



Production refinement Production refinement: the Company focuses on promoting kiln system optimization and grate cooler modification, the reduction of the integrated energy consumption per unit of clinker product, integrated electricity consumption and process electricity consumption per unit of cement product are all realized, and the reliability coefficient of kiln increases by 1.1%. In case of the significant increase of coal price and reduction of production, the manufacturing cost of clinker of CUCC Shandong remains the same year-on-year and the manufacturing cost of aggregates decreases by RMB 4/ton year-on-year; the main production technology indicators of South Cement reaches the leading level in the industry, with outstanding results of cost reduction and efficiency enhancement.

the Company comprehensively promotes systematic and refined management and control in procurement, logistics, marketing and other specialized fields. In terms of procurement, direct procurement, centralized procurement and platform procurement are implemented, the proportion of direct coal supply reaches 46% with cost reduction of RMB 520 million in direct coal procurement, the centralized procurement of 119 items of various materials are implemented with cost reduction by 2.2%; the promotion of Yangtze River Delta logistics planning, bidding and negotiation are implemented, with the savings of RMB 190 million in ocean and motor freight.

Precise management and control



Green credit



Green credit: in addition to further promotion of capital concentration and financing management, the Company expands the scale of green-credit policy and achieves the refined management for financing cost of green assets projects. Among them, the 9-year green project loan interest rate of Zhongnan Cement reaches 2.8%, a record low of green loan interest rate for the same period. South Cement applies for a medium and long-term green loan of RMB 1 billion from Bank of Beijing for the procurement of clean coal. This loan is the first bank loan of the Company that meets the requirements of the National Development and Reform Commission for clean utilization of coal, and the interest rate reaches the record low of green credit in the cement industry.

In 2022, the Company promoted reform and innovation, steadily promoted the "Management and IT Upgrade and Digital Transformation Planning Consulting Project" with digital upgrading and information-based transformation program as the core, created an unified, standardized, processed and digital information system, established an evolutionary mechanism for sustainable optimization, and drove management refinement with data transformation.

Reform and innovation



(3) reform and innovation

The Company continues to promote organizational optimization and simplification, enhance the management foundation, continues to improve the governance mechanism, improve organizational effectiveness, stimulate endogenous power, and establish and optimize an efficient organizational system that conforms to the characteristics of the Company and facilitates enterprise development.

The Company actively and deeply implements the special task of "annual reduction" and establishes a task tracking and monitoring mechanism. The Company is firmly committed to reducing "two funds" (funds occupied by finished products and receivable funds), among which Zhonglian Tongli and Southwest Cement implement a large reduction of funds; the governance structure is simplified through dynamic adjustment and optimization, and "two non" (non-major business, non-advantage) and "two assets" (inefficient assets, ineffective assets). (non-main business, non-advantage) and "two assets" (inefficient assets, invalid assets) are strictly eliminated, with outstanding simplification effect.

During the reporting period, the business integration of the Company was highly effective. Firstly, the Company completed the organizational integration and achieved the normalization and efficiency of organization management. A two-level headquarter structure and staffing plan is quickly determined, and in accordance with the principle of

"strategic matching, coordinated development and professional management", 15 regional companies are established, while Xinjiang Cement Co., Ltd. and Huadong Material, are also registered and established to determine the main body of regional management and control and properly handle the management and transfer of enterprises; the "Three Definitions" guidelines for member enterprises are developed to standardize and unify the classification standards, organizational settings and staffing of member enterprises. The Company completed matters concerned about organizational deployment, open selection and competitive recruitment, and successfully achieved organizational integration and personnel arrangement. Secondly, the Company continued to promote shareholding integration and clarify asset and equity relations, and the subordinate enterprises completed their own phased tasks in an orderly manner respectively, and basically completed the owned shareholding transfer and asset integration; business support groups were established for some enterprises to comprehensively improve the management level. At the same time, the Company accelerated the progress of management integration, established and perfected the three-level management and control system, basically established a standardized and high-efficient authorization and decision-making system; unified and optimized more than one hundred management systems, initially established a closed-loop management system for business management and control, discipline inspection and audit and comprehensive supervision, and orderly promoted the system integration construction.

Products Refinement

New Tianshan always insists on high-quality development, advocates "quality and efficiency improvement, optimization and upgrading", and strives to promote the Company's process of becoming a world-class cement company with Chinese characteristics through technical improvement, management refinement and other methods, provides high-quality products and contributes enterprise influence for China's urbanization and modernization construction.

The Company fully implements the concept of survival by quality and development by quality, comprehensively implements ISO90001 quality management system, carries out a series of quality management and control activities such as quality management system certification, quality standard formulation, experience communication about quality benchmarking, etc., and lays a solid foundation for high-standard and strict product quality management.

In terms of system construction

the Company unifies and develops "Quality Management

Measures of Xinjiang Tianshan Cement Co., Ltd.",

"Quality Supervision and Management Measures of
Xinjiang Tianshan Cement Co., Ltd." and other relevant
regulations, and in terms of the commercial concrete
business, the Company develops "Technology and
Quality Management Measures for Commercial Concrete
Business", "Inspection and Evaluation Outlines of Basic
Technology and Quality Management for Commercial
Concrete Business", "Quality Management Measures for
Raw Materials of Commercial Concrete Enterprises", etc.,
issues clear regulations on the quality requirements for
high-quality products, and refines quality files. The
Company strengthens the maintenance of product quality.
In the event of quality problems or accidents, the
Company will be firmly committed to identifying the

In terms of product innovation

the Company establishes a perfect carbon emission management system, implements the overall management for carbon resources, carbon emission reduction technologies, carbon trading and carbon sinks, accelerates the progress of the construction of low-carbon cement and digital carbon management platform, and improves production and management levels. The Company gives top priority to the development of special cement, strives to promote cooperation projects and build a technology R&D platform consisting of multiple unified internal and external systems.

In terms of technical communication

the Company regularly implements the sample survey about the products of the affiliated member enterprises, analyzes the sample test results of each party, integrates market and customer feedback information, updates relevant standards, and revises quality optimization measures to improve cement product quality and give the products lasting market competitiveness. In the process of the implementation of the quality system, the Company continues to optimize the regulations and promotes individualized practices on the basis of the original rules and regulations.



Case: Total Quality Control Activities of CUCC



Since June 2022, Tengzhou Zhonglian, a subsidiary of Zoomlion Cement, has continued to promote the practice of combining total quality management and lean TPM management, firmly establishing the principle of "quality first, benefit first" and continuously doing a good job of quality preventive management; with the main line of "stable strength, excellent performance and cost reduction", the QC quality management team headed by the general manager was established. The QC quality management team headed by the general manager has been set up with "stable strength, excellent performance and cost reduction" as the main line, always insisting on customer satisfaction as the guide, based on source control of raw and combustion materials, intelligent upgrading and transformation as the means, and clinker ratio reduction project as the grasp, refining and perfecting the process quality control network, continuously doing Q-M correlation analysis and visualization standard process, and sorting out the key factors and important equipment that affect quality changes, eliminate hidden quality problems in a timely manner, actively building a quality management system and quality standards that are compatible with the brand, constantly pursuing high quality, stable quality, consistent quality and products with minimal standard deviation, and striving to build "the first regional quality brand in the market and the top two in physical quality" to improve the quality management level of CUCC Tengzhou.





On the basis of the active implementation of various quality management measures, the Company has achieved outstanding results in quality optimization and upgrading, and the passing rate of integrated cement products has reached 100%. Multiple affiliated enterprises of New Tianshan won awards in "Meinolf Cup" - the 18th National Comparison Competition of Cement Chemical Analysis. This award fully embodies the outstanding achievements of the Company in quality management improvement, and also reflects that the cement quality inspection of the Company has reached the leading level in the industry, and further improves the brand quality of the products and establishes a good enterprise reputation.

Service Refinement

The Company develops and optimizes "Customer Service Management Measures for Cement Business of Xinjiang Tianshan Cement Co., Ltd.", which issues clear regulations on the product quality complaints processing to effectively improve the quality of after-sales service for products. If customers have any questions or dissatisfaction about the product quality, they can dial the special line, and the Company will strictly identify the reasons and implement responsibility investigation to the relevant responsible departments and responsible person.

Case: Cement Product Quality Complaint Processing of Zhejiang Cement



On August 23, 2022, the sales system of New Tianshan and Sanming South, a subsidiary of Zhejiang Cement, received a customer quality complaint, after obtaining the complaint information, our company immediately activated the customer complaint processing procedure, dispatched relevant personnel to arrive at the customer's location the next morning to conduct tests on the common sampling and standard powder in the trucks at the site. The result was identified and confirmed that the specific surface area of the cements in two trucks was within the controllable range and the cement was allowed to be unloaded from the truck for use after communications between the technical personnel of both parties.

Meanwhile, for the purpose of ensuring the accuracy of the test results, both parties took cement samples from the trucks and sent the samples to Longyan Product Quality Inspection Institute for comparative tests. The test results indicated that the cement met the requirements of the relevant standards and gained recognition of both parties. With timely and effective communication, this service was evaluated with customer satisfaction and no negative impact was observed.

The Company regularly carries out customer satisfaction survey activities every year, tracks and compares the collected results with product quality, reviews shortcomings in quality and service management, continues to improve the level of product quality and service, standardizes after-sales service and customer complaint processing, and further improves the customer complaint processing efficiency to improve customers' degree of satisfaction.

(II) Leading Role in Transformation

New Tianshan always deeply implements the national strategic deployment, gives top priority to the high-end oriented, intelligence oriented and environmental protection oriented transformation of production and service, continues to promote business layout and production capacity optimization, demonstrates the leading role in intelligent and environmental protection oriented manufacturing, and explores the creation of green and low-carbon products. In addition to the guarantee of the products and services quality, the Company lays a solid foundation for the transformation and development of the enterprise, and strives to realize the mission of "materials make world better".

Implementation of the optimization and deployment of the whole industrial chain

The Company accelerates the progress of production capacity optimization and upgrading and technical transformation, actively implements the technology promotion and application integration with "the second generation of NSP cement production line" as the core, improves the equipment level of the production line, optimizes product quality and performance, strives to develop special cement, and provides high-end products and customized services for special projects. Meanwhile, the Company actively implements cement reduction and replacement as well as renovation and upgrading projects.

The Company develops "cement+" business in various fields: in terms of commercial concrete business, the projects of CUCC Bengbu and Zhejiang Benteng Construction Materials Co., Ltd. are successfully put into production, and the production capacity and efficiency have reached the standard. In terms of aggregate business, the projects in Ruichang, Dean and Yiyang have been completed and put into operation by; and more aggregate resources have been developed, with the aggregate resource reservation reaching 3.4 billion tons.

Leading role as the intelligent manufacturing benchmark

The Company actively responds to "Intelligent Manufacturing Oriented Digital Transformation Action", achieves the digitalization of the overall process from mining, production to packaging and loading, and continues to enhance the construction of intelligent factories, digital mines and intelligent platforms. The Company has successfully completed the pilot construction of 7 intelligent factories and the acceptance of digital mine of Linli South New Material, among which Huaikan South, Zunyi Saide, Yulong Tongli and CUCC Linyi were listed by Ministry of Industry and Information Technology as typical cases of intelligent manufacturing oriented digital transformation in building materials industry in 2022. By the end of the reporting period, the Company had built 21 intelligent manufacturing demonstration enterprises, 48 intelligent production lines and 10 digital mines.

The Company is committed to standardizing the pilot projects of factories and the construction of information-based production, establishing a joint working group for intelligent construction, completing the research and evaluation for the pilot projects of 6 intelligent factory construction, compiling and perfecting Intelligent Factory Construction Guide, Intelligent Factory Evaluation Standard, Digital Mine Construction Guide, Pilot Project of Intelligent Factory and General Plan for Information-based Production, etc., which provide solid theoretical basis and operational guidelines for the implementation, construction and operation, and replication and promotion of intelligent projects.

Meanwhile, the Company actively promotes information-based management and contributes to the digital transformation of the Group and the industry. During the reporting period, the Company successfully established the working group for the construction of information-based project management of New Tianshan, carried out business research, and completed the overall architecture blueprint and technical solutions; completed the regional pilot project of production management platform of South Cement, and completed phase 1 acceptance and upgrade to version 3.0; actively joined the working group for information-based construction and digital transformation of China National Building Material Group, and actively got involved in the top-level design of the Group's strategic planning for digital transformation and the digital transformation oriented experience exchanging meeting, etc.

Seizing of opportunities for environmental protection oriented transformation

The Company regards environmental protection and low-carbon oriented transformation as the cornerstone of the sustainable development, the Company actively responds to the national goal of "Carbon Peaking and Carbon Neutrality", comprehensively establishes garden-style factories and environmental protection oriented zero-carbon mines, including carrying out the pilot project of digital "zero-carbon" mines for Huzhou Mining Co., Ltd's Dameishan Mine, promoting the "system research and development and exemplary application of digital mines and intelligent laboratory of cement factories" for Zhonglian Tongli, and constructing 3 environmental protection oriented intelligent mines for Shanya South, Changshan South and Jiangshan South.



Case: Intelligent construction of Zhejiang Cement green mine



In August 2022, the environmental protection oriented intelligent mine construction project of Shanya South, a subsidiary of Zhejiang Cement, was put into operation, and the acceptance of environmental protection oriented intelligent mine was completed. The project platform includes seven systems: data center, digital mining software, intelligent production management and control system, intelligent truck dispatching system, integrated security system of mining site, 3D visualization control system and slope detection system, with centralized management and issuance of data for each functional system to guarantee data connectivity The project achieves three-dimension visualization of resources, digitalization of control, information-based audit, visualization of inquiry and timely command. It is expected that after the completion of the project, the production efficiency of Shanya South's Datong limestone mine can be increased by 10%, with the consumption of main material and fuel reduced by 2% and the freight cost saved by RMB 0.7/ton, and the utilization rate of low-grade resources can be improved by 12%.





During the practice of innovation and responsibility fulfillment for green technology, the Company has overcome key technology barriers, developed high-performance low-heat silicate cement, promoted green building material certification product, and promoted the environmental protection and low carbon oriented development of the cement and building material industry. Dicalcium silicate is the main mineral component of high-performance low-heat silicate cement, and the cement features low resource and energy consumption and low environmental loading. The dam concrete formulated by high-performance low-heat silicate cement has outstanding crack resistance, and provides a better technical method to solve the cracking problem caused by temperature stress in large volume concrete. In recent years, this technology has been successfully applied in the construction of national key projects, such as Baihetan and Wudongde Hydropower Station, ending the curse of "no uncracked dam".

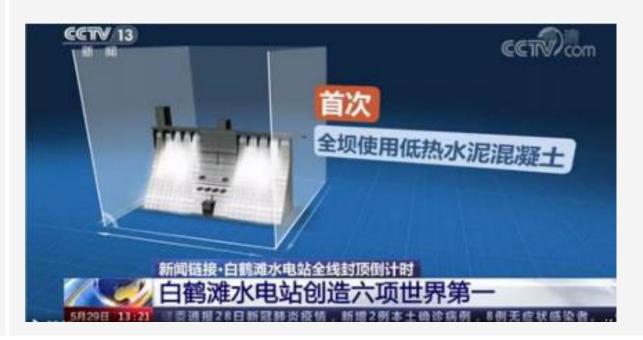
Case: Environmental Protection and low carbon oriented application of Jiahua Special Cement



Jiahua Special Cement cooperates with China Building Materials Academy Co.,Ltd., China Three Gorges Corporation and other companies to develop high-performance low-heat silicate cement, successfully supplied all the low-heat silicate cements required for pouring the dam concrete for Baihetan Hydropower Station, a major national project under "West-East Power Transmission" project. It should be mentioned that Baihetan Hydropower Station was the most technically difficult hydropower project in the world today and no temperature crack appeared on its dam since the start of concrete pouring, and all indicators have met the design requirements, Jiahua Special Cement has supplied a total of more than 1.33 million tons of low-heat silicate cement for Baihetan



Hydropower Station project. Jiahua Special Cement has made Baihetan Hydropower Station project the first world-class ultra-high arch dam that applies low-heat silicate cement concrete for the entire dam, with a maximum dam height of 289 meters. Jiahua Special Cement has made Baihetan Hydropower Station project the first world-class ultra-high arch dam that applies low-heat silicate cement concrete for the entire dam (with a maximum dam height of 289 meters).



Case: Concrete products of Xinjiang Cement passed "China Green Product" certification



The certification of "China Green Product" is a strong proof that the products supplied by the enterprise pass the green health certification. During this reporting period, 7 concrete products with grades in the range of C20-C50 produced by Xinjiang Cement under New Tianshan successfully passed the highest level of "China Green Product" certification. Xinjiang Cement will continue to actively respond to the national call, continue to deeply implement the concept of "environmental protection oriented development", enhance technological innovation, improve product quality, contribute to the construction of ecological civilization, and promote the realization of the goal of "carbon emission peak and carbon neutrality".



"China Green Product" certification of 9 memner enterprises of Xinjiang Cement

Scientific and Technological Innovation Achievements

Scientific and technological innovation is a necessary factor for enterprises to achieve sustainable development and enhance comprehensive competitive advantages. New Tianshan actively promotes scientific and technological research and development, strives to advocate innovation culture, value intangible assets, protect intellectual property, enhance trademark management, and committed to fully empowering the upgrading and reform of products and production environments with technology, resources and professional knowledge. By the end of the reporting period:

26 certified new high-tech enterprises, with a total of 59

1,135 new patents
including 92 invention patents
Accumulated 2,767 patents
Including 278 invention patents

The Company has undertaken and participated in 7 project of China Building Material Council under "the open competition mechanism to select the best candidates" participated in 1 national R&D project jointly with China Building Materials Academy, and participated in 1 national R&D projects and 10 science and technology projects of the Ministry of Science and Technology jointly with universities.

The Company complies with Patent Law of the People's Republic of China, Anti Unfair Competition Law of the People's Republic of China, Advertising Law of the People's Republic of China and Trademark Law of the People's Republic of China, and in terms of intellectual property protection, scientific research fund management and information confidentiality, the Company has established intellectual property and brand management system with features of the building materials industry in combination with the construction of internal control system and risk management requirements.

In terms of intellectual property protection

the Company develops relevant regulations, summarizes and identifies intellectual property-related risks, and develops corresponding risk management strategies and countermeasures to confirm that intellectual property risks are always under control, being controlled and affordable.



In terms of trademark management

the Company establishes the own trademark information database, actively implements various tasks such as trademark registration, trademark maintenance, trademark licensing, trademark disposal and trademark protection, and formulates assessment and accountability mechanisms. Meanwhile, the Company develops and perfects "Trademark Management Measures for Xinjiang Tianshan Cement Co.,Ltd.", and the secondary companies also issues relevant regulations in succession to protect intangible assets like the Company's trademarks and enhance trademark management. Depending on good trademark management, the Company continues to improve the visibility and reputation of the trademark, establish and maintain the enterprise reputation, and promote the intangible assets appreciation for the Company' strademarks.

(III) Responsibility Supply

New Tianshan adheres to the concept that the sustainable development of the enterprise is closely related to good value chain cooperation and supply chain management. The company optimizes the supply chain management, establishes a perfect supply chain assessment and management system, evaluates the environmental and social risks of suppliers, creates a responsible supply chain, and jointly establishes a sustainable industry ecology.

Supply Chain Management System

The company is committed to creating a high-quality supply chain system, giving top priority to supply chain management, continuing to refine the assessment of various indicators of the suppliers, managing, controlling and supervising the overall procurement process, and regularly conducting audits and evaluations.

Before conducting procurement activities, the Company firstly conducts a preliminary review on the qualification materials, productivity, product quality, operation and reputation of the potential suppliers, and eliminates the suppliers with low credit and poor supply guarantee capability.

The Company enhances the daily management and quality assessment for the suppliers, develops "Supplier Management Measures for Xinjiang Tianshan Cement Co.,Ltd.", establishes a dynamic evaluation mechanism for the suppliers, and eliminates suppliers with low-quality product, poor service and poor supply guarantee capability.

The Company incorporates ESG concept and related indicators into supply chain management, and gives preference to environmentally friendly suppliers with reliable quality, good reputation and reasonable management for cooperation in terms of supplier sourcing, selection and management. For example, the Company incorporates green production, energy conservation and environmental protection, employee rights and interests protection, and incorruptible employment into the scoring system, some of which act as entry conditions and companies that do not meet these indicators cannot participate in bidding, the "incorruptible employment" item features veto power, and companies with negative events are not allowed to participate in bidding and shall be included in the supplier blacklist.

Creation of a responsible supply chain

New Tianshan gives top priority to the guidance of suppliers so that they can actively fulfill the social responsibilities and obligations. During the procurement process, the Company not only focuses on own energy saving and carbon reduction actions, but also promotes suppliers to use new environmentally friendly materials, gives preference to products with low-carbon and environmentally friendly production processes, discusses with partners on the reutilization of solid waste resources and other issues, integrates the value chain to create a green supply chain, and promotes the green and sustainable development of the entire society.

During the process of business cooperation with suppliers, the Company promptly supervises and urges partners to fulfill the social responsibilities of the enterprises and protect the occupational health and safety of employees, and guides the suppliers and partners to carry out regular safety inspections, safety training, emergency drills and other activities. The Company actively carries out knowledge learning and exchanging activities for the suppliers and business partners in laws and regulations, social environment and other aspects.





Employee Development

- Employment Practices
- Employee Growth
- Employee Care

New Tianshan has always viewed people as the most precious resource of enterprise development. Based on the concept of "To be people-oriented and grow together with our people", the Company integrates human resources strategy into company's development strategy. People are the bases and guarantees for rapid and high-quality development at the same time. With principles of "systematization, standardization, digitization, elaboration", qualified personnel management efficiency of New Tianshan has been improved comprehensively and an iron army of qualified personnel in the cement industry has thus been established, providing first-class qualified people and organizational guarantees for New Tianshan's goal of ranking at the foremost of this industry.





(I) Employment Practices

The Company always respects and safeguards employee's legitimate rights and interests, always adheres to the principle of equal employment with openness and fairness and is against employment discrimination. Either child labor or force labor is strictly prohibited. We attaches great importance to collective and diversified development of employees, establishes a complete employee promotion channel system and communication mechanism, providing employees with a platform to fully display themselves and especially focusing on equal development opportunities for female employees.

Strict Employment Practices

New Tianshan strictly abides by laws and regulations related to salary and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination and other welfare benefits that have a significant impact on the Company, which include but not limited to Labor Law of the People's Republic of China, Labor Contract Law of the People's Republic of China, Employment Promotion Law of the People's Republic of China on Protection of Minors and other laws and regulations in China and the country where the operation is located. The Company always respects and safeguards employee's legitimate rights and interests.

During the process of recruitment and hiring, the Company always adheres to the principle of fair competition and be selected on merit, formulates and implements a standardized personnel management system. According to the rules and regulations such as "Recruitment Management Measures", "Labor Contract Management Measures", "Leave and Attendance Management Measures", etc., the Company strictly regulates the employee management procedures in recruitment, dismissal, working hours, contract operations and other aspects, effectively safeguarding employees' rights and interests. Identity information of our candidates has been closely scrutinized to prevent child labor. If any existence of child labor has been discovered, it shall be handled promptly according to relevant laws and regulations.

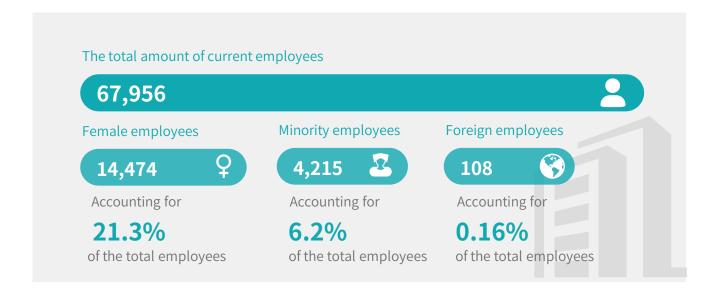
The Company clearly specifies employees' working hours, annual leave and other leave hours to guarantee their rights to rest and leave. Management procedures of employees' leave and rest have also been improved. For overtime employees, overtime payments will be paid in accordance with relevant management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

The Company reasonably regulates the dismissals in accordance with relevant regulations to protect the legitimate interests of both the Company and employees. Accurate and authentic personal information is required to be provided by all new employees. Candidates whose materials or information are found to be false will not be hired. And employees whose materials or information are found to be false, their qualifying periods or labor contracts will be terminated.

Promote Equal and Diversified Development

The Company actively expands the national and overseas business markets, always adheres to the principle of equal employment with openness and fairness, be against on employment discrimination based on age, sex, race, ethnicity, religion, sexual orientation and other aspects, ensuring employees' vital interests. As of the end of the reporting period, the total amount of current employees is 67,956, among which female employees are 14,474, accounting for 21.3% of the total employees; Minority employees are 4,215, accounting for 6.2% of the total employees; Foreign employees are 108, accounting for 0.16% of the total employees.

The Company respects and protects female employees' rights and interests in accordance with law, strictly abides by Special Provisions for the Work Protection of Female Employees, Regulations on the Working Scope Banned for Female Employees and other related rules and regulations and offers equal pay for equal work to both male and female employees. Meanwhile, we encourage female employees to develop their own leadership and take up management positions, and ensure that female employees have equal rights with male employees in terms of job promotion, professional technology and skills training and welfare benefits. As of the end of the reporting period, the total amount of company and all level companies' senior management is 1,172, among which female managers are 39, accounting for up to 3.3%.



Protect Employees' Rights and Interests

The Company establishes and improves the "Management Measures for Employee Salary and Benefits", "Management Measures for Employee Recruitment" and other internal employment regulations, and clearly specifies regulations on salary structures, salary management, welfare benefits, statutory holidays and holiday pay, providing employees with competitive salary and welfare benefits, including fully paid five social insurance and one housing fund.

The Company is devoted to constantly optimize the current salary system, build a unified, normative and standard salary management system and improve the salary incentive system with market-based salary incentive as its core and mid-and-long term incentive as its main pillar. Employees' salary shall be determined based on their post value, personal abilities and performance results. Based on the principles of regarding the benefit and efficiency at first, salary distribution shall be linked to benefit and efficiency. Tap people's potential and creativity to the full by strengthening performance-oriented salary distribution.

The Company will pay social insurance charges for employees in accordance with the laws and regulations, including endowment insurance, employment injury insurance, medical insurance, unemployment insurance, maternity insurance and housing fund. It will strictly abide by "Management Measures for Employee Salary and Benefits" and other internal administrative regulations to pay employees' post performance salary. Meanwhile, employees' rights to leave and rest are ensured in accordance with Management Measures on Leave and Attendance, which include but not limited to sick leave, personal leave, wedding leave, maternity leave, paid annual leave and statutory holidays. Over-time payment will be made for employees who exceed legal working hours.

Establish Communication Channels

The Company listens to employees' concerns and creates democratic and fair working atmosphere for them. The democratic management system in enterprises with workers' congress as its fundamental form has been improved. Formally holding the workers' congress is conducive to the realization of people's rights to know, to participate, to be heard and to oversee. Employees' valuable suggestion channels are kept open and the proposal system of representatives of the workers' congress is implemented to actively foster harmonious industrial relations. As of the end of the reporting period, the trade union included 67,549 employees, with union membership rate of 99.4%.

Case: Xinjiang Cement Trade Union Achieved Remarkable Success in Communication



Xinjiang Tianshan Cement Co., Ltd. upholds and improves democratic management in enterprises with workers' representatives congress as its base. Trade union at all levels continue to improve organizational structure, formally hold the workers' representatives congress and insist on fulfilling duty and power requirements of the congress. And employees' valuable suggestion channels are kept open. During the reporting period, Xinjiang Tianshan Cement Co., Ltd. and its subsidiaries held 38 workers' (representatives) congress. A total of 60 issues on suggestion right and 83 issues on passing authorization were deliberated; 45 issues on right of supervision and evaluation and 19 issues on democratic suffrage were discussed. Meanwhile, Xinjiang Tianshan Cement Co., Ltd. continues to keep factory affairs open and trade unions at all levels carry out the three-level factory affairs disclosure of "team, workshop and company' step by step. With the help of Tianshan official account, Tianshan Zhengji app, company OA, and bulletin board, the Company publicized 381 issues on major corporate matters and various matters involving the interests of employees, which fully guaranteed employees' rights to participate in the development of the Company and the rights to know about important matters. This will help them fully understand the actual development of the Company and strengthen their senses of belonging.



Keep Promotion Channel Access

New Tianshan built an individual sequence of competency model, leadership competency model, and key qualified personnel professional competency model in the Company headquarters, regional companies and its subsidiaries. By following the four major principles, namely introduced systematically, selected competitively, cultivated comprehensively and assessed incentively, a professional platform for qualified personnel management at all levels shall be rational and orderly built step by step to meet short-term and long-term qualified personnel needs for business development. Also, the Company strengthened the construction of a dual-channel system for career development, bringing value to the enterprise, the industry and the employees themselves. The Company performed annual performance evaluation and assessment for all regular employees, hereby making reasonable arrangements on their promotions and salary adjustments

(II) Employee Growth

Professional skills trainings for employees have always been our top priority. By learning from advanced experiences on employee growth and combining with our own developmental features, we established a multi-channel, multiform, multilevel employee growth training platform with special emphasis. Our training method is mainly internal trainings, supplemented by external trainings. With "giving priority to safety and environmental protection, management improvement and skill improvement" as the overall strategy, we build and improve training management policies and training management system, for example, conducting trainings on team building, ability enhancement, skills operation, new employees, security and emergency management and so on.

The Company opened up training class of special topics for different trainees, such as TPM training course for all employees, advanced course for marketing, courses for academic qualifications promotion, courses for ability enhancement (e.g., manufacturing techniques, electric automatization) and other courses. The Company encourages educational resources to be shared and establishes a unified training system to support self-directed training among employees. The Company also encourages employees' to be active learners and provide supports and guarantees for employees' re-education, re-training, and re-learning in terms of training investment and incentives. During the reporting period, the Company carried out a total of 2,366,115 hours of training for all employees, including 1,378,944 hours of security and environmental protection trainings, 630,296 hours of operation skill trainings, 299,271 hours of management trainings, and the average training hours for all employees are 35.

Case: Southwest Cement Carried Out "Everyone is the Host" Training Activities in Management Team



In April 2022, to further innovate our training system and empower high-quality development of the Company, Southwest Cement actively carried out "Everyone is the Host" training activities in management team. "Everyone is the Host" training activities promotes learning through lectures and promotes practices through lectures. Keynote speaker are from subsidiaries' management team and their topics focused on safety, technology, quality, electrical, mechanical and other professional knowledge. By combining theory explanation with analysis of practical cases, universal problems existed in production and operation have been pointed out and practical and inclusive training can be carried out.

(III) Employee Care

People have always been the most valuable asset of enterprise development. We pay high attention to the protection of employees' physical and psychological health and the improvement of their benefits. By providing targeted assistance to employees in need and carrying out employee protection and care activities, the Company actively strengthens the team cohesion as well as employees' senses of belonging and well-being.

Value Employees' Physical and Psychological Health

We value employees' physical and psychological health and carry out various fun activities to enrich their lives and arouse their work enthusiasm, thereby strengthening our team cohesion. During the reporting period, a total of 4,049 employee activities were held and organized by the Company. The number of activities organized by relevant industry associations (provincial above) reached 141. And a total of 107,952 employees participated in various activities in this year.

Case: Speech Contest on "Congratulatory Letter and I"



In August, 2022, the speech contest on "Congratulatory Letter and I" was successfully held in Nanchang, Jiangxi province. This event aimed to welcome the opening of the 20th National Congress of the Communist Party of China, honor the fifteenth anniversary of *Congratulatory Letter* recognized by President Xi Jinping and further promote youth mental culture improvement projects, reflecting the spirit of seizing the day and living it to the fullest embodied in New Tianshan league members, encouraging the youth to be brave to take on heavy responsibilities on enterprise reform and development, and eventually bringing youth power to the cause of New Tianshan ranking at the foremost of this industry.



Activity Photos of Speech Contest on "Congratulatory Letter and I"

Case: Zhejiang Cement "Welcome the National Day and 20th CPC National Congress" Fitness Running



On September 29, 2022, Sanming South, a subsidiary of Zhejiang Cement, organized and carried out "Welcome the National Day and 20th CPC National Congress" fitness running at Tongluo Mountain Trail in Qingliu County, Sanming City, Fujian to celebrate the 73rd anniversary of the founding of the People's Republic of China and welcome the successful convocation of the 20th National Congress of the Communist Party of China with practical actions.



Activity Photos of Sanming South Fitness Running 2022

The Company pays high attention to and safeguards female employee' rights and interests, organizes various activities for female employees, strengthens the promotion of women' s equal rights, and protects the well-being of female employees. For example, it organizes special activities for female employees and distributes exclusive holiday gift packages on the Women' s Day.

Case: Zhonglian Tongli Carried Out Recreational and Sports Activities on Women's Day



On March 8, 2022, Zhonglian Tongli held various fun cultural and sports activities with the help of trade union of the enterprise, including rope skipping, musical chair, Pitch Pot (Touhu), CD tug-of-war, etc., enabling female employees enjoyed a happy Women's Day.





Zhonglian Tongli Pitch Pot (Touhu) Activity on Women's Day 2022

Case: CUCC Carried Out "Taste Life and Happiness from Baking" Activity on Women's Day



On March 8, 2022, the labor union committee of CUCC Nanjing, affiliated to CUCC, held "Taste Life and Happiness from Baking" DIY activities on Women's Day. Professional pastry chefs were invited to give demonstrations and related guidance. After listening attentively, the participants worked together to make some semi-finished cakes and fondant with cute patterns. That day was lively and extraordinary.





Baking Activities Held by CUCC Nanjing on Women's Day 2022

The Company attaches great importance to the care and assistance of employees in need, disabled employees and retired employees. Through regular visits, it will carefully verify the difficulties that employees have met and realize targeted assistance. During the reporting period, New Tianshan visited and helped 2,550 special employees and those who is in need, with a total expenditure of 3.17 million yuan; The number of assistance to children's education of the difficult employees or enrollment scholarship for employees' children reached 627, with a total expenditure of 688 thousand yuan; It also helped 627 critically ill employees, with a total expenditure of 572 thousand yuan.



Social Contribution

- Rural Revitalization
- Social Investment
- Public Welfare Programs

As a responsible corporate citizen, New Tianshan pursues self-development while gives back to the society generously, which includes actively engages in programs for public good, earnestly implements political and social responsibilities of state-owned enterprises and tries to create greater value for the society.

During the reporting period,



A total of **76** assistance programs were carried out by the company

with a total public welfare investment of

65.70 million yuan



(I) Rural Revitalization

To help people lift themselves out of poverty by taking targeted measures, New Tianshan innovatively builds a pattern called "1234", that is one common goal, two responsibilities, three proper establishments and four highlights. Our primary-level workers lead farmers to develop distinctive industries and offer them with some job opportunities, trying to promote the progress of rural revitalization.

One "Goal"

 Grasp party building, ensure stability and promote poverty alleviation

Two Responsibilities"

- Subcontracting responsibilities of party committee members
- Main responsibility at the grassroots level

Three "In Place"

- Selecting people in place
- Responsibility in place
- Guarantee in place

Four "Priorities"

- Focus on employment support
- Focus on industrial support
- Focus on livelihood improvement
- Focus on "will and wisdom" double support

Industrial Assistance

New Tianshan carried out targeted poverty alleviation by developing industries according to local conditions, leading the farms to affluence. Grass-roots cadres committed to continually introduce new varieties, develop new technologies and cultivate agricultural-based dominant industry to create more jobs locally and increase agricultural production efficiency as well as farmers' income, finding a way to realize rural revitalization with the help of distinctive agriculture.



Our grass-roots cadres lead villagers to cultivate and plant native melon.

Educational Assistance

Our grass-roots cadres fully understand the needs of villagers, launch the technical trainings through various practical agricultural courses for different requirements, invite technical experts to demonstrate how to plant step by step and do good things as well as practical things as we can, increasing the technology level of scientific agriculture and lead the villagers to affluence.





Resident cadres explain the dos and don'ts of cowpea cultivation

E-commerce Assistance

We actively respond to the government calls on "Promote the Development of E-commerce and Express Logistics & Distribution in Rural Areas" and actively boost the construction of "Express Going Rural" program. This program offers efficient and convenient free express services to villagers, and gradually form a positive operation mode with low costs, laying a solid foundation for future e-commerce development.



E-commerce Service Center of Tuopuluke Village, Aksu City, Aksu Prefecture, Xinjiang, China

Employment Assistance

Our grass-roots cadres propose solutions for generating profits and increasing production based on the villagers' actual situations, develop rural economy vigorously and tackle the problem of employment of the residents, making positive contributions to keep the city's fundamentals of the employment stable.



Villagers present a banner to the Company's team in the village

(II) Social Investment

Over the years, New Tianshan has actively engaged in social construction, displayed the responsibilities of an outstanding enterprise and fostered a good and healthy company image. The Company proposes a unified three-principle slogan: "Contribute to local development, cooperate with local enterprises, and get along well with local people". Being adhere to its original intention, the Company continues to engage in social investments, and promote comprehensive local development.

Promote Cultural Education

Our volunteers implemented "Shan Jian" Colorful Class in Xinqi Village, Jingyuan County, Ningxia in August, 2022. Spot connection was implemented between local village students and students in Nachitete Primary School donated by a Zambia Company, one of our subsidiaries, and greeted with each other both in English and Chinese. This activity facilitate intercultural communication, broaden the horizons of students and improve their comprehensive quality.





"Shan Jian" Colorful Class

Spot connection in "Shan Jian" Colorful Class

Provide Assistance to People in Need



- We carried out condolence activity called "Condolence to the Lantern Festival shall Bring Warmth to People in Need" during the Lantern Festival of 2022. Company employees on the resident working teams with those from Yengisar County Civil Affairs Bureau went to the homes of partnered villagers with festival benefits and communicate with each other deeply. The grass-roots Party organization of the Company paid kind attention to local villagers and understood their living conditions, which further enhances the cohesion and centripetal force of the grass-roots party organizations.
- Southwest Cement carried out agricultural assistance programs, including purchased 100 thousand yuan
 of agricultural and sideline products from Dêrong County, Ganzi Prefecture, and purchased 238 thousand
 yuan of agricultural and sideline products from the public welfare "Hebaodan" platform of the
 Company, and be awarded as "Loving Care Enterprise" by Sichuan Provincial Department of Housing
 and Construction and Sichuan Provincial Construction and Building Materials Trade Union.
- Xinjiang Tianshan Cement Co., Ltd. actively engaged in local constructions of public infrastructures, including road constructions, courtyards renovations, assisted constructions of schools and hospitals and other programs. Drinking equipments donated and built by the Company completely solved the problems of drinking water safety and farm irrigation, which were troubled by several generations of local residents.
- In September 2022, a total of 12 subsidiaries of Southwest Cement, including Lisen Group, a subsidiary of Southwest Cement, donated 6 million yuan to the earthquake-severely-stricken areas such as Luding County and Shimian County, Garze Tibetan Autonomous Prefecture, Sichuan Province, providing assistance to post-earthquake relief work.

Improve Medical Environment

- Medical personnels, organized by the Company, carried out free clinics and medical consultation for the local farmers, and answered villagers' questions in detail. Villagers' health awareness had been improved and the probability of occurrence and prevalence of various infectious diseases had been reduced through "Zero Distance" medical services.
- CUCC carried out "Party Members Going into Community Teams" and worked with the government in community healthcare work.
- Two subsidiaries of Southwest Cement assisted local government in healthcare work, and donated 120,000 yuan of money and supplies to support local healthcare work.
- Sanshi Material donated money and materials to local charity federation and local government, and built a volunteer vanguard team for local healthcare as support.



Promote Economic Growth

- The Zambia Company, one of our subsidiaries, purchased local original burning materials to support the development of local suppliers.
- When the Nigerian Company, one of our subsidiaries, was established, the Company signed Community Development Agreement (CDA) and Chief Service Agreement in Ijeb Mining Area with local village community within the mining area, to promote local economic growth.

(III) Public Welfare Programs

New Tianshan Cement has actively engaged in public welfare activities, carried out varied activities for public good, shown concern for the rights and interests of vulnerable groups, making the power of enterprises count.

The Company makes earnest efforts to promote public good and charity, actively participated in overseas public welfare donation undertakings, established the "Administrative Measures for Overseas Donations", giving priorities to unpredictable natural disasters and social public welfare undertakings that can promote social developments.

Volunteers groups were established across the Company and its subsidiaries and activities such as voluntary blood donation, visiting the elderly, visiting the left-behind children and assisting the impoverished students were conducted to display the power of enterprises. A total of 87 volunteers groups were established during the reporting period, with 3,833 corporate volunteers. A total of 131 activities related to the protection of the rights and interests of women, children or the disabled were engaged or supported all year, with 17,445 hours of volunteer activities and 407 thousand yuan in voluntary services.



Voluntary Blood Donation



Visit the Elderly in Nursing Home



Visit the Left-behind Children



Activities to assist the impoverished students

Appendix

103

I ESG Performance

#	Key performance indicators	Unit	2022	2021
Environ	mental Protection			
Greenho	use gas emissions			
1	Total greenhouse gas emissions ¹	Tonne	187,382,300	215,371,680
1.1	Direct emissions (Scope 1)	Tonne	176,990,442	/
1.2	Indirect emissions (Scope 2)	Tonne	10,391,858	/
Resource	e utilizations			
2	Total coal consumption	Tonne	30,220,942	35,446,027
3	Total natural gas consumption	m³	4,451,800	7,001,209
4	Total power consumption	MWh	21,555,104.80	24,123,818.39
5	Purchased electricity consumption	MWh	14,771,652.80	17,688,508.65
6	Total purchased heat consumption	MWh	0	0
7	Installed capacity of waste-heat power generation system	MW	1,873.80	1,946.50
8	Waste heat power generation consumption	MWh	6,765.08	7,740.35
9	Total water consumption	Tonne	85,135,405	97,866,227
10	Recycled water utilization rate of clinker-producing cement companies ²	%	92.45	83.72
11	Reusing rate of the treated wastewater for commercial concrete business	%	100	/
12	Cement packing bags ³	Number	1,110,935,064	1,348,331,800
13	Quantity of recyclable cement packaging bags	Number	23,556,228	/
Emission	n - Pollutant Emission			
14	Nitric oxide (NOx) emission ⁴	Tonne	61,630	88,030
15	Total emission of sulfur dioxide (SO ₂)	Tonne	4,525	6,517

#	Key performance indicators	Unit	2022	2021
16	Industrial particulate matter emission	Tonne	7,113	10,151
17	Chemical oxygen demand (COD) emission	Tonne	0.80	1.39
18	Proportion of companies meeting noise level standards	%	100	100
Emission	- Solid Waste			
19	Self-produced hazardous solid wastes	10,000 t	0.24	0.18
20	Self-produced non-hazardous solid wastes	10,000 t	168.27	260.44
21	Self-processed non-hazardous solid wastes	10,000 t	166.08	246.48
22	Absorbed and discharged volume of solid wastes	10,000 t	7,657.81	9,373.04
22.1	Consumed volume of solid wastes	10,000 t	7,139.70	/
22.2	Discharged volume of solid wastes	10,000 t	137.45	/
22.3	Others for disposal	10,000 t	380.66	/
Effect(s)	on biodiversity			
23	Land area affected by business operations	m²	11,132,500	9,543,900
24	Restored land area	m²	7,613,200	7,156,200
25	Green mine construction and ecological restoration projects	Number	28	/
26	Investments on green mine construction and ecological restoration projects	RMB 10,000	7,557	/
27	Number of national green factories	Number	88	46
27.1	Concrete Green Demonstration Factory	Number	62	/
28	Number of national green mines	Number	38	40
29	Number of provincial green mines	Number	78	69
Society (S): Health and Safety			
30	New cases of occupational diseases	Number	0	/
31	Serious injury rate per thousand persons	%	8.0	/
32	Accident rates of minor and serious injuries	%	0.06	/

2022 Environmental, Social and Governance (ESG) Report

#	Key performance indicators	Unit	2022	2021
33	Investments on safety production	RMB 10,000	80,000	/
34	Lost work days due to work injuries	Day	30,000	24,000
35	Number of people participated in occupational health and safety trainings	Person-time	1,068,530	123,231
36	Near accident rates of full-time employees	%	0.02	0.03
37	Near accident rates of contractual personnels	%	0	0.01
38	Number of work-related fatality	Person-time	5	4
39	Death rate per thousand people	%o	0.07	0.02
40	Number of companies with zero deaths		492	/
41	Portion of companies with zero deaths	%	99	/
Certificat health	ions related to safety and occupational			
42	Accumulated number of factories at safety standardization level I (including those pending review)	Number	94	/
43	Accumulated number of factories at safety standardization level II	Number	121	/
44	Accumulated number of factories at safety standardization level III	Number	192	/
45	Accumulated number of companies with occupational health and safety management system certification	Number	418	/
Society (S): Employee Development			
46	Total number of employees	Number	67,956	70,829
Total nur	nber of employees by gender			
47	Male	Number	53,482	54,110
48	Female	Number	14,474	16,719
Total nur	nber of employees by employment type			
49	Long-term	Number	65,089	65,189
50	Short-term	Number	2,867	5,640
Total nur	nber of employees by age			

#	Key performance indicators	Unit	2022	2021
51	Employees who under 30 years old	Number	6,795	6,720
52	Employees who between 30 to 50 years old	Number	43,493	45,947
53	Employees who above 50 years old	Number	17,668	18,162
Total nui	mber of employees by region			
54	Mainland China	Number	67,848	70,812
55	Region of Hong Kong, Macau, and Taiwan	Number	0	C
56	Overseas	Number	108	17
57	Proportion of women in senior management of the Company	%	3.3	/
Employe	e activities			
58	Number of employee activities held and organized annually	Number	4,049	1,238
59	Number of times participated in various activities organized by relevant industry associations (above the provincial level)	Number	141	54
60	Number of employees participated activities in the year	Person-time	107,952	77,652
Employe	e Care			
61	Comforting special employees and helping employees with difficulties in a year	Person-time	2,550	3,607
62	Total expense on comforting special employees and helping employees with difficulties	RMB million	317	381
63	Number of assistance to children's education of the difficult employees or enrollment scholarship for employees' children in a year	Person-time	627	880
64	Total expense on offering grants to the children of employees with difficulties to go to school or rewarding the children of employees to go to school	RMB million	69	153
65	Helping employees with critical diseases in a year	Person-time	186	215
66	Total expense on helping employees with critical diseases	RMB million	57	75

2022 Environmental, Social and Governance (ESG) Report

#	Key performance indicators	Unit	2022	2021
Society (S): Social Contribution			
Social We	elfare			
67	Amount of public charity investment (including material donations)	RMB million	6,569.84	3,242.66
67.1	Amount of targeted assistance/rural revitalization investment (including material donations)	RMB 10,000	3,276	2,153
67.2	Amount of educational investment (including material donations)	RMB 10,000	231	/
67.3	Amount of medical care and public health investment (including material donations)	RMB 10,000	168	/
67.4	Amount of infrastructure construction investment (including material donations)	RMB 10,000	1,107	/
67.5	Other donations	RMB 10,000	1,787.84	1,089.66
68	Number of industrial assistance projects	Number	76	10
Public We	elfare Programs			
69	Number of established volunteer organizations or groups	Number	87	64
70	Number of volunteers among employees	Number	3,833	4,321
71	Hours of volunteer activities	Hour	17,445	17,143
72	Total investment of all subsidiaries' annual support in volunteer activities from the Company in a year	RMB 10,000	40.7	49.6
73	Number of participations in or support activities related to the protection of the rights and interests of women, children or the disabled	Number	131	77
74	Number of established special scholarship projects	Number	2	4
75	Number of universities and colleges covered by the scholarship	Number	14	22
76	Total amount of scholarship	RMB 10,000	2.8	13.2
77	Number of students received scholarships	Number	20	24

#	Key performance indicators	Unit	2022	2021
78	Number of entrepreneurial practice bases	Number	8	11
79	Student internship position situation	Person-day	22,597	21,081
Society	(S): Excellent Quality			
Scientific	c research and innovation			
80	Expenditure investments on scientific research and innovation	RMB million	3,749	2,768
81	National intelligent manufacturing demonstration factories	Number	1	2
82	Intelligent manufacturing demonstration factories	Number	21	9
83	Intelligent production lines	Number	48	14
84	Digital mine	Number	10	4
85	Accumulated number of patents for utility models	Number	2,474	1,258
86	Accumulated number of invention patents	Number	278	192
87	Accumulated number of design patents	Number	15	/
Supply c	hain management			
	of suppliers who have established long-term ion with the Company			
88	Total	Number	10,241	11,029
89	Mainland China	Number	10,239	11,029
90	Region of Hong Kong, Macau, and Taiwan	Number	0	0
91	Overseas	Number	2	0
	nem, the number of suppliers screened and d by the Company's environmental and social			
92	Total	Number	7,388	8,955
93	Mainland China	Number	7,386	8,955
94	Region of Hong Kong, Macau, and Taiwan	Number	0	0
95	Overseas	Number	2	0

2022 Environmental, Social and Governance (ESG) Report

#	Key performance indicators	Unit	2022	2021
Product	and service			
96	Percentage of products subject to recall for safety and health reasons	%	0	0
97	Lawsuits involving product and service safety and health	Number	0	0
98	Cement product percent of pass	%	100	100
99	Number of complaints about products and services received during the year	Number	125	225
100	Proportion of complaints responded and handled properly	%	100	100
101	Number of complaints due to the disclose of customer information	Number	0	0
Governa	nce (G): Compliance Governance			
Anti-corr	uption trainings			
102	Number of anti-corruption trainings held and organized	Number	1,269	2,178
103	The attendance rate of directors in held and organized anti-corruption trainings	%	100	/
104	The attendance rate of employees in held and organized anti-corruption trainings	%	100	/
105	Number of employees (including directors) who participated in anticorruption trainings	Person-time	52,153	64,726
106	Number of employees attending compliance governance training	Person-time	4,730	/

¹The calculation of greenhouse gas emission data is based on relevant conversion factors provided by the Guidelines for Accounting Methods and Reporting Greenhouse Gas Emissions for Chinese Cement Production Enterprises and the Notice on Doing a Good Job in the Focus of 2022 Greenhouse Gas Emission Report Management for Enterprises, and the data is measured in tons of carbon dioxide

II Indexes

Response to UN Sustainable Development Goals (UNSDGs)

Section in the Report

SDGs

Chapter One Compliance Governance

- Management and Governance for Sustainable Development
- 2. Compliance System Operation
- 3. Integrity System Building
- 4. Stakeholder Communication





Chapter Two Environmental Protection

- Addressing Climate
 Change
- 2. Green Production
- 3. Ecological Protection
- 4. Low-carbon Publicity

















Chapter Three Healthy

- 1. Security System
- 2. Security Operation
- 3. Occupational health
- 4. Security Culture





2022 Environmental, Social and Governance (ESG) Report

109

110

 $^{{}^2} Circulating\ water\ utilization\ rate = circulating\ water\ quantity/\ (circulating\ water\ quantity + other\ water\ consumption)$

³Because of the Company's business nature, the consumption of cement packaging bags is counted in "pieces"

⁴The emissions of nitrogen oxides, sulfur dioxide, industrial particulate matter and volatile organic compounds are derived from the monitoring and calculation data of the project

Section in the Report

SDGs

Chapter Four Excellent Quality

- 1. Lean Management
- 2. Transformation and Leading
- 3. Responsible Supply





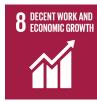


Chapter Five Employee Development雇佣规范

- 1. Employment Practices
- 2. Employee Growth
- 3. Employee Care









Chapter Six Social Contribution

- 1. Rural Revitalization
- 2. Social Investment
- 3. Public Welfare Programs









III Feedback

Dear Reader:

Thanks for your time! Thanks for reading Xinjiang Tianshan Cement Co., Ltd.' s 2022 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.

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



You could also provide your valuable comments or suggestions via telephone, email or express delivery. Our contact information is as follows:

Name: Ye Hong

Address: China National Building Material, No. 70, Expo Hall Road, Pudong New Area, Shanghai

Tel: 021-68989175

E-mail: tsgfyehong@126.com

