



**中國天瑞集團水泥有限公司**

**CHINA TIANRUI GROUP CEMENT COMPANY LIMITED**

(於開曼群島註冊成立的有限公司)

股份代號：1252

**2024**

**ENVIRONMENTAL, SOCIAL AND  
GOVERNANCE REPORT**

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# 1. ABOUT THIS REPORT

## About the Group

The main scope of business of China Tianrui Group Cement Company Limited (Stock Code: 01252) (“the Company” and with its subsidiaries, collectively referred to as “the Group,” “we,” or “us”) is the mining and utilisation of limestone, and the production and sale of building materials such as cement, clinker and construction aggregates. As at 31 December 2024, the Group has 20 clinker lines and 58 cement grinders, with clinker, cement and aggregates annual production capacity of approximately 28.4 million metric tonnes, 56.4 million metric tonnes, and 30.2 million metric tonnes, respectively.

The Group has established relevant policies and a management framework recognized internationally to achieve control of environmentally responsible and quality-driven operations. The Group has been committed to sustainable business that balances important environmental, social, and governance (“ESG”) issues through continuous refinement of frameworks and regular reviews of key performance indicators.

<div>The approximate annual clinker production capacity</div> <div>28.4 Million tonnes</div>	<div>The approximate annual cement production capacity</div> <div>56.4 Million tonnes</div>	<div>The approximate annual aggregate production capacity</div> <div>30.2 Million tonnes</div>
<div>Clinker production line</div> <div>20 Lines</div>	<div>Cement grinding</div> <div>58 Sets</div>	<div>2024 Revenue</div> <div>6,117,025 Thousand RMB</div>



## Overview

This Environmental, Social, and Governance Report (the Report) outlines the Group's ESG management approach, strategy, and structure and demonstrates its commitment to sustainability, related initiatives, performance, etc., to provide stakeholders with more non-financial information and to facilitate their understanding of and participation in the Group's sustainability process. The Group adheres to the ESG concept of sustainable development and is committed to handling the Group's ESG affairs effectively and responsibly as part of our business strategy. This is a core part of our business because we believe it is key to our continued success in the future.

## Reporting Scope

The scope of this ESG report covers the Group's main production areas, covering the cement, limestone aggregate and clinker business, in Henan, Liaoning, Anhui and Tianjin areas, with Henan and Liaoning accounting for the largest portion of our business.

## Basis of Preparation of Report

This report is prepared in accordance with Appendix C2 Environmental, Social and Governance Reporting Guide (ESG Guidelines) of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Listing Rules"), and the Sustainability Reporting Standards (GRI Standards) of the Global Reporting Initiative (GRI), and also make references to standards issued by China Cement Association, T/CCAS 002 Guidelines for Cement Corporate Social Responsibility Report Writing and T/CCAS 001 Cement Corporate Social Responsibility Guidelines, and this report is prepared in compliance with the industry's prevailing standards for social responsibility disclosure and is based on the industry background to highlight the Group's characteristics.

# Reporting Principles

In preparing this report, the Group adopted the reporting principles in the ESG Guidelines, as follows:

Reporting Principle	Meanings	Our response
Importance	When the board determines the impact of ESG matters on investors and others issuers should report when stakeholders have significant influence.	The Group believes that ESG reporting has a significant impact on investors and stakeholders. During the twelve months ended 31 December 2024, we identified major issues through materiality assessment based on the communication mechanism with stakeholders and the principle of materiality and listed the confirmed major issues and the corresponding measures are the focus of the preparation of this report.
Quantitative	Key performance indicators should be disclosed in a measurable manner, and information on the standards, methods, assumptions or calculation tools used to report emissions and energy consumption, as well as the sources of conversion factors used, should be disclosed.	This report discloses key performance indicators in a quantitative manner, has added supplementary explanations to the disclosed data, and has explained the standards, methods, assumptions or calculation tools used for emissions and energy consumption, as well as the sources of the conversion factors used. and make effective comparisons where appropriate.
Balance	ESG reports should be presented impartially and avoid selections, omissions, or presentation formats that could inappropriately influence the decision-making or judgment of report readers.	This report discloses the challenges faced by the Group in terms of sustainable development. and efforts made to objectively reflect the Group's operations.
Consistence	Issuers should use consistent disclosure statistics to enable meaningful comparisons of ESG information in the future. Cooperate with the requirements for discussion of ESG matters in the "Business Review" section of the directors report.	The reporting scope and preparation method of this ESG report are basically the same as those of the previous year, and data with changes in disclosure scope and calculation method are explained.



## Reporting Period

This report covers the Group's ESG related initiatives and measures taken for the twelve months from 1 January 2024 to 31 December 2024 (the "Reporting Period").

## Information Sources

Information is routinely gathered by the Group using internal systems. The primary sources of information cited in this report are statistical data, pertinent documents, official websites, and internal communications from the Group. The report's contents will be supervised by the board of directors to make sure no fraudulent records, misleading statements, or significant omissions are included.

## Forward-looking Statement

The report includes forward-looking statements that are not promises of future performance, but rather reflect the Company's and its subsidiaries' current expectations, estimates, forecasts, and assumptions about their respective businesses and markets. Risks associated with the market, unforeseen circumstances, and other factors beyond the control of the Company may have an impact on our performance. As a result, actual outcomes and returns could be different from the report's assumptions and assertions.

## Definitions

**Unless specified otherwise, this report includes:**

- The acronyms for China Tianrui Group Cement Co., Ltd. are "China Tianrui Group Cement Co., Ltd.," "the Company," "our Company," "the Group," or "we."
- The Stock Exchange of Hong Kong Limited is shortened to the Stock Exchange.
- The acronym for "Environmental, Social, and Governance" is "ESG."

## To Obtain the Report

The electronic version of this report can be downloaded from the website of Hong Kong Stock Exchange ([www.hkexnews.hk](http://www.hkexnews.hk)) and the website of the Company ([www.trcement.com](http://www.trcement.com)).

## Stakeholders' Feedback

The Group welcomes any comments and suggestions regarding this report. Please send an email to [ir@tianrui.com](mailto:ir@tianrui.com) or [ir@ctr cement.com](mailto:ir@ctr cement.com) to provide your feedbacks.

# 02

## STATEMENT OF THE BOARD OF DIRECTORS





## 2. STATEMENT OF THE BOARD OF DIRECTORS

The Group is fully aware of the importance of good corporate governance, including the governance of ESG related matters that are critical to sustainable development. The Board of Directors of the Company (the “Board”) has reviewed and approved this report and is convinced that the contents of this report are true, accurate, and complete.

The Board is ultimately in charge of the organization’s ESG management policies, strategies, and reports since it is the highest decision-making body in the Group. The Board is in charge of determining the Group’s risk level and risk tolerance level, and reviewing the Group’s risk management and internal control frameworks, as well as ESG policies and guidelines to guarantee successful implementation.

The Board prioritizes and manages important ESG matters (including risks to the Group’s business) through analysis, identification, evaluation, confirmation, and review. The Board actively participates in relevant training to understand the latest developments in important ESG issues and will consider inviting relevant experts to participate in the Board when corresponding situations arise to enhance the relevant experience of the existing board of directors. The Group’s major operating units have working groups that set ESG goals and regularly review the effectiveness of the plans. By formulating strategies, the Board gives operating units a clear direction to formulate goals, plans, and actions, and regularly reviews the effectiveness of the plans. The working group will regularly monitor and collect ESG information and report to the Board every six months to one year. It will also report to the Board from time to time the significant ESG risks and opportunities that may exist in the Group. The Board regularly reviews strategies and progress and reviews ESG reports to ensure that the Group’s development direction and disclosure standards meet the expectations of stakeholders in ESG related areas.

Risk management in ESG-related areas is critical to the Board. The Board and its audit committee evaluate relevant risks through communication with different stakeholders and extensive understanding of the business and incorporate relevant risks into the risk management and internal control systems to promote comprehensive risk management within the Group.

The Group will disclose in detail the Group’s supervision of ESG matters, ESG management policies and strategies, ESG related goals and progress reviews, as well as the progress and results of key issues through the ESG report.

### 3. CHAIRMAN'S STATEMENT

#### Dear Stakeholders

In 2024, with the full assistance and support of shareholders, customers, and all sectors of society, the Group adhered to the sustainable development strategy and continued to be customer-centric, based on striving for innovators, relying on industry, focusing on innovation, and with the brand strategy of "Century-Long Project, Tianrui Cement". As a driving force, we must comply with industry development trends and strive to achieve comprehensive transformation and upgrading of intelligent manufacturing and green and low-carbon economies. Here, we are honored to announce in this report the important achievements of the Group in further promoting sustainable development.

The Group has been awarded the honorary title of "Centennial Craftsman Star" as a high-quality material manufacturer of China's characteristic brand enterprise in the construction industry many times. It has been selected as the leading manufacturing enterprise in Henan Province by the Henan Provincial Leading Group for the Construction of a Strong Manufacturing Province for four consecutive years.

We understand that current stakeholders are concerned about the performance of corporate sustainable development. We firmly believe that improving ESG management can regulate corporate governance, enhance brand image, reduce operating costs, improve overall market competitiveness and sustainable development capability, and promote harmonious development in communities. The Group uses its resources and the high-temperature production process of rotary kilns to harmlessly treat waste and introduce advanced production lines from Germany to establish a waste-free factory to help Xuchang City build a waste-free city. During this reporting period, Tianrui Xindeng Cement was recognised as a "Waste-Free Factory" in Zhengzhou City. At the same time, the establishment of waste heat recovery devices for the self-generation of electricity, and

the establishment of a comprehensive water resource recycling system not only saves costs but also greatly improves resource utilization efficiency. The clinker production line was retrofitted with SCR ultra-low emissions, and the emission standard thereof is stricter than the national standard. This series of energy-saving and consumption-reduction measures has created better economic and social benefits.

The cement Industry continues to implement a series of government policies, such as supply-side reform and environmental protection, and measures such as energy conservation and emission reduction, peak-shifting production, and comprehensive mine improvement. The effect of industry self-discipline has been significantly improved. The Group actively plans and rationalizes layout, strictly implements peak-shifting production, actively optimizes production procedures, and promotes green, digital and intelligent innovation and efficiency-enhancing activities, with remarkable results achieved. The Group is committed to saving energy and reducing emissions and has achieved great improvement in preventing and controlling environmental pollution. We have completed quality, environment, energy, and occupational health and safety management systems and have also obtained the "five-in-one" certification. Tianrui Yongan Cement, Tianrui Guangshan Cement, and Tianrui Yuzhou Cement were newly awarded the title of "Provincial Green Factory," respectively during the reporting period. At the end of the reporting period, the Group has a total of 14 green factories, including 8 at the national level, and 15 green mines, including 6 at the national level.

The Group attaches great importance to the innovative application and development of the new technologies. Use 5G technology to carry out smart mining project pilots, introduce driverless excavators and smart mine trucks for remote control, thereby greatly improving loading and excavation efficiency, and introduce intelligent logistics systems to develop unmanned smart solutions for the whole process of finished goods in and out of the warehouse. This series of innovative application measures promotes production upgrading and transformation, and provides employees with a healthier, safer, and more comfortable working environment, leading to the sustainable development of the industry.

The Group has established two provincial technology R&D centers in Henan and Liaoning and multiple municipal R&D centers to continue the research and development, innovation, and technological transformation of process equipment. It has successfully implemented research, development, and transformation of key technologies such as ultra-low emissions, grate coolers, ammonia-free denitrification and high-temperature fans. As at the end of the reporting period, the Group has 19 subordinate high-tech enterprises in total. The total number of A-level, B-level, and performance-leading enterprises in the Group has reached 19. Six of the Group's subsidiaries have been selected as the "Energy and Carbon Management Demonstration Enterprise" in Henan Province. Among them, Tianrui Zhengzhou Cement Co., Ltd. has been selected as the "Carbon Peak Pilot Enterprise" in Henan Province and successfully applied for Zhengzhou City's Cement Production Green Energy Conservation Engineering Technology Research Center. During the reporting period, Tianrui Nanzhao Cement was selected to be the founding unit for Henan Provincial Green Building Materials Production Comprehensive Base. The Group continues to optimize its production processes and has won numerous high-quality awards. The Group already has 21 smart factories and 26 enterprises integrating information and industrialization to implement standards. Liaoyang Tianrui Cement Co., Ltd. was awarded the title of "Smart Demonstration Factory" in Liaoning Province, was also selected for the list of "Smart Manufacturing Demonstration Factory" by the Ministry of Industry and Information Technology, and won two first prizes in the Liaoning Province Building Materials Science and Technology Innovation

Category. Weihui Tianrui Cement was awarded the title of "National Quality Benchmark Enterprise" by the China Quality Association. During the reporting period, the Henan Building Materials Industry Association launched the selection for 2024 Excellent Laboratory and Excellent Laboratory Director in the province's cement industry, in which Tianrui Cement's 9 laboratories and 10 laboratory directors were awarded the honorable titles of Excellent Laboratory and Excellent Laboratory Director, respectively.

We also participate in public welfare projects such as helping the poor, carrying out community volunteer services, and creating a stable and harmonious community environment. Among them, Tianrui Xiaoxian Cement Co., Ltd. was awarded the "Healthy Enterprise" award by the Suzhou Municipal Health Commission and the honorary title of "Xiaoxian Advanced Unit that Cares for the Next Generation and Loves Education Aid". Tianrui Xindeng Cement Co., Ltd. was awarded the honorary titles of "Advanced Unit for Respecting Teachers and Emphasizing Education" and "Zhengzhou Garden-style Unit." During the reporting period, Tianrui Zhengzhou Cement was selected as a "Zhengzhou City Healthy Enterprise".

Looking forward to the new year, we will continue to uphold the concept of sustainable development, communicate closely and work side by side with stakeholders, and strive to improve ESG management methods and actions in the hope of further improving comprehensive ESG performance. We strive to play an important role in the circular economy, spare no effort to sustainably manage raw materials and products, and continue to provide high-quality products. In the process of operating decision-making, we are committed to reducing emissions, making good use of resources, improving occupational safety and health, focusing on employee development and training, etc., to further promote the Group's mission and goals of sustainable development.

With that, we would also like to sincerely thank all factories, departments and teams for their great contributions to the sustainable development of the Group.

# 04

## SUSTAINABILITY PERFORMANCE HIGHLIGHTS



## 4. SUSTAINABILITY PERFORMANCE HIGHLIGHTS

### Environment

<p>Number of national green factories</p> <p><b>8</b> Factories</p>	<p>Number of green factories at provincial and municipal levels</p> <p><b>6</b> Factories</p>	<p>Number of national green mines</p> <p><b>6</b> Mines</p>	<p>Number of green mines at provincial and municipal levels</p> <p><b>9</b> Mines</p>
<p>Number of mine green management projects approved</p> <p><b>19</b> Projects</p>	<p>Green mine restoration area</p> <p><b>249,817</b> Square meters</p>	<p>Planting trees in green mines</p> <p><b>46,774</b> Trees</p>	
<p>Heavy pollution, weather performance rating, A-level enterprise</p> <p><b>4</b> Enterprises</p>	<p>Number of B-level enterprises</p> <p><b>7</b> Enterprises</p>	<p>Greenhouse gas emission intensity</p> <p><b>0.71</b> Tonnes of carbon dioxide equivalent/tonne of cement output</p>	
<p>Output energy intensity</p> <p><b>0.68</b> Thousands of kilowatt hours / tonnes of cement output</p>	<p>Water consumption intensity per unit product</p> <p><b>215</b> Thousand cubic meters / million tonnes of cement output</p>	<p>Water consumption intensity per unit operating income</p> <p><b>65</b> Thousand cubic meters / 100 million RMB</p>	
<p>Nitrogen oxide (NO<sub>x</sub>) emission intensity</p> <p><b>0.23</b> kg/tonne clinker</p>	<p>Sulfur dioxide (SO<sub>2</sub>) emission intensity</p> <p><b>0.03</b> kg/tonne clinker</p>	<p>Particulate matter (PM) emission intensity</p> <p><b>0.04</b> kg/tonne clinker</p>	
<p>Non-hazardous waste discharge</p> <p><b>0</b> Tonne</p>	<p>Hazardous waste discharge</p> <p><b>0</b> Tonne</p>	<p>Zhengzhou Cement Co., Ltd. is <b>the first</b> company in Zhengzhou City to implement smart mines. Smart mines improve mine car operation efficiency</p> <p><b>15%</b></p>	
<p>Improvement of efficiency throughout the entire process</p> <p><b>10%</b> ↑</p>	<p>Realize unmanned on-site operation under extreme working conditions and reduce the probability of safety production accidents ("<b>zero accidents</b>") in mine production</p> <p><b>100%</b> ↓</p>		



## Labor Hire

Employee training coverage

100%

Average hours of training for employees

30.23 Hours

Carry out environmental protection training

121 Training

Total number of participants

7,262 Participants

Total training time

605 Hours

Anti-corruption and anti-corruption training coverage

100%

Carry out antitrust and fair competition training

696 Training

Total number of participants

12,408 Participants

Total training time

2,088 Hours

Carry out intellectual property protection training

560 Training

Total number of participants

12,556 Participants

Total training time

1,680 Hours

Workers killed and injured due to work-related injuries

0 People

Work injury rate

0%

Number of working days lost due to work injury

0 Day

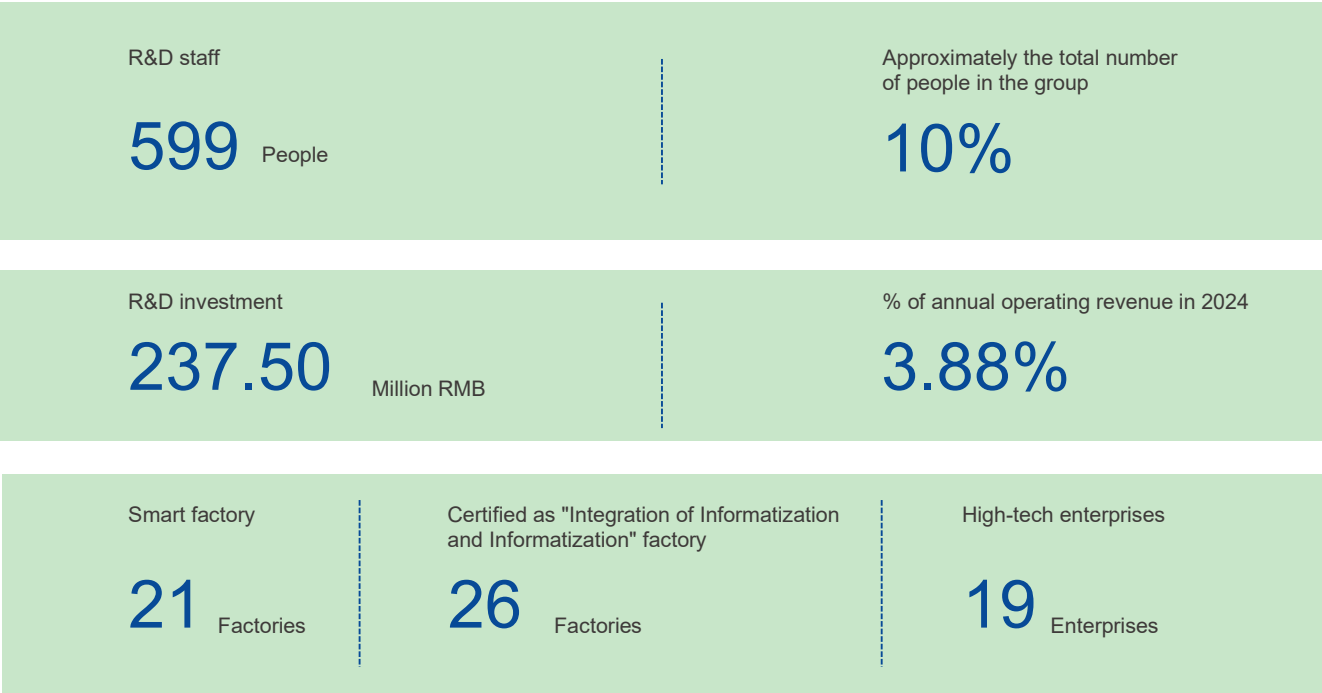
Investment in occupational disease prevention and control measures

3.42 Million RMB

Occupational disease incidence rise

0 Incidence

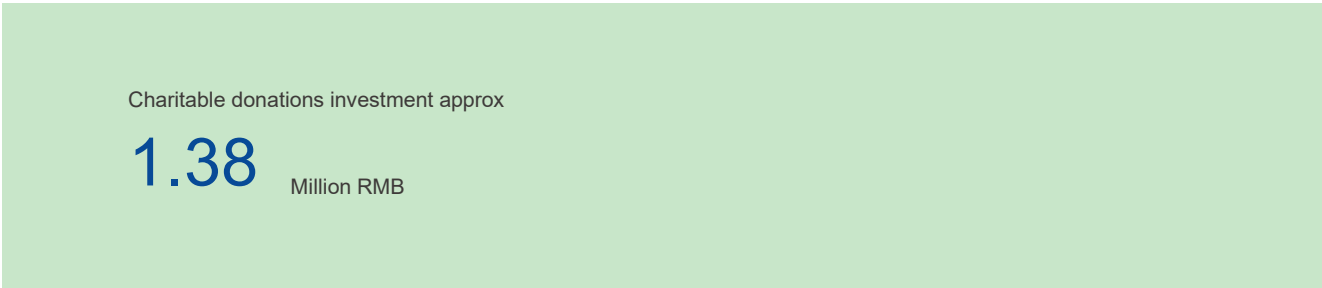
R&D



Product Liability



Community Feedback



## Awards and Recognition Summary

### ◎ Energy Saving and Environmental Protection

Awards/Achievements	Award-winning units	issuing authority
8 national green factories	Dalian Tianrui Cement Co., Ltd.; Liaoyang Tianrui Cement Co., Ltd.; Tianrui Group Zhengzhou Cement Co., Ltd.; Tianrui Xindeng Zhengzhou Cement Co., Ltd.; Tianrui Group Xiaoxian Cement Co., Ltd.; Weihui Tianrui Cement Co., Ltd.; Tianrui Group Nanzhao Cement Co., Ltd.; Tianrui Group Yuzhou Cement Co., Ltd. Qianjing Branch	Ministry of Industry and Information Technology
6 provincial green factories	Haicheng City First Cement Co., Ltd.; Yingkou Tianrui Cement Co., Ltd.; Tianrui Group Ruzhou Cement Co., Ltd.; Henan Yongan Cement Co., Ltd.; Tianrui Group Yuzhou Cement Co., Ltd.; Tianrui Group Guangshan Cement Co., Ltd.	Department of Industry and Information Technology of Liaoning Province/Henan Province
6 national green mines	Tianrui Group Nanzhao Cement Co., Ltd. East Mining Section of Qingshan Cement Gray Carbon Mining Area, Nanzhao County; Tianrui Group Zhengzhou Cement Co., Ltd. cement limestone mine in Luzhuang Mining Area, Xingyang City; Tianrui Xindeng Zhengzhou Cement Co., Ltd. Dengfeng Lijiamen Cement Limestone Mine; Tianrui Xindeng Zhengzhou Cement Co., Ltd. Renzigou Cement Limestone Mine; Dalian Tianrui Cement Co., Ltd. Yushushan Limestone Mine; Liaoyang Tianrui Cement Co., Ltd.	Ministry of Natural Resources of the People's Republic of China
9 provincial and municipal green mines	Tianrui Cement Group Co., Ltd. Zhifang Limestone Mine; Tianrui Cement Group Co., Ltd. Yunshanzhai cement limestone mine in Guangshan County; Cement limestone mine in Wangzongdian Mining Area, Xingyang City, Henan Province; Shanbi Cement Limestone and Solvent Limestone Mine of Manji Holdings Group Co., Ltd.; The first quarry of Weihui Tianrui Cement Co., Ltd.; Tianrui Cement Group Co., Ltd. Xiaoshangou Quarry; Qingsong Quarry of Tianrui Cement Group Co., Ltd.; Limestone mine for cement in Cement Tuanli Mining Area, Tianrui Xiaoxian; Sandstone mine for cement of Tianrui Group Zhengzhou Cement Co., Ltd.	Henan Province / Anhui Province Department of Natural Resources

## © Energy Saving and Environmental Protection

Awards/Achievements	Award-winning units	issuing authority
Provincial green factories	Tianrui Group Guangshan Cement Co., Ltd.	Henan Provincial Department of Industry and Information Technology
Environmental management system certification	Tianrui Group Xuchang Cement Co., Ltd.	China Quality Mark Certification Group
Founding unit for Henan Provincial Green Building Materials Production Comprehensive Base	Tianrui Group Nanzhao Cement Co., Ltd.	Henan Provincial Department of Industry and Information Technology
Henan provincial green factories	Henan Yongan Cement Co., Ltd.	Henan Provincial Department of Industry and Information Technology
Environmental management system certification	Tianrui Group Yuzhou Cement Co., Ltd.	China Quality Mark Certification Group
Environmental management system certification	Dalian Tianrui Cement Co., Ltd.	China Quality Mark Certification Group
Energy management system certification	Dalian Tianrui Cement Co., Ltd.	China Quality Mark Certification Group

◎ Product Quality

Award/Achievement Name	Award-winning units	issuing authority
2024 Excellent Laboratory	Tianrui Group Guangshan Cement Co., Ltd.	Henan Building Materials Industry Association
Good award in the 19th National Cement Chemical Analysis Comparison of the 2024 "Tianbao Huarui Cup"	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	China National Testing and Testing Holdings Group Co., Ltd., National Cement Quality Inspection and Testing Center
2024 Excellent Safety Manager in Cement Industry - Li Qiang	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	China Cement Association
Second prize for the Five-little Innovations Transformation Group in the Staff Innovation Transformation Competition	Yingkou Tianrui Cement Co., Ltd.	Yingkou Federation of Trade Unions, Yingkou Human Resources and Social Security Bureau, Yingkou Science and Technology Bureau
Good award in the 19th National Cement Chemical Analysis Comparison of the 2024 "Tianbao Huarui Cup"	Tianrui Group Yuzhou Cement Co., Ltd. Qianjing Branch	China National Testing and Testing Holdings Group Co., Ltd., National Cement Quality Inspection and Testing Center
2024 Excellent Laboratory	Tianrui Group Yuzhou Cement Co., Ltd.	Henan Building Materials Industry Association
Quality control system certification	Dalian Tianrui Cement Co., Ltd.	China Quality Mark Certification Group



## © Technological Innovation

Awards/Achievements	Award-winning units	issuing authority
Digital Transformation Benchmark for SMEs in Henan Province	Tianrui Group Nanzhao Cement Co., Ltd.	Henan Digital Energy and Carbon Management Centre
Advanced Enterprise in Science and Technology Innovation	Tianrui Group Yuzhou Cement Co., Ltd.	Ruzhou Municipal Party Committee and Municipal Government
High-tech enterprise	Weihui Tianrui Cement Co., Ltd.	Henan Provincial Department of Science and Technology
Award-winning project in Henan Province Building Materials Industry Technological Innovation Award of the 2024 “Fengbo Cup”	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	Henan Provincial Mechanical, Metallurgical and Building Materials Industry Committee, Henan Building Materials Industry Association
Henan Digital Energy and Carbon Management Centre	Henan Yongan Cement Co., Ltd.	Henan Provincial Department of Industry and Information Technology

## © Safe Production

Awards/Achievements	Award-winning units	issuing authority
Third prize in “The Ninth Domestic and Overseas Cement Industry Safety Production Technology Exchange Conference”	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	China National Testing and Testing Holdings Group Co., Ltd.

## ◎ Labor Hire

Awards/Achievements	Award-winning units	issuing authority
Occupational health and safety management system certification	Tianrui Group Xuchang Cement Co., Ltd.	China Quality Mark Certification Group
Receiver of unemployment insurance stabilisation subsidy policy specialised incentives	Weihui Tianrui Cement Co., Ltd.	Xinxiang Human Resources and Social Security Bureau
2023 advanced collective for in non-coal mines	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	Zhengzhou Emergency Management Bureau
Occupational health and safety management system certification	Tianrui Group Xuchang Cement Co., Ltd.	China Quality Mark Certification Group
Occupational health and safety management system certification	Dalian Tianrui Cement Co., Ltd.	China Quality Mark Certification Group

## ◎ Social Feedback

Awards/Achievements	Award-winning units	Issuing authority
Unit Member of Zhengzhou Narcotic Control Association	Tianrui Xindeng Zhengzhou Cement Co., Ltd.	Zhengzhou Narcotic Control Association

## ◎ Comprehensive Strength of the Enterprise

Awards/Achievements	Award-winning units	Issuing authority
Xinyang City Civilised Enterprise	Tianrui Group Guangshan Cement Co., Ltd.	Xinyang Spiritual Civilisation Construction Steering Committee
2023 Ruzhou City Excellent Enterprise (leading type)	Tianrui Group Ruzhou Cement Co., Ltd.	Ruzhou Municipal Party Committee and Municipal Government
Honorary title of advanced enterprise for employment absorption	Tianrui Group Yuzhou Cement Co., Ltd.	Ruzhou Municipal Party Committee and Municipal Government
Specializing in special new small and medium-sized enterprise in Henan Province	Weihui Tianrui Cement Co., Ltd.	Henan Provincial Department of Industry and Information Technology
Xinxiang City Excellent Enterprise	Weihui Tianrui Cement Co., Ltd.	Xinxiang Municipal Committee of the CPC, Xinxiang Municipal People's Government
Yingkou City Learning Lei Feng Activity Demonstration Site	Yingkou Tianrui Cement Co., Ltd.	Publicity Department of Yingkou Municipal Committee of the CPC
Title of "Worker Pioneer" from the All-China Federation of Trade Unions	Yingkou Tianrui Cement Co., Ltd.	All-China Federation of Trade Unions
"Gold Cup for Industrial Contribution" of Xingyang City	Tianrui Group Zhengzhou Cement Co., Ltd.	Leadership Group for High Quality Development of Manufacturing Industry in Xingyang City
Title of 2024 Advanced Unit for Tax Contribution	Dalian Tianrui Cement Co., Ltd.	Dalian Changxing Island Economic and Technological Development Zone Management Committee

# 05

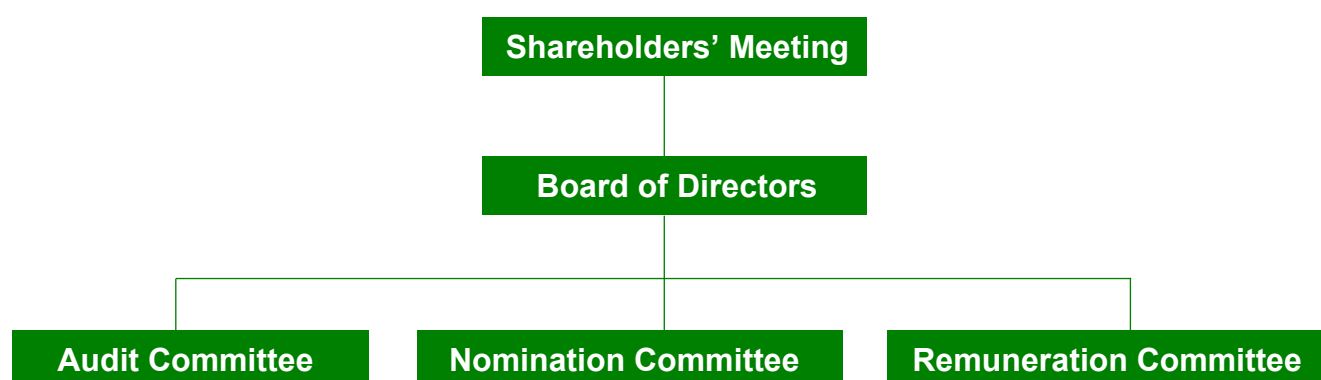
## IMPROVE CORPORATE GOVERNANCE, INSIST COMPLIANCE IN OPERATIONS



## 5. IMPROVE CORPORATE GOVERNANCE, INSIST COMPLIANCE IN OPERATIONS

### 5.1 Corporate Governance

The Group strictly complies with the requirements of the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Listing Rules, and other applicable laws, regulations, and normative documents, constantly improves the corporate governance structure, and establishes a scientific corporate management system that is standardized, operates efficiently, has clear boundaries, and has effective supervision. The Company has established a corporate governance structure consisting of the shareholders' meeting, the board of directors, and senior management.



The Group has established a three-tier management system to identify, collect, assess, respond, evaluate, and improve risk management and internal control. The three-tier management system includes (the 3rd layer) within each branch company or subsidiary, a risk management team, in charge by branch level manager, looking after the relevant functional departments and business units; (the 2nd layer) within the headquarters of the Company, a risk management office managed directly by the general manager, with the assist by the relevant functional department and the regulatory units; and (the first layer) our internal audit structure, the executive department of specific supervision functions, supervised by the Company's board of directors and the audit committee under the board of directors. The risk management team, under the guidance of the issued risk management manual, conducts daily risk identification, relevant information collection, and reporting to the risk management office. Our legal department serves as the consulting agency of the risk management office and provides suggestions on the formulation of risk management-related systems and major risk management methods, the Company's risk management organizational structure, and its responsibilities plan. The Risk Management Office is a permanent risk management organization that provides improvement suggestions to the Risk Management Office and if necessary, reports to the Audit Committee.

We strictly follow the principles of board diversity and actively build a diversified board of directors. We adhere to the principles of meritorious service and take the gender, age, culture, and race of directors into consideration, and also takes into account factors such as the candidates' industry experience, skills expertise and work experience, etc., in order to promote the steady development of the Group from a more professional and diversified management perspective. At the end of reporting period, the Board consisted of 9 members, including 5 executive directors, 1 non-executive director, and 3 independent non-executive directors, including 1 female director.



## 5.2 ESG Governance Structure

The Board of Directors is the highest decision-maker for the Group's ESG management and bears the ultimate responsibility for the Group's ESG policies, strategies, and reports. To better manage the Group's ESG performance and identify potential risks, the Board of Directors, with the assistance of the ESG working group, regularly conducts materiality assessments and refers to the opinions of different stakeholders to evaluate and prioritize important ESG-related issues.

The Group has established an ESG working group with the participation of the Group's executive directors, board secretaries, office directors, functional departments, senior management of each operating unit, and corresponding functional departments to strengthen the management of ESG-related matters. As the highest operational management decision-making body of the Group, the Group's Board of Directors assumes overall responsibility for the performance of ESG issues, ESG development strategies, ESG policies, and ESG management measures, and integrates them into the Group's long-term development plan. The Board of Directors monitors and reviews the Group's ESG governance practices at all operational levels through the Audit Committee to maintain a high level of ESG governance and safeguard compliance, ensure the effectiveness of ESG risk management and internal control systems, and incorporate ESG risk factors into decision-making process. The board of directors understands the Group's ESG progress and major ESG practices through regular meetings, checks the consistency and completion of the current progress with the target direction, supplements and revises the ESG development strategy for the next stage, and clarifies the future short-term, medium- and long-term ESG development. Goals and directions. The ESG working group regularly collects ESG information, closely monitors the Group's ESG performance, ensures compliance with ESG-related laws and regulations, and prepares ESG reports. Under the coordination of the Group's functional departments, each operating unit promotes ESG-related policies during operations and continues to optimize ESG-related work through management.

The Group reduces the impact of its operations on the environment by formulating ESG-related goals and indicators. The Group will be committed to integrating sustainable development into business operations and fulfilling corporate responsibilities. The ESG working group regularly reports to the Board of Directors to evaluate the implementation and effectiveness of the internal control mechanism and review the progress of established goals and indicators. The ESG working group will also participate in enterprise risk management to assist in the assessment and identification of the Group's ESG risks and opportunities.

## BOARD OF DIRECTORS

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- © Supervise all ESG matters
- © Provide management guidelines and strategies
- © Review ESG-related goals and indicators and review progress

## ESG WORKING GROUP

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- © Collect and analyze ESG data and evaluate the effectiveness of policies and procedures
- © Ensure implementation of plans to achieve ESG goals and indicators
- © Review ESG-related goals and indicators and review progress
- © Prepare annual ESG report and report to the board of directors

## 5.3 Stakeholder Communication

Stakeholder communication and importance assessment are an integral part of the Group's process of promoting sustainable development. The Group maintains good communication with stakeholders through diversified communication channels, fully understands the views and expectations of stakeholders, and thus fully considers the concerns of each stakeholder in operational decisions.

Our main communication channels, frequency and key issues with various stakeholders are as follows:

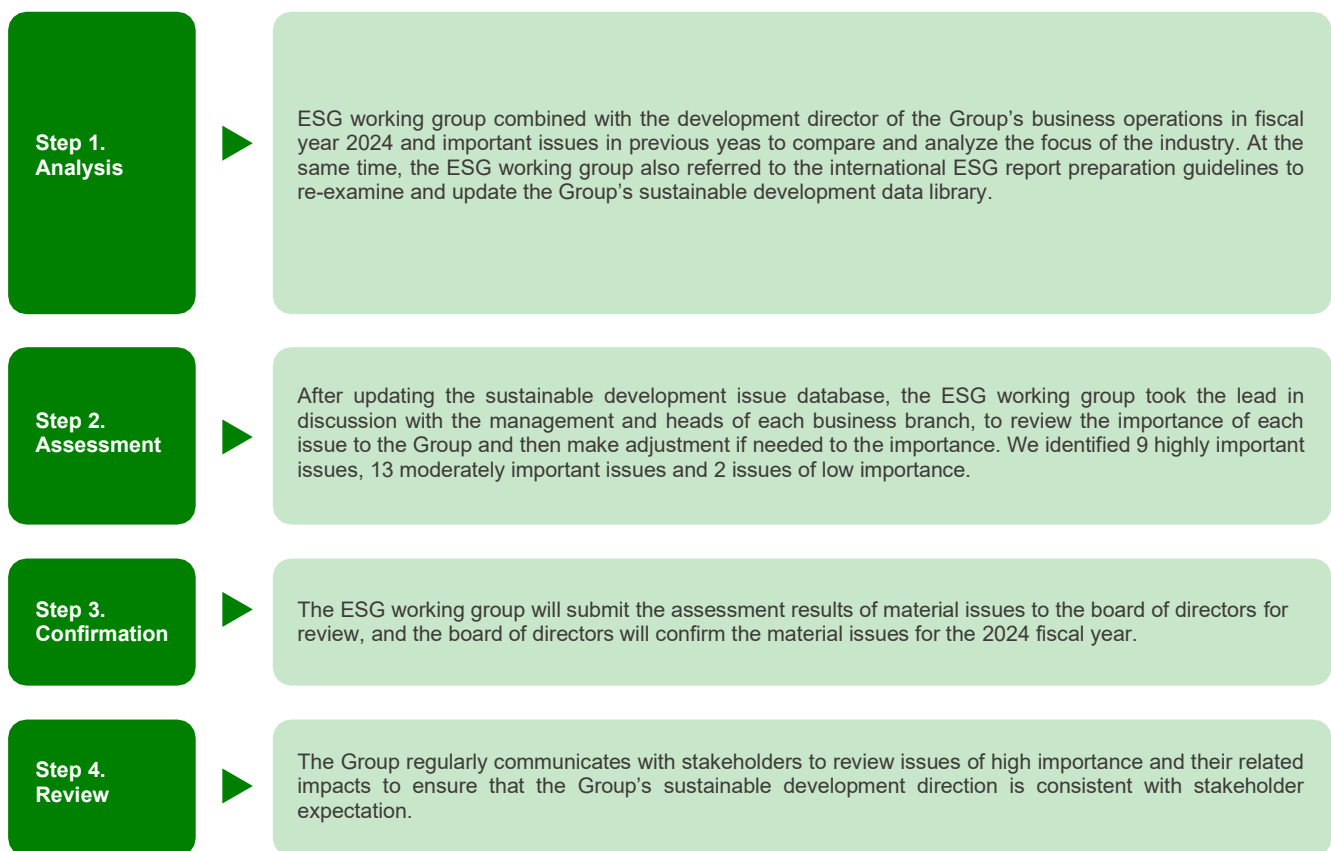
Stakeholder	Communication Channel	Frequency	Focus on Issues
Shareholders	Annual Report/Interim Report Announcement/Circular for Annual/Special Shareholder Meeting Official Website/Emails/Hotline	Semi-Annually Irregularly Annually/ Irregularly Irregularly	Investment returns Corporate governance Business operation Innovation
Government and Regulatory Agencies	Annual/Interim Reports Announcements/Circulars	Semi-Annually Irregularly	Compliance with laws and regulations Employment and local economic development
Employees	Performance Evaluations Meetings and Trainings OA, E-mails, WeChat Messages, Bulletin Board	Quarterly Irregularly Irregularly	Employee benefits Occupational H&S Employee development and training
Customers	Satisfaction survey Interviews and on-site inspection Customer service hotline and emails	Irregularly Irregularly Irregularly	Quality products and services Customer interest protection Customer privacy protection
Suppliers	Public bidding Supplier satisfaction assessment Interviews and on-site visits Supplier meeting	Irregularly Irregularly Irregularly Annually	Procurement procedure Win-win cooperation Green procurement Receivable turnover
Professional Bodies	Satisfaction survey and assessment Emails, hotlines and interviews	Irregularly Irregularly	Win-win cooperation Resource links
Local Communities	Media Charitable activities Donations Face-face visits Forums and seminars	Irregularly Irregularly Irregularly Irregularly Irregularly	Community participation Public welfare supports Environmental protection awareness Environmental education Community development support

## 5.4 ESG Materiality Assessment

In addition to its business development strategies and industry practices, based on our assessment results on important matters, combined with domestic and international ESG regulations and disclosure guidelines for the fiscal year 2024, as well as sustainable development trends, the Group identified our material ESG issues. The relevant stakeholders of the Group and the management and employees of each major functional department reviewed the Group's operations identified relevant ESG matters, and assessed the importance of relevant matters to the Group's business and each stakeholder.

The Group has reviewed the assessment results of important areas. After the Group's business analysis and management review, based on the operational priorities of the 2024 financial year, we have identified a total of 9 highly important issues, 13 moderately important issues, and 2 issues of low importance. The Group will continue to regularly monitor business operations and ESG performance, and adjust ESG development strategies, and improve performance based on actual performance.

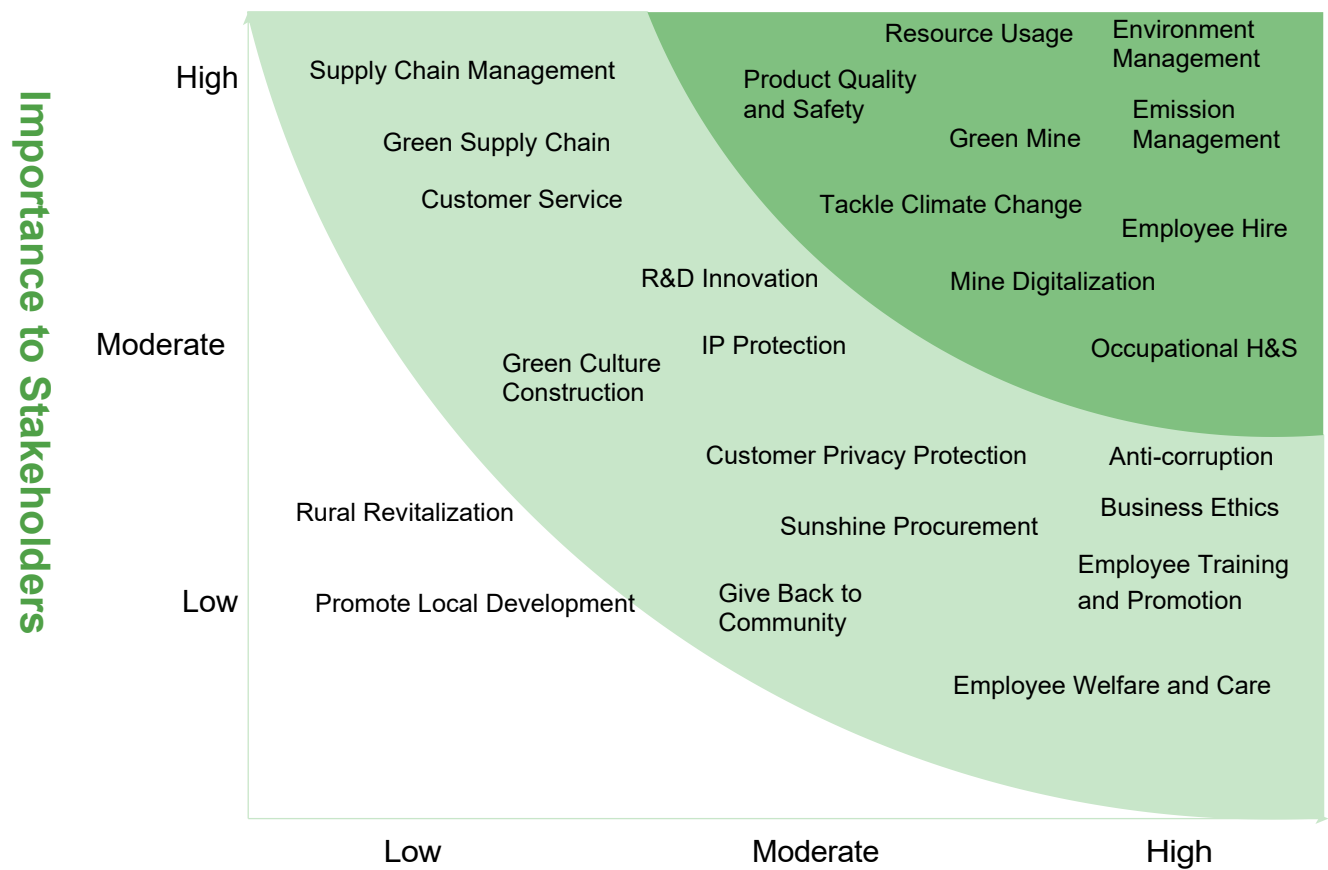
The Group's assessment process of material issues for the 2024 financial year is as follows



This report will describe the work and progress made by the Group in the fiscal year 2024, on 24 important issues in the subsequent chapters. It will also pay attention to issues of high importance in operations and formulate corresponding strategies, principles, improve policies and set long-term goals to continue to respond to stakeholders' expectations and report on the Group's contribution to ESG.

The following table sets out the important issues of the Group in 2024

Matrix Chart for Importance of Issues



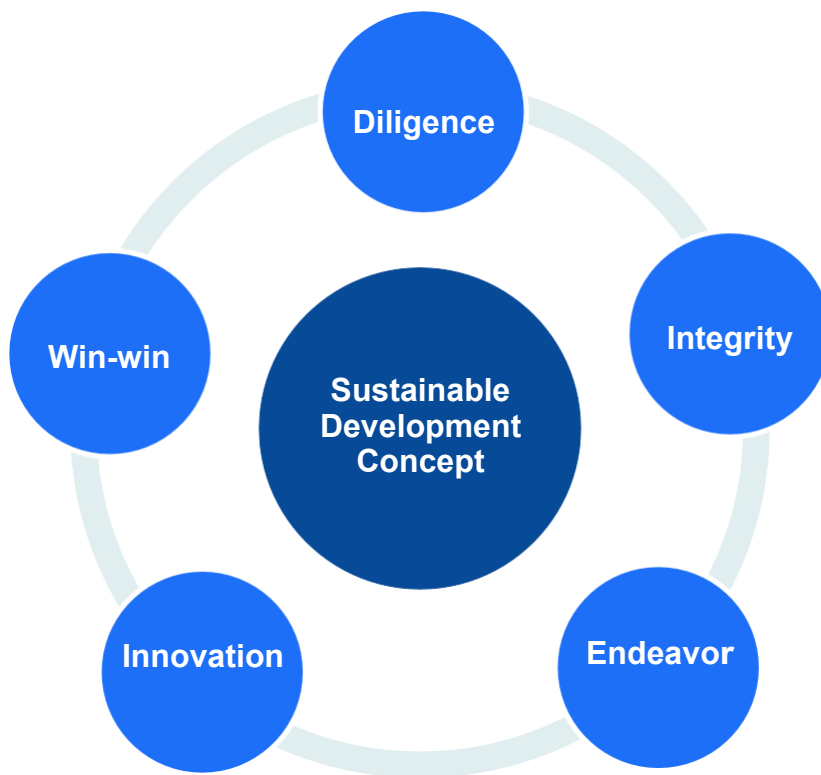
The Importance for Corporate ESG Governance



## 5.5 Core Value of Sustainable Development

The Group actively fulfills its social responsibilities and focuses on the coordination of corporate development and economic, social, and environmental development. We are committed to leading and developing the green cement industry. The Group actively responds to the “carbon peaking and carbon neutrality” policies, implements the developmental philosophy of “lucid water and lush mountains are valuable assets”, and achieves a harmonious unity between the production of high-quality cement products and ecological and environmental protection. Moreover, the Group believes that strong ESG propositions and management can help companies manage and control compliance risks, which will ultimately help increase the Group’s revenue, and build brand image to improve corporate competitiveness.

### Concept of Sustainable Development



The Group has integrated the concept of sustainable development into all subsidiaries, ensuring that from top to bottom, from inside to outside, from the management, and employees to all stakeholders, the Group's sustainable development concept is upheld and implemented in daily life. The Group plans to continue to improve information transparency on the current basis, assume greater environmental and social responsibilities, and create a green and sustainable future for the next generation.

**To implement the Group's sustainable development philosophy and create long-term value for our stakeholders, we promise to:**

- Comply with applicable laws, regulations, industry standards, and normative documents, practice good ethics, and operate with integrity
- Adhere to the concept of environmental protection, reduce emissions, improve resource use efficiency, strictly manage waste emissions, and reduce the adverse impact of business operations on the environment
- Carry out occupational health protection work for employees and improve occupational safety and health levels
- Promote a good business ecology and create a mutually beneficial and win-win situation

## 5.6 Uphold UN Sustainable Development Goals

In the actual production and operation process, the Group is supportive of the UN Sustainable Development Goals (SDGs) through practical actions, regards the UN SDGs as the Group's long-term development direction, paring them with the Group's sustainable development strategy, and commits itself to eradicating poverty, protecting the planet and ensuring that everyone can live in peace and prosperity by 2030.

### 1 No Poverty 8 Decent Work and Economic Growth

#### The Promoter of Common Prosperity

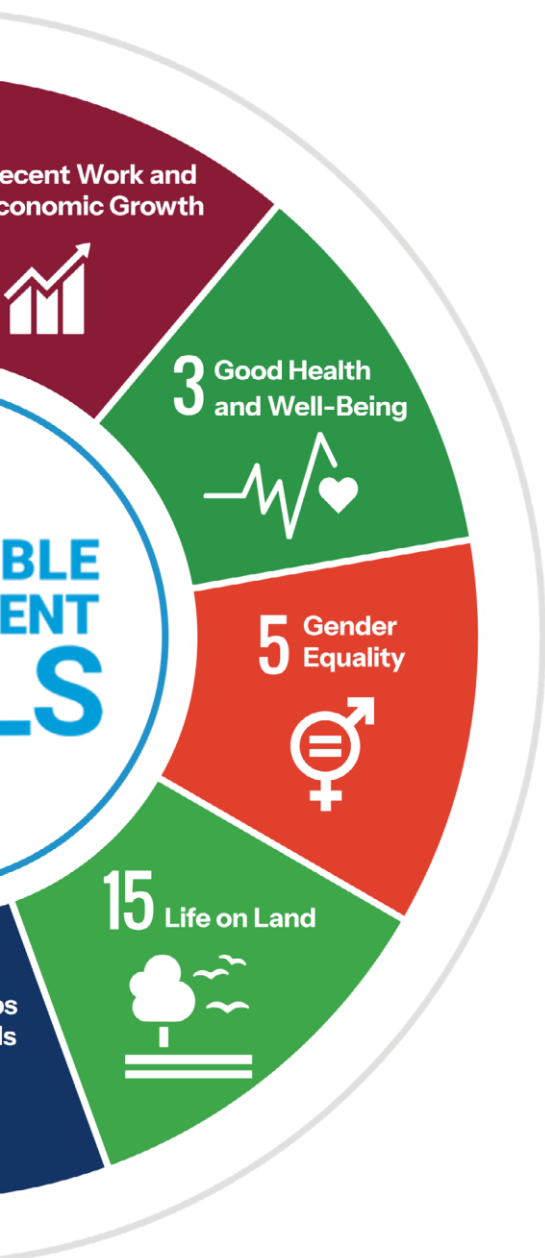
The Group provides employees with attractive salaries and benefits to ensure their life stability and provides employees with training and promotion channels for their life-long development. The Group is well aware that as an enterprise, it should assume social responsibilities, and give back to the community with corporate donations, volunteer activities, public welfare undertakings, and other actions, promoting community development.

### 7 Affordable and Clean Energy 13 Climate Action

#### The Builder of Climate Transformation

The Group has reduced carbon emission per unit of product upgrading low-carbon emission reduction technologies and promoting the low-carbon transformation of enterprise. It has deployed waste heat power generation facilities in multiple factories, recycled resources, and implemented waste heat power generation practices in rotary kilns to supply additional electricity power and increase the proportion of clean energy use, through the SCR ultra-low emission transformation of the clinker line, the standard is better than the national standard, and clean production is carried out. The Group has made practical efforts to mitigate climate change, actively responded to the global challenges brought by climate change, and implemented a climate change risk management layout.





### 3 Good Health and Well-being 5 Gender Equality

#### The Supporter of Employee's Rights and Interests

The Group has earnestly considered the interests of employees. To implement the people-oriented concept, it has formulated a series of measures for employee safety and occupational disease prevention and control and conducts regular physical examinations to minimize the risk of occupational diseases. In the process of employment and employee development, we will never discriminate based on gender. We are providing equal pay for equal work, and creating a healthy and harmonious job-hunting and working environment.

### 15 Life on Land

#### The Guardian of the Ecological Environment

The Group is well aware that the ecological environment is the basis of human survival, committed to the construction of green factories and green mines. During the business development process, it ensures the good management of materials and emissions throughout the entire process, and manages to achieve exhaust gas emissions well below national and local standards, zero discharge of factory production wastewater, and harmless treatment of solid waste in the factory. In addition, for the development of mining resources, the Group adheres to the principle of "developing while managing" and conducts mining operations together with slope greening and vegetation restoration to ensure the integrity of the ecological environment.

### 12 Responsible Consumption and Production 17 Partnership for the Goals

#### The Guarantor of Product Quality

Providing high-quality products and services is the Group's business philosophy. The Group has set up its laboratory to obtain the cement enterprise laboratory certificate and entrusts inspection agencies at or above the provincial level to regularly test product quality, and customer complaints are investigated within 24 hours. The Group selects suppliers through principles such as sunshine procurement and builds a robust and sustainable supply chain. As a leading enterprise in the cement industry, the Group has a thorough understanding of industry development trends, actively participates in industry exchange meetings, and promotes and leads industry development.

## 5.7 Steady Operation

The Group strictly complies with all laws, regulations, and industry regulatory requirements for the Group's operations. Relevant departments within the Group regularly review current laws and regulations update and then make adjustments to the Group's policies and guidelines, while improving the Group's internal control system, clarifying the responsibilities and authorities of each department, and standardizing various business processes to ensure that the Group's business interactions are legal, compliant and efficient, while providing compliance training to employees. The Group adheres to product and service-oriented. Always maintain the output of high-quality cement products. Follow the normal operation of the market, understand the current overcapacity situation in the cement industry, and rationally adjust production capacity and supply. At the same time, in response to changes in the operating environment, the Group optimized its organizational structure and personnel structure based on business attributes and characteristics, focusing on business positioning and core business resources. Integrate and tap development potential to enhance its competitiveness to cope with the uncertainty of the external environment.

### Business Ethics

The Group firmly believes that business ethics is a cornerstone and essence of the long-term development of enterprises, which can help enterprises remain invincible in the commercial market and maintain market fairness. Competition order, thus promoting the development and advancement of industry. Maintaining good business ethics can safeguard the corporate image of the Group, enhance corporate reputation, and help for the sustainable development of enterprises. Antitrust and fair competition are important aspects of business ethics and are the necessary basis for maintaining market fairness and impartiality. It is also an important means to build new development patterns and promote high-quality development of the industry. As a leading enterprise in the cement industry, the Group has always promoted good practices in the industry. It takes sexual development as its core value and adheres to the values of anti-monopoly and fair competition. Prevent and manage possible risks in advance to protect fair market competition, achieve healthy and sustainable development, and protect consumer interests and social public interests. During the reporting period, the Group conducted a total of 696 antitrust cases. A total of 12,408 participants participated in fair competition training, with a total training time of 2,088 hours. During the reporting period, no anti-competitive behavior, antitrust, or litigation over antitrust practices.

696

Sessions

Training, Antitrust and Fair Competition

12,408

Participants

Number of Participants trained, Antitrust and Fair Competition

2,088

Hours

Total Hours of Trainings, Antitrust and Fair Competition

Antitrust and fair competition trainings		
Indicators	Unit	Year 2024
Antitrust and fair competition trainings	Sessions	696
Number of participants trained	Participants	12,408
Training duration	Hours	2,088

### Anti-corruption Management

The Group strictly abides by the applicable laws, regulations, and normative documents in each location where it operates, and has formulated systems and regulations such as the “Employee Anti-Corruption Practice Regulations” to strictly prevent corruption, fraud, transfer to improper benefits, and other violations of laws and disciplines are strictly prohibited. The Group has always regarded anti-corruption as an important corporate responsibility and continues to carry out anti-corruption work and strives to create a clean business environment.

The Group has equipped professionals to set up specialized units for auditing and supervision, and appointed supervisors to be responsible for internal review. The Group has established working relationships with local audit and judicial authorities liaison mechanisms to observe and report crimes such as bribery, extortion, fraud, and money laundering. The Group appoints independent non-executive directors to oversee the Company’s operations and carry out supervision.

The Group continues to implement the work of building a culture of integrity, continues to strengthen daily supervision, and conducts a series of training activities to improve the integrity of internal management and employees. Integrity construction activities cover all on-the-job employees, laying a good foundation for the company’s subsequent development and business expansion, and laying the foundation for the Company’s high-quality development and protection.

During the reporting period, the Group has no corruption incidents or resulting legal proceedings.

5,469 People

Number of employees participating in anti-graft and anti-corruption

100%

Percentage of governance-related staff who have participated in the training

100%

Of employees participating in anti-graft and anti-corruption training

100%

Of anti-corruption policies and procedures communicated to governance-related staff

100%

Of anti-corruption policies and procedures communicated to employees



Anti-graft and anti-corruption training for employees		
Indicators	Unit	Year 2024
Number of directors who have received training	People	9
Number of employees what have received training	People	5,460
Number of governance-related staff who received training (breakdown by regions)		
Central China	People	82
Northeast China	People	37
Percentage of governance-related staff who received training (breakdown by regions)		
Central China	%	100%
Northeast China	%	100%
Number of employees who have received training (breakdown by titles)		
Senior management	People	133
Middle management	People	455
Director	People	406
General employees	People	4,475
Percentage of employees who received training (breakdown by titles)		
Senior management	%	100%
Middle management	%	100%
Director	%	100%
General employees	%	100%
Percentage of governance-related staff who received training (breakdown by regions)		
Central China	People	82
Northeast China	People	37
Percentage of anti-corruption policies and procedures which have communicated to governance-related staff (breakdown by regions)		
Central China	%	100%
Northeast China	%	100%

Anti-graft and anti-corruption training for employees		
Indicators	Unit	Year 2024
Number of employees informed the anti-corruption policies (breakdown by regions and titles)		
Central China	People	4,480
Northeast China	People	989
Senior management	People	133
Middle management	People	455
Directors	People	406
General employees	People	4,475
Percentage of employees informed the anti-corruption policies (breakdown by regions and titles)		
Central China	%	100%
Northeast China	%	100%
Senior management	%	100%
Middle management	%	100%
Director	%	100%
General employees	%	100%

The Group encourages all employees, customers, partners, suppliers, engineering contractors, and other relevant parties to give back and report any violation of the Company's anti-corruption policy. During the reporting period, the Group signed an "integrity and self-discipline agreement" with 100% of the supplies in the resource pool to restrict the behavior of suppliers and prevent violation of laws and discipline violations occur. The Group has established a smooth reporting channel to ensure the openness and transparency of reporting while also protecting the privacy and information of the whistle-blowers, and ensuring that the handling process and results should be made public and transparent, without favoritism based on position and identity, and cases should be handled strictly and investigated carefully.



Results of anti-corruption reviews for business partners and operation units		
Indicators	Unit	Year 2024
Number of business partners informed of the anti-corruption policies (breakdown by types and regions)		
Total	Individual	1,852
Central China	Individual	1,317
Northeast China	Individual	217
Other regions	Individual	318
Suppliers	Individual	448
Customers	Individual	1,382
Engineering clients	Individual	22
Percentage of business partner informed of the anti-corruption policies (breakdown by types and regions)		
Central China	%	100%
Northeast China	%	100%
Other regions	%	100%
Suppliers	%	100%
Customers	%	100%
Engineering clients	%	100%
Operation units which have undergone corruption risk assessment		
Total number of operation units which have undergone corruption risk assessed	Units	33
Percentage of operations units assessed	%	100%
Total number of cases in which corruption found	Cases	0

## 5.8 ESG Risk Management

To further improve the Group’s ESG management, during the reporting period, the Group comprehensively assessed and identified major ESG-related risks to provide targeted improvements in the future. Provide an important reference for ESG management work. During the reporting period, the Group’s entire ESG risk identification and assessments was as follows:



After assessment, the ESG risks and related management response measures at the “high” level are as follows:

## Climate Change Risks

### Physical Risks

Greenhouse gas emissions are exacerbating global warming. Extreme weather conditions occur frequently, which may harm production and safety. Unexpected events may lead to unplanned corporate disruptions and industry economic losses.

The worsening weather hinders the business development process of enterprises, such as the collection and transportation of raw materials are blocked, production conditions deteriorate, etc., which ultimately increases the operating costs of enterprises.

### Transition Risks

The state and government have introduced a series of laws, regulations, and policies, the greenhouse gas emission management system has become more perfect, and greenhouse gas emission management has become increasingly strict. After the resumption of Certified Voluntary Emission Reduction (CCER), carbon emission credit trading continues to develop, and carbon emission prices will have an upward trend in the future, increasing corporate carbon emissions costs.

National policies promote the transformation and upgrading of the industry, and it is an inevitable trend for enterprises to reduce emissions in production and launch low-carbon products.

### Response Measures

The Group has strengthened its corporate carbon emission management system, tracked and recorded emission sources and emission data of various production operations, and set corresponding goals and checked goal completion regularly.

Improve resource utilization efficiency, comprehensively utilize steel slag and other waste materials, develop comprehensive utilization methods for aggregates and other products, and develop low-carbon products; gradually improve energy usage ratio and increase the energy supply ratio of wasted heat power generation.

Establish a meteorological information tracking mechanism, formulate extreme weather response plans, and conduct corresponding drills to ensure there are no casualties and minimize property losses.

## Three Wasted Management Risks

### Risk Description

The state and government have further tightened the control of pollutants, international standards, industry standards, and local standards have become increasingly stringent. In particular, local governments have stricter regulations on water pollution. The waste gas emission standards of the cement industry have been further improved, and the compliance risks faced by enterprises have increased. Companies that fail to properly manage their emissions may face penalties and negative public opinion has a very serious negative impact on corporate reputation and ESG development.

### Response Measures

The Group conducts real-time monitoring and recording of the emissions from exhaust gas emission sources to ensure that emission levels are below various emission standards.

The factory is equipped with a reclaimed water treatment system and zero discharge of industrial wastewater.

The solid waste is harmlessly treated through a high-temperature rotary kiln, which solves the Company's own and also helps the government deal with municipal solid waste.

## Supply Chain Management Risks

### Risk Description

Supply chain stability affects a company's product quality stability and supply continuity, thereby affecting customer experience and corporate brand name.

Suppliers with ESG risks, as their partner, when ESG public opinion incidents break out, such as supplier corruption, product quality issues., etc. It will also affect the company's own ESG image, and may even affect the company's stock price and future development.

### Response Measures

During the procurement process of the Group, the quality, price, delivery time, reliability, geographical location, environmental and social risks of the supplied products, and other factors are considered. Suppliers are selected through a bidding process and "sunshine procurement" is implemented.

Regularly evaluate the risk of suppliers, establish a supplier environmental and social risk assessment mechanism to monitor the environmental and social performance of supplier operations to reduce supply. Suppliers voting relevant laws and regulations, and regularly review the supplier list.



## 5.9 Seizing ESG Opportunities

To further promote the corporate ESG development process, seize ESG opportunities, and enhance corporate competitiveness, during the reporting period, the Group implemented several measures to comply with ESG development trends and improve the overall ESG governance level. Please see the table below for details:

### Business Cost Reduction

#### Opportunity Description

Introducing energy-saving products and equipment can reduce corporate operating costs in the long run; improving corporate ESG management can reduce the probability of violations of laws and regulations to a certain extent, thereby avoiding fines; and can also avoid the consequences of negative public opinion incidents, stock prices fluctuate; respond to policy calls, develop innovative low-carbon products, conduct evaluations and awards, and have the opportunity to receive government financial support and bonuses.

#### Seize Opportunities

In response to current industry policies and future industry development trends, the Group upgrades production capacity and updates equipment to establish industry benchmarks, which can reduce unit product costs in the long run.

Actively participated in various awards and evaluation activities, and received many honorary commendations and bonuses during the reporting period, creating a good corporate brand name.

### Asset Layout Optimization

#### Opportunity Description

A strong ESG proposition can lead to a more sustainable asset layout, thereby increasing investment returns and avoiding corporate asset stranding due to policy reasons.

Good ESG corporate image performance attracts the attention of more investors.

#### Seize Opportunities

The Group laid the foundation for the subsequent clean energy transformation through the layout of waste heat power generation facilities in the factory area, and the layout of renewable energy assets has initially taken shape.

# 06

## DEEPENING GREEN DEVELOPMENT AND SAFEGUARDING NATURAL RESOURCES



## 6. DEEPENING GREEN DEVELOPMENT AND SAFEGUARDING NATURAL RESOURCES

### 6.1 Environmental Management

The Group strictly abides by the environmental protection-related laws, regulations, industry standards and other formative rules applicable to the regions we operates or run business, such as the Environmental Protection Law of the People's Republic of China (PRC), the Air Pollution Prevention and Control Law of PRC, the Water Pollution Prevention and Control Law of the PRC, the Solid Waste Pollution Prevention and Control Law of PRC, Emission Standards of Air Pollutants for the Cement Industry, Management Measures for Wastewater Discharge Permit (trial), and Management Measures for Legally Disclosing Enterprise's Environmental Information.

The Group applies the environmental protection and energy use measures throughout the entire process of production and operations, complying with the requirements of ISO 14040/44 and GB/32161-2015 standards, LCA lifecycle assessment is conducted on cement products to reduce the negative impact on the ecological environment, to support the goal of achieving harmonious coexistence between man and nature. The Group divides environmental management objectives to specific execution requirements for the specific subsidiaries, businesses and production units, fully implements environmental management assessment work, and facilitate our environmental protection development in a systematic way.

### Environmental Protection Technology Investment

In response to the State Council, the Ministry of Ecology and Environment and local governments' laws and regulations on the continuous improvement of air quality, air pollution prevention and control, and ultra-low emissions in the cement industry, and in line with the requirements and calls of industry standards, the Group seeks breakthroughs in environmental protection technology reform, pays close attention to relevant scientific and technological trends, and reserves environmental protection technology research expenses. During the reporting period, the Group invested approximately RMB177.95 million in environmental protection technology improvements throughout the year, accounting for approximately 2.91% of the 2024 operating income.

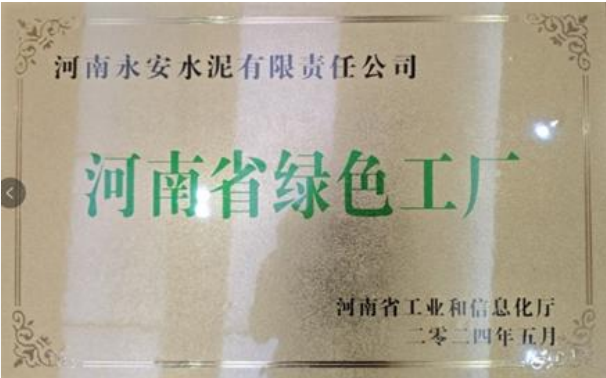
Environmental Certification

In order to improve the overall environmental management level of the Group and establish a corporate environmental image, the Group encourages all subsidiaries to carry out environmental protection-related technical certification and system certification. Efforts will be made to promote ecological and environmental protection. As of the end of reporting period, the Goup had 8 national-level green factories and 6 provincial and municipal-level green factories. There are 6 mines, 9 provincial and municipal green mines, and 19 green mining management projections.

The Group also attaches great importance to the adverse impact of corporate production and operations on the environment, upgrades independent emission reduction measures for heavy pollution weather, and collaboratively promotes corporate ecological environment high-level protection and high-quality development. As of the end of the reporting period, the Group has obtained the enterprise performance rating in key industries recognized by the Henan Department of Ecology and Environment. We have 4 A-level enterprises, 8 B-level enterprises and 7 performance-leading enterprises.

Case: Henan Province Green Factory Certification

On 23 July 2024, Henan Yongan Cement Co., Ltd. was certified the Green Factory, by the Henan Provincial Department of Industry and Information Technology.



121 Sessions  
Environmental protection-related training

7,262 Participants  
Total number of participants trained

605 Hours  
Environmental protection training duration

Environmental investment and certification		
Indicators	Unit	2024
Environmental protection-related training sessions	Sessions	121
Number of participants trained	Participants	7,262
Total hours of environmental protection-related training provided	Hours	605
Environmental protection investment	Million RMB	177.95
Environmental protection investment as a percentage of operating income	%	2.91%
Number of national green factories	Factory	8
Number of provincial and municipal green factories	Factory	6
Number of national green mines	Mine	6
Number of provincial and municipal green mines	Mine	9
Number of green mining management projects approved	Project	19
Green mine restoration area	Square Meter	249,817
Trees planted in green mines	Tree	46,774
A-level enterprises, heavy pollution weather performance	Enterprise	4
Level enterprises, heavy pollution weather performance	Enterprise	8
Leading enterprises, heavy pollution weather performance	Enterprise	7

## Factory Environmental Construction

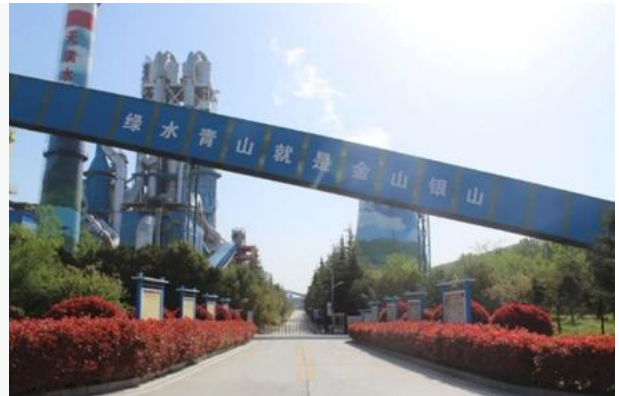
The Group is committed to building a beautiful factory environment and continuously improving production and living environment, providing a better comfortable and healthy living environment to enhance the overall aesthetics of the factory area to our employees and surrounding residents. Reversing the public's negative impression on a cement factory. The Group selects appropriate plant varieties with strong adaptability and strong survivability and carries out large-scale green planting in the factory area, and assigns dedicated personnel to cultivate the plants, maintaining and managing greening to ensure the green plants grow well within the factories. The Group also digs decorative ponds and pools to enhance our ecosystem richness, provides places for birds, insects and other creatures to inhabit and breed in our factory areas, promoting biodiversity. The Group also organizes factory environment photography film competition to encourage employees to record beautiful living environments and improve employee happiness and team cohesion.





### Case: Garden-style Factory Design

The Group's factories are designed with extensive greening and planting to create a pleasant factory environment and continuously improve the production and living environments, reversing the public's negative impression of cement factory environments.



## 6.2 Low-carbon Production

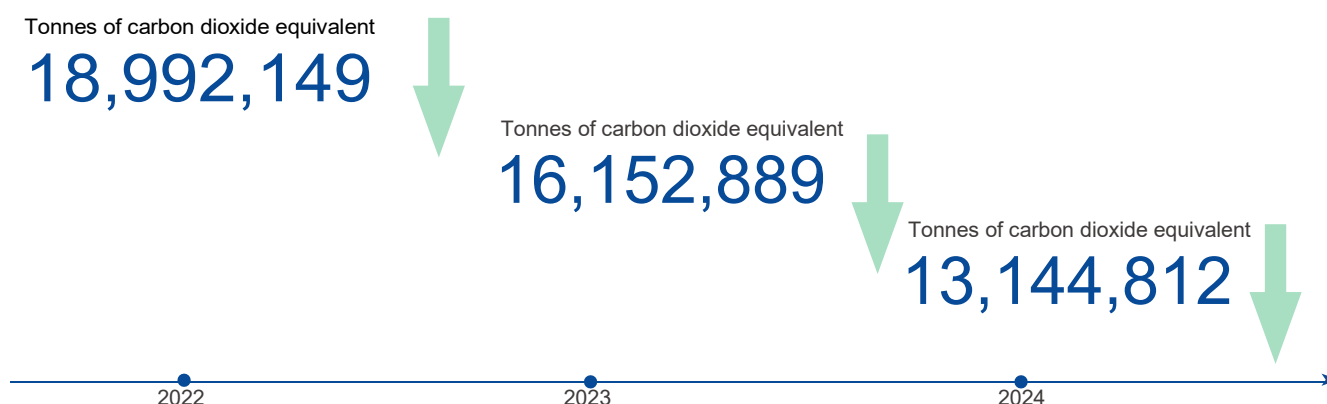
### Greenhouse Gas Emission

The Group is well aware that the green and high-quality development of the cement industry plays an important role in the country's green development process. The Group strictly implements the requirements of the "14th Five-Year Plan" and continuously implement the deployment of the Party Central Committee and the State Council, proceed from the optimization of cement production technology and operational reduction, continue to innovate, and promote the low-carbon development of green cement products. The Group actively responds to the national strategic goal of "carbon peaking and carbon neutrality" and follows the "Action Proposal to Promote Carbon Peaking and Carbon Neutralization in the Building Materials Industry" and the "Building Materials Industry Action Plan", "Implementation Plan for Carbon Peaking in Materials Industry", "Implementation Plan for Carbon Peaking in Building Materials Industry", "Implementation Plan for Energy Saving and Carbon Reduction Renovation and Upgrading of Cement Industry (2022 edition)", and other normative documents.

The Group complies with the "Guidelines for Accounting and Reporting of Greenhouse Gas Emission by Chinese Cement Production Enterprise (Trial)", "Greenhouse Gas Emission Accounting and Reporting Requirement Part 8: Cement Production Enterprises (GB/T 32151.8-2015)", "Cement Products Units Product Energy Consumption Limits", the HKEX's "Environmental and Social and Governance Reporting Guidelines" to conduct greenhouse gas verification, and actively promote low-carbon product certification in each factory.

The Group's greenhouse gas emission data in the past three years is shown in the table below. During the reporting period, the Group purchased 1,320,079 thousand kilowatt-hours of electricity, and its indirect greenhouse gas emissions were 802,608 tonnes of carbon dioxide equivalent.

### Total Greenhouse Gas Emissions



Greenhouse gas emissions				
Indicators	Unit	2024	2023	2022
Direct greenhouse gas emission (scope 1)	Tonnes of carbon dioxide equivalent	12,342,204	15,167,736	17,965,086
Energy indirect greenhouse gas emissions (scope 2)	Tonnes of carbon dioxide equivalent	802,608	979,397	1,027,063
Total greenhouse gas emissions	Tonnes of carbon dioxide equivalent	13,144,812	16,152,889	18,992,149
Greenhouse gas emission intensity	Tonnes of carbon dioxide equivalent/tonne of cement output	0.71	0.64	0.69

Indicators	Unit	2024
Total remaining indirect greenhouse gas emission (scope 3)	Tonnes of carbon dioxide equivalent	4,384
Total greenhouse gas emissions per million revenue	Tonnes of carbon dioxide equivalent/million RMB	2,150

Note: The electricity emission factor used in the calculation is 0.608kg/kWh, and the data comes from the "China Regional Power Grid Carbon Dioxide Emission Factor Research Report 2023" by the Ministry of Ecology and Environment.

Scope 3 only includes greenhouse gas emissions caused by the treatment of drinking water and sewage.



## Raw Material Optimization

Since the clinker production stage in the cement production process is the largest source of carbon emissions, the Group actively explores sustainable solutions and incorporate substitute waste steel slag into the cement grinding stage. This innovative approach aims to reduce clinker production, thereby reducing total greenhouse gas emissions. Moreover, this process can make full use of waste steel slag, reduce waste emissions, and achieve resource utilization of waste.

## Alternative Fuels

The Group has always adhered to the concept of sustainable development and actively responded to the national policy call on energy conservation, emission reduction and environmental protection. Faced with today's serious challenge of global climate change, we know that reducing the use of fossil fuels such as coal is crucial. The Group proactively adjusts its energy structure, vigorously promotes the development and utilization of alternative fuels, and reduces greenhouse gas emissions caused by the combustion of fossil fuels. As a renewable energy source, biomass fuel has the characteristics of wide sources, low carbon and environmental protection. The Group adopts this alternative energy to reduce the proportion of fossil energy use, improve energy utilization efficiency, and inject new vitality into the sustainable development of the enterprise.

**Case: Tianrui Group Xiaoxian Cement Co., Ltd. was awarded the membership certificate by Anhui High-Tech Enterprise Association**

Following the strict review and evaluation by Anhui High-Tech Enterprise Association, Tianrui Group Xiaoxian Cement Co., Ltd. has recently become the first member unit of Anhui High-Tech Enterprise Association and awarded the membership certificate from the association.



## Closed Belt Corridor Transportation Technology

In order to reduce the total amount of carbon emissions in the production process, the Group started with the transformation of raw material transportation technology and invested in the construction of belt corridor transportation facilities in multiple factories. By building a belt corridor transmission path from the raw material end to the production end, the original large-scale use of raw material transport vehicles has been replaced, thereby reducing the use of fossil fuels and reducing total greenhouse gas emission.

During the reporting period, a total of 35.00 million tonnes of ore were transported through belt corridor transmission facilities, accounting for approximately 70% of the total ore transportation. Based on calculation on the distance between the mine and the production site, ore transportation volume, unit transportation volume of mining trucks and mining trucks fuel consumption, greenhouse gas emission reduced through belt corridor transportation technology during the reporting period totaled approximately 0.46 million tonnes of carbon dioxide equivalent. In the future, the Group will continue to develop and improve this transportation technology, expand the scope of use of this technology, improve the transmission efficiency of belt corridors, reduce energy consumption, and build a factory that is more in line with the concept of green reduction.



Mine-factory Belt Transmission Facility

### Case: Tianrui Group Guangshan Cement Co., Ltd.'s Products Passed Low-Carbon Product Certification

During the reporting period, the low-carbon product audit team of the professional certification company went to Tianrui Group Guangshan Cement Co., Ltd. of the Group to conduct annual supervision and evaluation of cement clinker and ordinary Portland cement PO42.5 low-carbon products. Following the low-carbon product certification rules, the audit team inspected the production process, collected energy consumption data and other information, verified the authenticity of the data, thereafter calculated the carbon emission of the products. After review, the audit team determined that the product meets the requirements for low-carbon products.



Tianrui Group Guangshan Cement Co., Ltd.'s products passed low-carbon product certification.

## 6.3 Resource Usage

### Energy Management

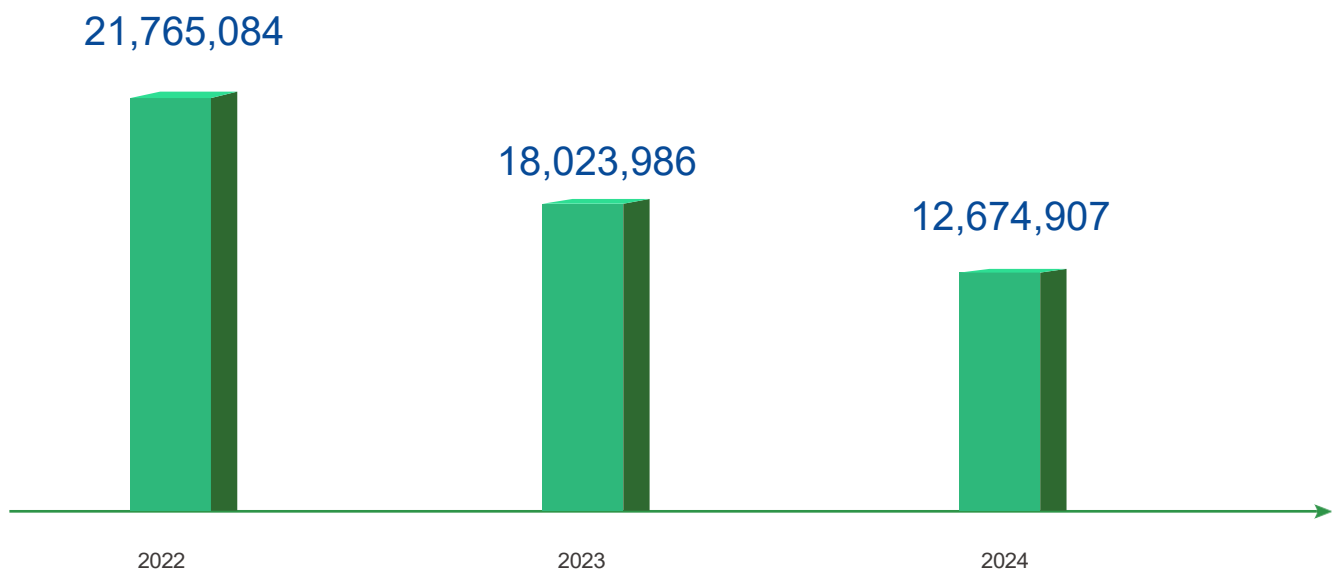
The Group strives to improve energy efficiency and reduce energy consumption, and strictly abides by the “Energy Consumption Limits for Cement Unit Products” and “High Energy-Consumption and Outdated Mechanical and Electrical Equipment”. Standards such as “Produce Phaseout Catalog” (First to Fourth Batch), “Implementation Guidelines for Energy Saving and Carbon Reduction Renovation and upgrading in Key Areas of High Energy Consumption Industries (2022 Edition)”.

The Group is equipped with an online energy consumption monitoring system to collect raw energy data in the production process based on the energy consumption monitoring system of industrial enterprises to achieve energy conservation. The centralized real-time monitoring, statistics, analysis and in-depth management of data can realize multi-dimensional data statistics, comprehensive comparison and macro analysis of major energy consumption categories. It is conducive to the timely identification of abnormal conditions in the factory and discovery and improvement of high energy consumption nodes; and real-time upgrading through the security isolation and information exchange system (isolation gate). To the platform of the Provincial Energy Bureau, we fully support relevant departments in formulating energy-saving plans, deploying and supervising energy-saving work.

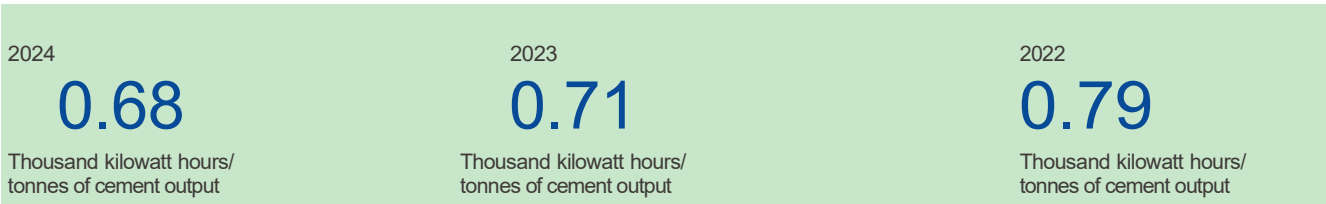
During the reporting period, the Group's energy intensity significantly compared with the previous two reporting periods. Compared with the reporting period of the previous year, the energy intensity has decreased by up to 4.23%.

### Total Energy Consumption

Unit: thousand kilowatt hours



Energy Intensity



Energy use overview				
Indicators	Unit	2024	2023	2022
Direct energy power consumption	Thousand kilowatt hours	11,354,828	16,413,135	19,997,334
Indirect energy power consumption	Thousand kilowatt hours	1,320,079	1,610,851	1,767,750
Total energy consumption	Thousand kilowatt hours	12,674,907	18,023,986	21,765,084
Energy intensity	Thousand kilowatt hours/ tonnes of cement output	0.68	0.71	0.79

Clean Energy Construction

During the reporting period, the Group continued to invest in clean energy construction and independently developed waste heat power generation technology for energy supply. The wasted heat power generation efficiency has reached 37.436 degree/tonne of clinker; a total of 414,000 thousand kilowatt hours of electricity generated. Most of the Group’s production lines has been equipped with waste heat recovery system, and the clinker production process. The waste heat generated is recovered by the heat recovery system and reused in cement production, reducing the overall energy demand in the production process. The production line also improves energy usage due to use efficiency to reduce the amount of coal burned, and collect waste heat from production for domestic water heating. During the reporting period, a total of 9,308 tonnes of heat were heated, reducing the production and life of employees in the factory. The total amount of energy required, waste heat power generation technology not only supports cleaner production, but also significantly saves production costs and improves the Group’s overall competitiveness. During the reporting period, the Group’s annual clean energy power generation usage is equivalent to saving 57,000 tonnes of standard coal and reducing carbon dioxide emissions by 132,600 tonnes.





Tianrui Group Zhengzhou Cement CO., Ltd. Xingyang Factory Rotary Kiln



Tianrui Group Zhengzhou Cement Co., Ltd. Rotary Kiln Waste Heat Power Generation Control Station

The Group also explores the possibility of other clean energy and is committed to improving the Group's energy structure and increasing the proportion of clean energy. During the reporting period, the Group has been selecting the factory sites for photovoltaic power station which will be carried out in suitable area. Currently, 4 photovoltaic power generation projects have been approved, with a planned investment amount of RMB70.00 million in the future. With the completion of the projects, the annual power generation is expected to reach 210,000 thousand kilowatt hours.

Water use overview				
Indicators	Unit	2024	2023	2022
Total water consumption	Cubic meter	3,989,417	3,944,895	584,183
Water consumption intensity per unit product	Thousand cubic meters/million tonnes of cement output	215	156	21

Tianrui Group Xiaoxian Cement Co., Ltd. was awarded the honour of Anhui Province Water-saving Enterprise by the Department of Water Resources of Anhui Province and the Department of Economy and Information Technology of Anhui Province in August 2024.





## Packaging Materials Used

The Group strictly abides by the green recycling requirements for packaging in GB/T9774-2020 “Cement Packaging Bags” and strictly manages the classification, specifications and standards of cement packaging bags. Notes and layout printing, bag making materials, etc. At the same time, the Group strongly supports the recycling of packaging materials, while reducing the consumption of cement packaging materials. It has achieved many benefits such as improvement of social environment, elimination of safety risks, and reduction of employee labor intensity. During the reporting period, the Group’s unit product packaging material consumption and unit operating income has reached the industry-leading level. The packaging material volume intensity per unit operating revenue in 2024 was 111.50 tonnes/100 million RMB.

Overview of packaging material usage				
Indicators	Unit	2024	2023	2022
Total consumption of packaging materials	Tonnes	6,820	6,473	1,076
Packaging material usage intensity per unit product	Thousand tonnes/million tonnes of cement output	0.37	0.26	0.04

## 6.4 Emissions Management

### Exhaust Gas Management

The Group attaches great importance to air pollutant emission management and strictly abides by laws and regulations, group standards and normative documents such as the “Atmospheric Pollution Prevention and Control Law of the People’s Republic of China”, “Emission Standards for Air Pollutants in the Cement Industry” and “Ultra-low Emission Standards for Air Pollutants in the Cement Industry”. The Group’s production and transportation strict management and control of air pollutants generated during the operation process, mainly including nitrogen oxides, sulfur dioxide and solid particular matter, leading the industry in practice. It has ultra-low emissions and the emission standards are better than national and industry standards.

The Group’s emission data in the past three years are shown in table below.

Emission overview					
Type of exhaust gas	Unit	2025 target	2024	2023	2022
Nitrogen oxide (NO <sub>x</sub> ) emissions	Tonnes	2,550	2,288	4,497	4,873
Sulfur dioxide (SO <sub>2</sub> ) emissions	Tonnes	378	152	261	230
Particulate matter(PM) emissions	Tonnes	448	212	426	1,336

Emission intensity overview			
Type of exhaust gas	Unit	2025 target	2024
Clinker production	Tonnes	11,059,000	9,642,000
Nitrogen oxide (NO <sub>x</sub> ) emissions emission intensity	kg/tonne of clinker	0.23	0.24
Sulfur dioxide (SO <sub>2</sub> ) emissions intensity	kg/tonne of clinker	0.03	0.02
Particulate matter(PM) emissions intensity	kg/tonne of clinker	0.04	0.02

During the reporting period, the Group's nitrogen oxide NO<sub>x</sub> emissions have declined for two consecutive years. Compared with the previous reporting period, the NO<sub>x</sub> emission dropped by 49.12%. Compared with the 2022 reporting period, the NO<sub>x</sub> emissions dropped by 53.05%; compared with the previous reporting period, Group's sulfur dioxide SO<sub>2</sub> emission dropped by 41.76%, compared with the 2022 reporting period, the sulfur dioxide SO<sub>2</sub> emission dropped by 33.91%. The Group's particulate matter PM emissions have declined for two consecutive years. Compared with the previous reporting period, PM emissions dropped by 50.23%. Compared with the 2022 reporting period, PM emissions dropped by 84.13%. Through a series of technical improvements and strict production emission management measures, the Group's current gas emission intensity is already at the leading level in the cement manufacturing industry.

Based on the Group's emissions management status in the past three years and future production and operation plans, the Group has formulated emission targets for fiscal year 2024. In the future, the Group will conduct strict emission management and process optimization in alignment with the goals, and regularly check the completion of the goals to ensure that the goals are achieved.

## Cement Kiln Wet Desulfurization Technology

The sulfur discharged by the Group mainly comes from the cement clinker production process. The raw materials are calcined. During the reporting period, we continued to explore wet desulfurization technology improvements. Striving to continuously improve desulfurization efficiency, Dalian Tianrui Cement Co., Ltd. of the Group adopt cement kiln wet desulfurization technology, which is the latest technology in the world today. The most mature and most reliable thermal power plant limestone-gypsum desulfurization process. It can meet the current environmental protection index requirements of the cement industry. Cement kiln wet removal sulfur can be produced by utilizing from humidification towers or waste heat boilers in the cement clinker production process. As a desulfurizer, it can strictly control the exhaust gas emission level and reduce business costs. The ash from the humidification tower and waste heat boilers is made into slurry and then transported to the absorption tower. The internal slurry is sent to the spray device for spraying through a circulating pump; the flue gas is mixed with the absorber in the absorption tower. Contact with the sprayed limestone slurry to remove SO<sub>2</sub> in the flue gas, and the desulfurized. After the flue gas removes liquid droplets through the demister, it enters the chimney and is discharged inside the absorption tower. The calcium sulfite generated after absorbing SO<sub>2</sub> is oxidized to form calcium sulfate. The calcium sulfate discharged from the absorption tower is separated tower is separated by cyclone, vacuum dehydrated and returned to be collected and used.

## PROCLON@REDOX Cement Kiln Denitrification Technology

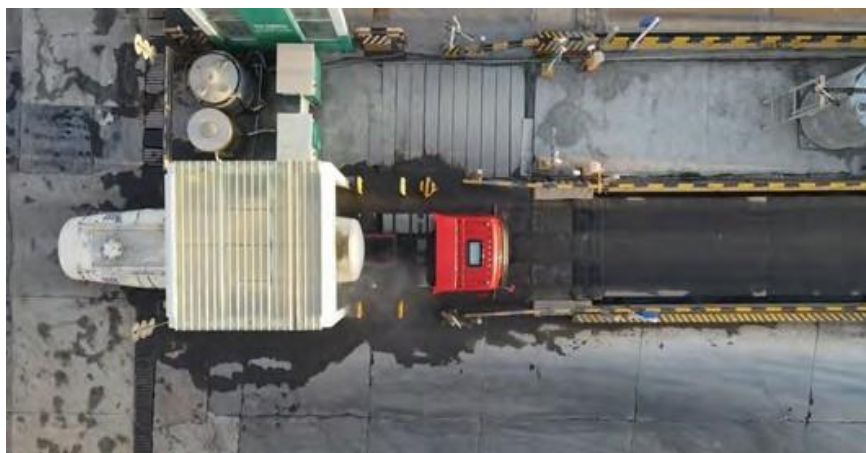
During the reporting period, the Group adopted PYROCLON@REDOX cement kiln denitrification technology to reduce the concentration of nitrogen oxides and achieve ultra-low emissions of nitrogen oxides. The technology is theoretically researched by the German Humboldt (KHD) Company and Tianrui Group Cement Co., Ltd. Implements applications and jointly develops new low-consumption, high-efficiency, low-cost cement kiln denitrification and environmental protection technology. PYROCLON@REDOX water. The mud kiln denitrification technology is to add a gas chamber between the original kiln tail smoke chamber and the decomposition furnace. Fuel gasification and NO<sub>x</sub> reduction device. Most of the kiln tail fuel (pulverized coal) directly fed into the PYROCLON@REDOX reaction device, the pulverized coal is first gasified inside, and the gasified coal powder and a large amount of coke powder are processed at low temperature. Incomplete combustion reaction occur in an oxygen environment, immediately generating a large amount of CO:  $2C+O_2 \rightarrow 2CO$ ;  $C+CO_2 \rightarrow 2CO$  forming a strong reducing atmosphere at the moment. The kiln tail flue gas is brought into the reaction device, and NO<sub>x</sub> is reduced under a strong reducing atmosphere. Original N<sub>2</sub>:  $2NO+2CO \rightarrow N_2+2CO_2$ , finally achieving reduction without external addition. The NO<sub>x</sub> source control of the agent is harmless.



Denitrification facilities of Wehui Tianrui Cement Co., Ltd.

## Particulate Matter Emission Reduction Technology Improvements

With the gradual launch of ultra-low emission transformation work in my country's cement industry, in order to further reduce particulate matter emissions, the Group has taken measures to reduce particulate matter emissions in production throughout the entire process, raw materials are transported by sealed conveyor belts and sealed batching scales to avoid dust during transportation. Electric bag composite technology combines the electric dust collection and the bag dust collection mechanisms. The comprehensive promotion of such technology help efficiently collect large particle dust and PM10, PM2.5 of tiny dust, greatly improving the particle removal efficiency and meeting ultra-low emission requirements. All transportation vehicles in the factory area must go through flushing facilities before leaving the factories to avoid the dust sprayed outside the factory area. At the same time, the roads in the factory area are hardened and sprayed regularly to comprehensively reduce the concentration of particulate matter in the production and living environment of the factory area. Automatic bagging system of the packaging machine is used for packaging. The machines replace manual work to complete the automation of cement packaging machine bagging, reducing dust during the packaging process and reducing worker inhalation risks.



Tianrui Xindeng Zhengzhou Cement Co., Ltd. Spraying to remove dust from transport vehicles before leaving the factory

## Wastewater Management

During the reporting period, the Group achieved zero discharge of industrial wastewater and domestic sewage, as well as zero discharge of ammonia nitrogen and chemical oxygen demand. The Group strives to reduce water consumption and improve high water resource utilization efficiency. The Group has formulated wastewater management rules and regulations based on the production process and actual conditions of the factory, and installed wastewater and sewage treatment facilities in factory, system and circulating water system to realize the recycling of water resources in production line, and use recycled water to cool down the water cooler of the production equipment after treatment. The water can be used as water for greening irrigation and sprinkler trucks, and for dust control in the factory area. During the reporting period, the Group processed a total of 37,090 tonnes of power generation wastewater. The domestic water treatment capacity is 15,300 tonnes, and the goal of not discharging waste water is finally achieved.

## Solid Waste Management

The Group attaches great importance to the standardization of the harmless disposal process of solid waste and hazardous waste, and strictly abides by the Solid Waste Pollution Environmental Protection Regulations of the People's Republic of China, Environmental Protection Law, Environmental Protection Technical Specifications for Collaborative Disposal of Solid Waste in Cement Kilns and other laws, regulations and normative documents applicable to the place of operation. During the reporting period, the Group achieved 100% recycling of non-hazardous waste and 100% disposal of hazardous waste.

The hazardous waste generated by the Group is mainly chemical substances used to machinery maintenance, and the non-hazardous waste is mainly general production and domestic waste. The Group follows the national environmental protection requirements, waste should be processed in accordance with the principles of classified collection, storage in partitioned warehouses, and recycling. In some cases, the production process produces raw and valuable chemical waste which is collected and reused as lubricating materials for on-site equipment and machinery. The Group ensure harmless treatment of solid waste through independently developed cement rotary kiln-temperature treatment technology. During the reporting period, the Group has achieved zero solid waste leakage.

Solid waste discharge overview				
Indicators	Unit	2024	2023	2022
Non-hazardous waste emissions	Tonnes	0	0	0
Hazardous waste emissions	Tonnes	0	0	289

While ensuring that the solid waste generated during its own production and operations is strictly treated, the Group also has a understanding of social responsibility and giving back to the community. To fulfil this mission, we are committed to maximize the effectiveness of our rotary kiln wasted treatment technology. During the reporting period, the Group assumed municipal waste disposal responsibility, helping local government deal with hazardous waste such as municipal waste and discharged medical waste, reducing the burden on local governments.



Cement kiln co-processing solid waste center

## 6.5 Addressing Climate Change

In recent years, problems such as frequent climate events and rising global temperatures have become increasingly severe. Climate change on a global scale has had a major impact on economic and social development impact. The importance of global climate governance has become increasingly prominent. In 2015, the 21st United Nations Climate Change Conference (UNCCC) unanimously agreed to adopt the Paris Agreement, with the long-term goal of “limiting the increase in global average temperature to 2 degrees Celsius compared with the pre-industrial period, and striving to limit the increase to 1.5 degrees Celsius”, and reached a landmark agreement on climate change.

The Group has been committed to responding to global initiatives and actively fulfilling corporate social responsibilities to support global climate governance. Recognising climate change mitigation and global warming alleviation as fundamental corporate duties, the group has established internal climate change management frameworks and protocols to monitor, record, and analyse relevant data. It also benchmarks against the goal of the Paris Agreement to “strive to limit the temperature increase to less than 1.5 Celsius” and analyzes the specific production and operation factors that affect the achievement of this goal. The operation link is divided into smaller goals for each production link of climate change management. The Group strictly follows the requirements of the climate change management system to implement mitigation actions. We start from every tiny link and continuously optimize and improve production technology and processes to play our positive role in mitigating climate change. We play a positive role and make unremitting efforts to achieve corporate climate goals and the goals of the Paris Agreement.

During the reporting period, the Group identified and assessed climate change risk issues with reference to the recommendations of Task Force on Climate-related Financial Disclosure (TCFD), proposed corresponding response strategies, and integrated climate change response measures into the production and operation of the Group. The Group continues to improve its ability to cope with climate change risks.



## Transition risk

### Regulations and Laws

#### Risk description

Government carbon emission-related policies, laws and regulations are becoming increasingly strict, and the industry is subject to carbon emission management policies. With the advancement of the construction of the national carbon market and emissions trading market, carbon prices, etc. will bring additional cost pressures to enterprises.

#### Response measures

The Group pays attention to the latest changes in national environmental protection and carbon emission laws and regulations, industry policies, etc., and takes timely response measures. The Group has strengthened its corporate carbon emission management system, tracked and recorded emission sources and emission data in production operations, set corresponding goals, and corresponding goals, and regularly checked the completion of goals.

### Technology

#### Risk description

The introduction of national energy-saving and low-carbon policies has prompted the cement industry to accelerate low-carbon transformation, optimize energy-using equipment, and develop low-carbon production technologies.

#### Response measures

The Group continues to promote energy-saving and emission-reducing technological reforms, implements the construction of clean energy projects, technological reforms, implements the construction of clean energy projects, during production and operations, and continues to explore low-carbon production technologies to enhance its emission reduction potential

### Reputation

#### Risk description

Failure to management energy conservation and carbon reduction may have left a potentially negative reputational impression on customers and the public.

#### Response measures

Continue to promote the research and development and innovation of low-carbon products, actively promote the company's low-carbon production technology and related honorary awards, and shape the corporate image of sustainable development.

## Physical risk

### Acute Risks

#### Risk description

The collection and transportation of cement raw materials are affected by extreme weather, which increase company operating costs, extreme by extreme weather, which increase company operating costs;

Extreme weather can cause safety hazards in outdoor operations and downstream construction operations are easily suspended due to extreme weather, which indirectly affects product sales.

#### Response measures

Establish a regular tracking mechanism for meteorological information, and formulate early warning, management processes and disaster response plans extreme weather to effectively prevent and respond to sudden natural disasters such as natural disasters such as typhoons, heavy rains, and floods.

In view of the special circumstances of extreme weather, communicate with downstream construction units to promptly adjust the concrete mix ration and production process to meet the needs of the construction site.

### Chronic Risks

#### Risk description

The rise in average temperatures will inevitably worsen cement product production conditions and increase operating costs in the long run.

#### Response measures

Strengthen temperature monitoring in daily operations, identify potential risks of strengthen temperature monitoring in daily operations, identify potential risks of the environment, and enhance the ability to adapt to rising temperature.

## 6.6 Green Mine

### Mining and Environmental Remediation

The Group's mining operations adhere to the concept of green and harmonious development, carry out green mine construction in accordance with local conditions, and strive to minimize the impact of mining activities on the mine and the surrounding ecological environment. During the mining process, we strictly follow the "Environmental Protection Law of PRC", "Mining Geological Environmental Protection Regulations", "Land Reclamation Regulations", "Cement Limestone Green Mine Construction Specifications (DZ/T 0318-2018)" etc. Relevant national laws, regulations and normative documents.

The Group has established a series of mine management systems internally, covering the specifications for mining procedures, management requirements for construction teams, standards for green mine construction, and assessment methods for mine resource management etc. to ensure that all work is carried out in an orderly manner. We have always adhered to the development concept of "lucid waters and lush mountains are valuable assets", and adhere to the principle of "mining, managing and restoring" during the mining process. We strive to develop while protecting, protect during development, and continuously promote the ecological restoration of mines work. The Group insists on combining the development of mineral resources with the protection of the ecological environment, ensuring that every aspect of mine management embodies the concept of green development, and strives to achieve the protection and restoration of the ecologic environment while ensuring the benefits of resource development, and promote the development of mines and harmonious symbiosis in the construction of ecological civilization.

As of the end of the reporting period, the Group has achieved remarkable results in the construction of green mines, with a total of 6 national-level green mines and 9 provincial and municipal-level green mines. It has successfully established 19 green mine management projects. During the reporting period, the Group actively carried out ecological restoration work, restoring a total of 249,817 square meters of pasture area and planting 46,774 trees, marking the Group's substantial progress in improving the regional ecological environment. In the future, the Group will continue to adhere to the concept of green development, increase investment in green management of mines, promote the coordinated mine development and ecological environment protection, and make greater contributions to the realization of sustainable development.



Real photo of green mines



## Resource Utilization

The Group actively promotes comprehensive resource utilization strategies during the mining process. The main raw material ores mined are produced, processed and sold by the Group. At the same time, we also value the by-product aggregates and convert them into products with economic value for the sale through recycling and reuse. For those soil that have no direct economic value, we use them as raw materials for mine over soil restoration to promote the restoration of the ecological environment. Through the implementation of this series of measures, the Group achieved a comprehensive resource utilization rate of 100% during the reporting period.

## 6.7 Smart Mine Construction

The Group actively responds to national policy calls and adheres to the principle of “mechanized replacement”. The concept of “automation and reduction of people” reduces the number of workers in high-risk workplaces and greatly improves the safety production level of enterprises. The Group continues to build smart mines and transforms and upgrades to carry out construction of smart mines. Smart mines are the specific application of “Digital Earth” technology in mine exploration, development and mine management.

Zhengzhou Cement Co., Ltd. of the Group is one of the first five enterprises in Henan Province and the first enterprise in Zhengzhou City to implement smart mines. It completed the acceptance inspection of smart mines during the reporting period. The construction of smart mines includes digital intelligent management and control, intelligent dispatching and driverless driving. All data is monitored and processed through the data center, and mining operations are carried out relying on the 5G network communication system, intelligent truck dispatching system, driverless system, quality control system and monitoring and control system, ultimately through digital mining software platform production execution. The mobile system platform and three-dimensional visualization management and control platform realize remote unmanned autonomous operations and ensure safe, economical, efficient and low-carbon production of mines.

The Group's smart mining project is a successful application of “5G + new technology” in open-pit mines. It combines the specific mining operations and introduces “5G + smart cockpit”, “5G + remote control” and “5G + platform monitoring” solutions. Through the construction of smart mines, the operating efficiency of mine cars has been improved by 15%, and the efficiency of whole process has been improved by more than 10%. On-site operations have been unmanned under extreme working conditions, and the probability of safety production accidents has been reduced by 100%, achieving “zero accidents” in mine production. The perfect acceptance of the Group's smart mines is successful practice in the intelligent transformation of mines. It marks that Tianrui Cement is developing in the direction of “digitization, high-end, intelligence, and “green” and realizes digital and intelligent construction of open-pit mines in the overall cement industry. It provides technical and product support, which is conducive to promoting the construction and development of digital mines, green mines, and smart mines in the entire industry.

## Unmanned Driving System and Remote Control of Excavator

The unmanned driving system consists of an unmanned pure electric mining truck, a dispatching platform, a remote cockpit, vehicle-road collaboration, etc. The autonomous driving system controls the vehicle to complete automatic starting, automatic tracking, etc. according to the dispatching instructions and through core algorithm such as perception, decision-making, and planning. Automatic parking, automatic obstacle avoidance, etc.; at the same time combined with excavator remote control technology, the crushing station can complete automatic unloading and dynamic coordinated ore loading, thereby realizing the entire process of “loading, transportation, unloading, parking, and charging in the mine transportation process. Completely unmanned and autonomous operations reduce the incidence of dangerous operating accidents and improve the efficiency of the entire process.



Driverless Mine Cart



Smart mine real-time monitoring screen

## Digital Mine Intelligent Management and Control System

The digital mine intelligent management and control system built by the Group conducts real-time monitoring of mining volume, mining area operations, mining area air quality, noise pollution, mining area operating equipment, etc., comprehensively controls the overall situation of the mining area, and plans future mining plans and mines in advance governance. Through the three dimensional visual management and control platform, we integrate 3DS, VR and to IoT technologies to build a visual virtual mine that is parallel to the real mine; with the help of the digital mining software platform, we can plan production plans, automatic ore allocation, simulated blasting, three-dimensional reserves; relying on the production execution system platform is input on the WEB side and APP side, automatically generates reports, automatically analyzes, guides production and optimizes indicators; the safety monitoring surveillance system provides 24-hour all weather protection, and perform slope displacement monitoring, rainfall monitoring, video monitoring, and risk monitoring, classification and hidden danger investigation and management.



3D visualization of smart mine



Intelligent mine real-time monitoring screen

## 6.8 Green Culture Construction

The Group attaches great importance to the implementation of environmental protection systems and measures during production and operation activities, and also focus on the cultivation of corporate environmental protection culture. The Group is aware of the necessity of promoting environment protection concepts and regularly conducts environmental protection training for employees to help employees better understand the importance of environmental protection actions, how to implement environment protection concepts in the production and operation process, and implement environmental protection into specific businesses. During the reporting period, the Group conducted a total 121 environmental training sessions, covering topic such as low-carbon production, energy conservation and consumption reduction, and efficient use of resources, with a total 7,262 participants and a total training of 605 hours.



Case: Group Green and Low-Carbon Technical Exchange Seminar

On the morning of 11 January 2024, the Group held a green and low-carbon technical exchange meeting with Henan Provincial Building Materials Institute and ThyssenKrupp. Tianrui Zhengzhou Cement Co., Ltd. set up the main venue, and Tianrui Cement headquarters and various branches and subsidiaries set up branch venues. The exchange meeting introduced in detail the alternative fuel solutions, overall energy-saving solutions for kiln head, oxyfuel technology, activated clay technology, intelligent quality control system and other advanced technology solutions, laying a good foundation for Tianrui Cement Group's energy-saving and carbon reduction, quality improvement, and consumption reduction and renovation work.



On-site picture of green and low-carbon technical exchange meeting

The Group not only active promotes the deepening of environmental protection concepts and the cultivation of green culture within the Company, but also hopes to spread this concept to society and improve the environmental protection level of the entire society. During the reporting period, the Group practiced this concept by organizing various employees activities, spreading green culture, and guiding everyone to participate in the protection and construction of the ecological environment. We firmly believe that only by working together as a whole society can we create a better ecological environment and leave a beautiful home with blue sky, green land and clear water for future generations.

Case: Tree Planting and Greening Campaign

The Group's subsidiaries embarked on tree planting and greening campaign from March to April 2025 to practically implement the modern concept of "building a harmonious coexistence between human beings and nature" and to actively create a good ecological environment. During the campaign, the employees carried out voluntary tree planting and thoroughly cleaned up the weeds and road debris in the green lawns under their management to further enhance the greening rate and greening effect of the factories, and to build a garden-style factory together with practical actions.



Tianrui Group Zhengzhou Cement Co., Ltd. launched tree planting and greening campaign

# 07

## ENGAGEMENT WITH PEOPLE-ORIENTED CULTURE TO SEEK COMMON DEVELOPMENT



## 7. ENGAGEMENT WITH PEOPLE-ORIENTED CULTURE TO SEEK COMMON DEVELOPMENT

The Group's success lies in our engagement with the people-oriented culture, respecting the value of employees, protecting their legitimate rights and interests, and providing employees safe jobs and healthy, comfortable and convenient environment. In addition, the Group pays attention to the rights and interests of our employees, take multiple measures to introduce and cultivate talents, and actively builds a broad environment for employees. We are committed to provide a broad career development platform and establish a sound salary incentive mechanism to all employees to share the results of our growing business.

### 7.1 Employment of Employees

The Group regards its employees as the Company's most valuable assets, create a fair and just employment mechanism, continues to improve the scientific talent retention, promotion and development system. We have built a established welfare system running through the entire employment life cycle in workplace, comprehensively support our employees' career development and workplace experience, which enhance our employees' sense of happiness and belonging.

#### Employment Policy

The Group strictly abides by relevant regulations on employment, remuneration and firing, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination, anti-harassment and other provisions on welfare benefits, including but not limited to the Labor Law of PRC, the Labor Contract Law of PRC, and the Employment Promotion Law of PRC, Social Insurance Law of PRC, Provision on the Prohibition of Child Labor and Occupational Diseases of PRC, Prevention and Control Law and laws, regulations and normative rules.

During the recruitment and employment process, the Group adhere to the principles of fair competition and transparent selection procedure for the best, formulates and implements a scientific and standardized personnel management system. The Group has formulated the "Cement Group Employees Selection and Labor Relations Management Regulations", "Cement Group Management Regulations on Position and Staffing", Cement Group Enterprise Management and "Human Resources Daily Management Work Assessment Regulations" and other internal policies, respect and protect the legitimate rights and interests of employees, and create an equal and diverse workplace environment so that an employee can realize his or her self-worth, his or her potential to develop soundly together with the Group.

We resist all forms of Child labor and forced labor. During the reporting period, the Group has no incidents of Child labor and forced labor. The Group opposes all discriminatory behavior on gender, age, and other discrimination existing due to differences in region, education, religious beliefs, nationality, race, sexual orientation, disability, etc. We are committed to protect the legitimate rights and interests of female employees and of the qualified workers with disabilities, and provide

them appropriate working conditions in compliance with the applicable laws. At the same time, all workplace harassment or abuse is strictly prohibited. In the event of harassment or abuse, we will fully protect employee's legitimate rights and interests in terms of equal opportunities and diversity.

When an employee violated such rules and regulations of the Company while not serious enough to terminate his or her labor contract, the supervisor of the unit deems it necessary to suspend the employee as a warning for the violation. For those who slightly violate laws and regulations or those who cannot return to work and extend their sick leave beyond national regulations, their employment and their wages can be suspended.

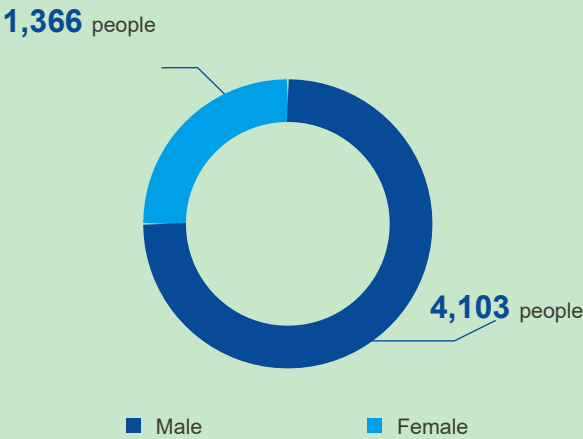
## Recruitment Channels

The Group has always regarded the introduction of professional talents as an important way to maintain the Group's rapid development and talent strategy. The Group recruits new employees through various methods such as campus recruitment, internal selection, and social recruitment, and strive to ensure a high degree of matching and high-quality employment through a strict, fair, just and open standardized recruitment process. When there are vacancies due to the Group's new business development needs or the incumbent's demotion or resignation, etc., and it is necessary to replenish new hires, the positions are filled by first carrying out internal selection and the external recruitment next.

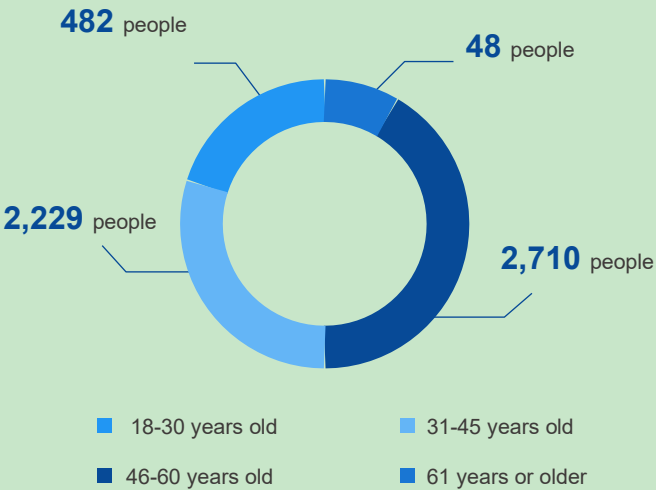
The Group adopts "online + on-site", "school-enterprise cooperation, university double selection fairs and other methods to carry out special job fairs for fresh graduates. The joining of new forces provide sufficient manpower supply and talents reserve for the sustainable development of the Group. At the same time, we have also opened up recruitment channels to select the best from the society and absorb all kinds of professional and technical talents and management talents, and through further training, will strengthen consolidate the backbone of group management.

During the reporting period, we fully implemented the requirements for digital and information management, innovated the recruitment model, and improved the interviewer and presentation system by optimizing the recruitment management system. The official recruitment system implements job posing, talent evaluation, written examination, interview, employment contract issuance and other recruitment links to further improve the matching between talents and positions. We must ensure that recruitment information, processes and results are disclosed. The human resources department is responsible for verifying the age of applicants, supervising employment matters and being responsible for background checks and periodic reviews. The administrative and human resources department conducts spot checks and interviews from time to time to strengthen internal supervision. At the same time, each unit has employee opinions collection box, accept real-name or anonymous opinions from employees, and hold timely meetings to research, process and respond.

Number of employees by gender



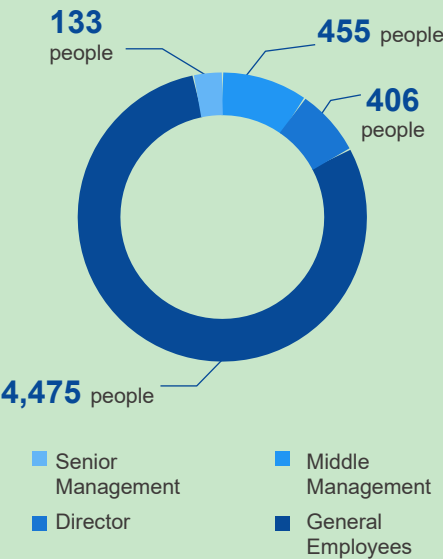
Number of employees by age



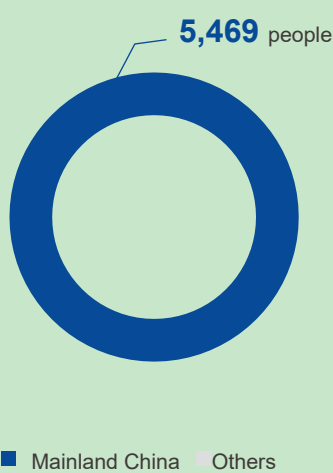
Number of employees by types



Number of employees by grade



Number of employees by regions





Employment status overview					
Indicators		Unit	2024	2023	2022
		Number of employees			
Total number of employees		People	5,469	6,892	7,299
Gender	Male	People	4,103	5,105	5,375
	Female	People	1,366	1,787	1,924
Employment types	Full-time	People	5,427	6,847	7,080
	Part-time	People	13	14	2
	Contract	People	10	11	0
	Temporary worker	People	19	20	217
	Apprentices and trainees	People	0	0	0
Age composition	18-30 years old	People	482	587	709
	31-45 years old	People	2,229	2,687	3,008
	46-60 years old	People	2,710	3,560	3,534
	61 years or older	People	48	58	48
Regions	Mainland China	People	5,469	6,892	7,299
	Other	People	0	0	0

Indicators		Unit	2024
		Number of employees	
Gender	Senior management	People	133
	Middle management	People	455
	Directors	People	406
	General employees	People	4,475

Indicators		Unit	2024	2023	2022
		Employee turnover rate			
Total employee turnover rate		%	18.87%	14.57%	1.21%
Gender	Male	%	18.84%	14.57%	1.18%
	Female	%	18.96%	14.54%	1.32%
Age composition	18-30 years old	%	34.23%	21.52%	1.77%
	31-45 years old	%	18.30%	14.40%	0.86%
	46-60 years old	%	15.42%	13.15%	1.35%
	61 years or older	%	85.42%	28.29%	4.69%
Regions	Mainland China	%	18.87%	14.57%	1.21%
	Other	%	Not applicable	Not applicable	Not applicable

## 7.2 Employee Training and Promotion

The Group has always insisted on creating a diverse and inclusive working environment, respecting the differences in employees' personalities, abilities and growth experiences, and cherishing employees with different backgrounds, talent, insights, experience and skills to promote the integration of employees from different backgrounds. Continuously deepen the promotion of strategic development and organizational talent training. Based on the characteristics of the position, by identifying the matching of people and positions, we will improve the dynamic management of talents, smooth career development channels, and improve the incentive mechanism to promote the common development of employees and the Group.

The Group attaches great importance to talent utilization and is also committed to cultivating talents. Combined with the Group's annual operation and management strategy, determine the annual training plan and establish multi-channel, multi-form, hierarchical development platform which is employee oriented, to help employees improve their professional skills and comprehensive abilities.

The Group formulates and improves the internal rules and regulations of the "Cement Group Training and Development Management Measures" and adopts a training method of "mainly internal training, supplemented by external training", make full use of internal and external resources to promote the development of employees through mentoring and mentoring programs, create a three-dimensional and multi-type training system, and encourage employees to participate training activities on various topics. The training content covers management capabilities, professional skills, production safety, general professional abilities, environmental protection, laws and regulations, social responsibilities, etc. The Group stipulates that all new employees are required to participate in uniformly organized pre-job training, and department-level and job-level training is organized for employees who transfer. Based on the Group's development plan and the work needs of each department, current employees receive diversified and differential job knowledge and skills training according to professional categories.

As of the end of the reporting period, the Group's employee training coverage reached 100%, with an average training hours of 30.23 hours.



Overview of employee training				
Indicators		2024	2023	2022
Employee training coverage				
Total employee training coverage		100%	100%	100%
Gender	Male	75.02%	73.70%	74%
	Female	24.98%	26.30%	26%
Grade	Senior management	2.43%	2.01%	2%
	Middle management	7.32%	7.09%	7%
	Directors	7.42%	6.44%	7%
	General employees	81.82%	84.45%	83%

Indicators		Unit	2024	2023	2022
Average hours of training for employees					
Total average training hours of employees		Hours	30.23	28.79	32
Gender	Male	Hours	30.23	28.79	32
	Female	Hours	30.23	28.80	33
Grade	Senior management	Hours	30.23	24.23	36
	Middle management	Hours	30.23	26.68	33
	Directors	Hours	30.23	28.54	33
	General employees	Hours	30.23	29.10	32

Talents and technology are inevitable requirements for the Group's industrial development and the extension of the entire industry chain. Strengthening technical training is to improve the Group's labor performance and enhance its core competitiveness. An effective way to achieve high-quality development, the Group attaches great importance to the training and cultivation of technical talents, and hosts high-standard and high-quality technical training activities for employees every year.

The Group conducted in-depth research on training needs at each position, combined with technical difficulties and practical issues in daily work, from production, technology, 6S, quality, machinery to electrical equipment and other matters, and actively carried out professional skills training. The training class also includes discussions, exchanges, practical simulations and other links to help employees better understand the training content, so that the learning results can effectively help improve the business at the production site, and cultivate a high-quality workforce that is knowledge-based and skill-based and innovative.

#### Case: Exchange Meeting on "Zero Carbon Factory" Development Project

Tianrui Group Xiaoxian Cement Co., Ltd. participated in the exchange meeting on "Zero Carbon Factory" development project to grasp the latest "Double Carbon" policy.



The Group adheres to the principles of "fairness, impartiality and openness", attaches great importance to employees' career development planning, and strives to provide broad opportunities for employees to realize their self-worth with the Group's development platform. In line with the needs of strategic development, the Group formulated and issued the Cadre Management Measures (Trial), and continuously improved the dual-channel promotion mechanism, which not only encouraged employees to become leaders in management positions and assume more and more important management responsibilities. We also encourage employees to continuously improve their personal professional skills and accumulate professional experience to become an expert in technical and business areas. At the same time, we will strengthen the inspection and review process for cadre promotion, do a good job in special training for talents in key positions, and provide talents with support for advancement, retention and development.

## 7.3 Employee Welfare and Care

### Salary and Benefits

In order to build a scientific and efficient remuneration system with internal fairness and market competitiveness, the Group has formulated the "Cement Group Remuneration and Welfare Management Measures", "Employee Benefits Management Measures" and "Regulations on Labor Rewards and Punishments", "Measures for Management of Performance Appraisal of Headquarters", "Measures for the Management of Performance Appraisal of Branch Companies" and other rules and regulations, and improve and enrich welfare. We have a benefits system to ensure that employees enjoy fair treatment in terms of salary, benefits, compensation, leave, etc. In terms of salary management, we use fair and reasonable salary management system to provide employees with market-competitive salary packages.

The Group follows the principles of internal fairness and external competitiveness, and continuously optimizes performance appraisal based on employees' job responsibilities, work abilities, work performance and other factors. The system uses assessment results as the main basis for employee appointment, removal, promotion, salary distribution and job adjustment, and provides incentive work such as floating wages and bonuses, such design of financial incentives provides employees with reasonable and substantial returns and stimulates their enthusiasm for work.

In addition, the Group provides employees with statutory benefits that comply with local laws and regulations in each location where it operates. In addition, it provides employees with health security benefits, life security benefits, incentive benefits, festival and cultural constructive benefits, etc. Diversified benefits include on-the-job allowance, summer heating subsidy, laundry subsidy, working environment subsidy and paid leave, etc. At the same time, we pay pension insurance, medical insurance, work-related injury insurance, unemployment insurance, maternity insurance for female workers and housing provident fund for all regular employees to further enhance employees' sense of belonging and cohesion.

### Cultural Activities

The Group continues to carry out diversified employee care activities, focusing on employees' physical and mental health, daily life, spiritual culture and other aspects to enrich employees' entertainment life and actively establish positive employee relations. In order to continuously enhance employee happiness and sense of belonging, the Group carries out a number of employee cultural and entertainment activities, including speech contests, skills contests, knowledge contests, employee sports meetings, team lunches, cooking, leisure sports, festival cultural activities and family gatherings, etc., by creating warm focus on humanistic activities to enhance employees' sense of belonging and steadily enhance group cohesion.

## Women Care

The Group respects and protects the special rights and interests of female employees in accordance with the law. During pregnancy, childbirth and breastfeeding, female employees can enjoy leave in accordance with the standards stipulated in relevant policies, and the labor relationship with them shall not be terminated during this period. The labor contract shall be automatically extended when it expires. Until the end of pregnancy, childbirth and lactation period. During the reporting period, the Group actively supported the spiritual and cultural life construction of female employees, organized female employee symposiums and expert psychological lectures, and cared for the physical health of female employees, carried out "two cancer" screening and physical examinations, and carried out comprehensive humanistic care and psychological counseling for female employees. During "Women's Day", exclusive holiday gift packs were distributed to female employees.

### Case: "Women's Day" Holiday Gift Package Campaign

On "Women's Day", in order to enable all female employees to spend a warm and happy holiday, Tianjin Tianrui Cement Co., Ltd. sent out "Women's Day" holiday gift packs to female employees.



## Employee Care

The Group continues to carry out solid employee care work, establishes a standardized employee assistance mechanism, regularly visits employees and their families in need, understands the actual difficulties and needs, and cares about and follows up on life improvement. Among them, in addition to charity fundraising for sick and needy employees, we also carry out loving education assistance activities for the education of employees' children to help children of employees from poor families realize their dreams of studying. The Group provides "warm benefits" to each employee and provides employees and their families with secure life security to reduce worries and improve happiness. By organizing and carrying out activities to send warmth and holiday benefits such as Spring Festival, Mid-Autumn Festival, Lantern Festival and other special festivals, condolence money, condolence materials and holiday blessings and greetings are sent to corporate employees and production front-line employees, so that employees can fully feel the care and welfare from the company.

### Case: Dalian Tianrui Cement Co., Ltd. Launched The “Caring for Employees and Giving Warmth In Winter” Campaign

In the winter in Northeast China, the ground is frozen and the wind is bond-chilling. In order to thank all employees who are working on the front line of production, in December 2024, General Labor Union in Qianjing Town, Yuzhou City, launched the activity of Caring for Employees and Giving Warmth in Winter at Tianrui Group Yuzhou Co., Ltd., to convey care and concern to the frontline staff, inquire about the living needs of the staff in difficulty, and present them with souvenirs to express the deep care and concern of the union for them.



## 7.4 Occupational Health and Safety

The Group continues to optimize the construction of its occupational health and safety management system, comprehensively promotes the implementation of safety responsibility standards, strengthens the prevention and management of occupational diseases, promotes the construction of a safety concept culture for all employees, and comprehensively improves the Group's health and safety management standards.

### Safety Management System

The Group is committed to providing a safe and healthy working environment for its employees, responding to the “14th Five-Year Plan for National Work Safety Plan” and strictly abiding by the “Work Safety Law of the People’s Republic of China”, the “Law of the People’s Republic of China on the Prevention and Control of Occupational Diseases”, and the “Occupational Diseases in Employers” "Prevention and Control Guidelines", "Employer Occupational Health Supervision and Management Measures" and other laws, regulations and normative documents, and formulate corresponding internal rules and regulations within the enterprise to further clarify occupational health management work and effectively protect the health rights and interests of all employees.



Safe Production

The Group implements the requirements of the "Production Safety Law of the People's Republic of China" that "safety must be managed in the management of the industry, safety must be managed in the management of the business, and safety must be managed in the management of the production and operation", and the "6S On-site Management Measures" have been formulated to establish and improve the safety production responsibility system for all employees , promote the construction of safety production standardization, and build safety risk analysis. We have a dual prevention mechanism of grade-level control and hidden danger investigation and management, and implement the safety production policy of "safety first, prevention first, and comprehensive management". Set up occupational health and safety production emergency plan; according to the production process and technology, break down the specific links and hidden danger points that have safety hazards in the production process, and set up safety hazards in high-risk areas. Install warning notices to remind employees to maintain safe working behaviors and pay attention to potential safety hazards. Each subsidiary organizes comprehensive safety inspection activities every month to conduct inspections. Various safety hazards in the production process will be rectified within a time limit.



During the reporting period, there were no work safety accidents and no loss of working hours due to work-related injuries.

Overview of workplace injuries				
Indicators	Unit	2024	2023	2022
Number of employees killed due to work-related injuries	People	0	0	0
Number of working days lost due to work injury	Day	0	0	2,243

Indicators	Unit	2024
Number of employees injured due to work-related injuries	People	0
Work injury rate	%	0

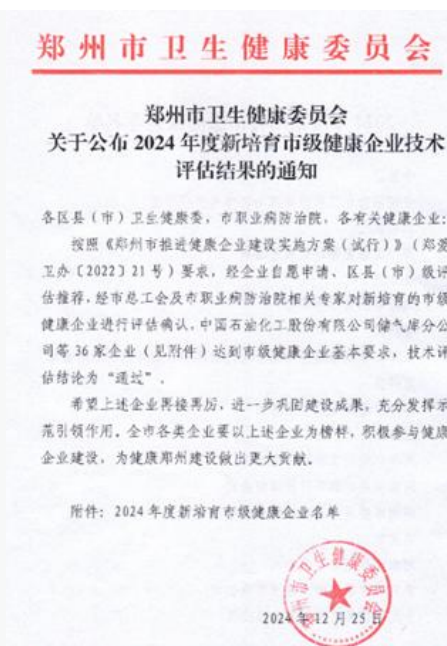
Note: The calculation method of work injury data is in accordance with "GRI 403: Occupational Safety and Health 2018", work injury rate (recordable occupational injury rate, calculated based on 1,000,000 working hours) = number of recordable occupational injuries/ number of working hours \* 1,000,000; number of working days lost due to work injuries =Σ(number of recordable occupational injury days \* number of occupational injuries).

## Occupational Disease Prevention and Control

The Group is fully aware of the hazards of pneumoconiosis and other related occupational diseases caused by noise and dust in the cement production process. Warnings are set up in conspicuous places in places and working positions to inform people of occupational disease hazards, and the Group is actively exploring more effective ways to prevent and control occupational diseases. Efforts should be made to replace, eliminate and control occupational hazards.

### Case: Zhengzhou City Healthy Enterprise Title

On 25 December 2024, Tianrui Group Zhengzhou Cement Co., Ltd. was awarded the title of "Zhengzhou City Healthy Enterprise" by Zhengzhou Municipal Health Commission.



The Group complies with the "Equipment Standards for Labor Protection Supplies", "Respiratory Protection—Self-priming Filtering Anti-Particulate Respirators", and "Dust and Virus Prevention for Cement Production Enterprises" "Technical Specifications" and other standards, based on the actual production process, covering respiratory protection, ear protection, eye protection, body protection, etc., and providing employees with regular different types of protective equipment. According to the nature of occupational hazards in different positions at the work site, different types of protective equipment with different filtration efficiencies are configured, including KN100, KN95, KN90 masks, anti-noise earplugs, safety helmets, protective shoes, etc. and conduct protective user training for employees so that employees can follow. The rules are to be worn and used correctly to effectively play a protective role. Special personnel are arranged at the production site to conduct irregular inspections to check the wearing status of protective equipment in each workshop. Overall protection efficiency is improved.

In order to protect the health of employees, the Group conducts regular occupational disease examinations for employees and establishes employee occupational health files to promptly identify and avoid occupational health problems. Intervention and treatment. In accordance with national occupational health-related regulations and policies, the Group hires third-party organizations to conduct occupational health status assessments every three years. At work, occupational hazard inspections are conducted once a year.

During the reporting period, the Group invested a total of RMB3.42 million in occupational disease prevention and control measures, and no occupational diseases occurred.


Overview of occupational diseases P&C		
Occupational disease prevention and control indicators	Unit	2024
Number of people suffering from occupational diseases	People	0
Investment in occupational disease p&c	Million RMB	3.42

Safety Culture Construction

The Group regards the construction of safety culture as an important means to implement the health and safety awareness of all employees, continues to establish and improve the health and safety education and training system, and regularly carries out "Safety Production Month", "Fire Drills", special safety inspections, safety knowledge and regulations training , safety knowledge contests, safety speech contests, safety skills contests and other forms of cultural construction activities to cultivate employees' health and safety awareness, strengthen employees' safety production skills, and thereby improve the overall safety production level of the enterprise.

**Case: Tianrui Group Yuzhou Cement Co., Ltd. launched safety inspection campaign**

From 16 to 19 January 2024, Tianrui Group Yuzhou Cement Co., Ltd. launched a 3-day safety and environmental protection inspection campaign led by the Production Technology Department and the inspection teams set up by the key management staff of each department. It also organised the department to launch a daily question post knowledge learning to promote the in-depth development of safety training.



**Case: Tianrui Zhengzhou Cement Co., Ltd. launched the "Safety Production Month" launching ceremony**

On 1 June 2024, Tianrui Zhengzhou Cement Co., Ltd. organized the launching ceremony of the "Safety Production Month". The theme of this "Safety Production Month" activity is "Everyone pays attention to safety and everyone knows how to respond to emergencies - barrier-free access to life passages." At the launching ceremony, the "2024 'Safety Production Month' Activity Plan" was read out, and it ended successfully with the safety oath and safety commitment signed by all cadres and employees. It also kicked off various activities of the Tianrui Zhengzhou Cement Co., Ltd.'s "Safety Production Month".



# 08

## ADHERE TO THE ORIGINAL INTENTION OF QUALITY AND LEAD THE WAY FORWARD WITH INNOVATION





## 8. ADHERE TO THE ORIGINAL INTENTION OF QUALITY AND LEAD THE WAY FORWARD WITH INNOVATION

### 8.1 Innovation Awards

#### Innovation Management

The Group actively responds to the "14th Five-Year Plan Development Guidelines for the Concrete and Cement Products Industry" and continues to strengthen technological innovation and promote independent research and development. The Group attaches great importance to the construction of the R&D team and has formed a high-quality cement R&D team internally to ensure that the company has the innovation power for sustainable development. As of the end of the reporting period, the Group currently has 599 R&D employees, accounting for approximately 10% of the total number of the Group.

The Group has long practiced the concept of innovative development and adhered to high-quality development. It has established two provincial-level technology R&D centers in Henan and Liaoning and multiple municipal-level R&D centers, and continues to carry out R&D, innovation, and technological transformation of process equipment. During the reporting period, the Group's annual R&D investment was RMB237.50 million, accounting for approximately 3.88% of the 2024 operating income.

The Group continues to improve its innovation management mechanism, sets standards for R&D projects, classifies the importance of R&D projects, clarifies R&D expense rights and responsibilities and R&D processes, and provides necessary resource support for R&D projects to ensure the speed and efficiency of various R&D innovation activities. carry out. Many companies of the Group have won honors in national quality and technology competitions, realizing the transformation of traditional industries into high-tech enterprises. As of the end of the reporting period, the Group owned 19 high-tech enterprises.

#### Case: Being appraised as an advanced collective for safety production in industrial and trade industry and non-coal mines in Zhengzhou City

In March 2024, Tianrui Zhengzhou Cement Co., Ltd. was appraised as the advanced collective for safety production in industrial and trade industry and non-coal mines in Zhengzhou City. Tianrui Zhengzhou Cement Co., Ltd. puts safety on the top priority, works around the safety production laws and regulations, technical specifications and the requirements and instructions of the local industry authorities, seriously implements the main responsibility for safety production, improves the assessment of safety responsibility, incorporates the assessment results of the responsibility system into the mechanism for rewarding safety performance, carries out safety education on a regular basis, organises emergency drills, improves safety facilities and continuously improves the safety awareness and skill levels of all staff. The Company has continuously improved the safety awareness and skills of all employees, continuously strengthened the ability to manage hidden dangers, and steadily promoted the work of risk classification and control and hidden danger investigation and treatment, so that the dual prevention system continues to operate effectively, realising closed-loop management of production safety and ensuring "zero" accidents in production safety for the whole year.

#### 郑州市工贸行业和非煤矿山企业安全生产工作先进集体和先进个人名单

##### 一、先进集体（以下排名不分先后顺序）

##### （一）工贸行业安全监管工作先进集体

登封市应急管理局  
新密市应急管理局  
荥阳市应急管理局  
惠济区应急管理局  
管城回族区应急管理局  
经济技术开发区应急管理局  
高新技术产业开发区环保安监局  
郑州市应急管理局安全生产基础处

##### （二）非煤矿山企业安全监管工作先进集体

荥阳市应急管理局  
巩义市应急管理局

##### （三）工贸行业和非煤矿山企业安全生产工作先进集体

天瑞集团郑州水泥有限公司

Case: Liaoyang Tianrui Cement won two scientific and technological innovation awards for construction materials in Liaoning Province

The Group actively responded to the call of the building materials industry in Henan Province, extensively launched mass technical innovation activities, deeply explored the potential of frontline staff and production equipment, and continuously improved the technical quality of the staff and the innovation capability of the enterprise. The Group led its subordinate cement enterprises to achieve excellent results in the “Fengbo Cup” Technical Innovation Award Competition 2024 in Henan Province. The Group won a total of 29 awards, including 4 first-class awards, 11 second-class awards and 14 third-class awards, with the number of awards exceeding one-third of the total number of commendations. Among these awards, the Group won 3 out of 5 first-class awards in the category of technological transformation and 1 out of 4 first-class awards in the category of technology and workmanship, thus playing a leading role in the technological advancement of the industry.

2024 年度“丰博杯”河南省建材行业技术革新奖获奖项目				
类别	等级	序号	项目名称	主要完成人
技术改造项目	一等奖	3	煤磨热风管道漏风监测系统改造	苏洪峰 王园园 赵永峰
		4	骨料回廊输送系统技改	张春雷 沈亚明 陈军伟 魏志强 卢 冲 魏长洲 张进军
		5	磨冷风双刀闸密封改造	张春雷 周振刚 张东伟 卢 冲 刘国兵 沈亚明 魏向堂 武延辉
		7	磨尾滑槽散料装置技术改造	刘国兵 武亚明 魏军浩 唐耀冰 魏清立 李明忠
		8	矿山矿区抽水电控系统实现无线远程控制	张新伟 胡 兵 刘国鹏
	二等奖	9	磨内活化环加长技术改造	张久峰 李鹏飞 岳春雷 郑有森
		10	磨磨内活化环加长技术改造	张久峰 李鹏飞 岳春雷 郑有森
		11	入选粉机管道技改部分入成品收尘的使用效果	苏洪峰 李小龙 陈伟超 杨俊宗 王群川
		12	丹麦史密斯 ATOX-50 立磨选粉机工型密封改造	苏洪峰 王园园 赵永峰
		13	磨机密封板	王青峰 张文杰
	三等奖	14	磨尾煤管改造	张志强 魏俊星 张玉鹏
		15	预热器密封板改造	张志强 魏俊星 张玉鹏
		16	水泥发运智能系统改造	张春雷 李斌斌 郭峰皓 沈亚明 卢 冲 张会普
		17	采用流量网和变频器自动控制系统降低电耗	李德强 赵长青 王登伟 宋 彬 郑占峰
		18	风机效率提升节能改造技术	李德强 王登伟 陈 宇 赵元元 于明辉 陈山阳
技术创新项目	一等奖	19	矿粉装车快速卸车通道技术改造	刘国兵 武亚明 魏军浩 唐耀冰 魏清立 李明忠
		14	磨尾粉输送通道技术改造	刘国兵 武亚明 魏军浩 唐耀冰 魏清立 李明忠
		15	卸车机密封口技术改造	刘国兵 武亚明 魏军浩 唐耀冰 魏清立 李明忠
		16	选粉机一次风冷风阀技术改造	刘国兵 武亚明 魏军浩 唐耀冰 魏清立 李明忠
		17	磨尾排风机高压变频技术改造	张新伟 胡 兵 刘国鹏
	二等奖	18	调配库顶皮带技术改造	张久峰 魏小强 李连坤 王亚峰
		19	水泥磨系统现场技改提升措施	李 强 李红亮 郭祥民 张新峰 李刚等 张向飞 冯国杰
		20	新型干法水泥熟料生产线提高余热发电量的技改措施	李 强 李红亮 冯晋杰 刘俊飞 王亚峰 谢永刚
		21	骨料线石料筛分故障排除改造	张春雷 沙方壮 刘 刚 杜洪刚
		22	水泥磨加超细粉工艺改造	潘 庆 李新海 魏秋成 陈 琳 李福华 李德强
		23	磨风阀下入磨磨体改造	张春雷 刘伟涛 张付国 邵少航 潘文日 赵伟刚
技术创新项目	三等奖	2	485 热电厂模块在集中监控系统的应用	阮耀林 陈海涛
		4	结露土壤替代高岭砂在生产熟料过程中节能降耗的应用	苏洪峰 李小龙 马志远 吴鹤刚 李 琳
技术创新项目	三等奖	6	磨冷风系统技改	张春雷 沈亚明 张东伟 卢 冲

Intellectual Property Protection System

The Group strictly abides by laws and regulations such as the Intellectual Property Law of the People's Republic of China, the Patent Law of the People's Republic of China, the Trademark Law of the People's Republic of China, the Copyright Law of the People's Republic of China, etc., and focuses on the project establishment and implementation process and results management of science and technology projects, patent management and other clear requirements, through the combination of patents, trademarks, domain name registration and contract restrictions, establish an intellectual property protection system to promote innovation through management, and enable the results to be industrialized and applied as soon as possible. The Group sells products under the trademark "TIANRUI", which has been registered with the Trademark Office of the State Administration for Industry and Commerce of the People's Republic of China and has been awarded a nationally well-known trademark. The Group attaches great importance to the protection of intellectual property rights. The Group promises not to purchase or use pirated products. All copyright-related products are purchased from dealers authorized by the copyright holders. From 2021 to 2024, the Group has obtained 639 utility model patents, 56 software copyrights, and 15 invention patents, and has successfully implemented key technologies such as ultra-low emissions, efficiency improvement transformation of grate coolers, and high-temperature fans, technology research and development and transformation.



## Intellectual Property Protection Culture Construction

Intellectual property rights are an important part of an enterprise's core competitiveness. Protecting intellectual property rights is the only way for enterprises to develop healthily and sustainably, and it is also an effective way to protect enterprise innovation achievements. In terms of intellectual property protection, the Group adheres to the concept of "promoting management through culture and promoting efficiency through management", and disseminates content related to intellectual property protection through intellectual property protection training, intellectual property promotional videos, etc., making the importance of intellectual property deeply rooted in the hearts of the people and creating the construction of intellectual property protection culture with the participation of all employees. During the reporting period, the Group conducted a total of 560 intellectual property protection training sessions, with a total of 12,556 participants and a total training time of 1,680 hours.



## Industry Exchange

The Group firmly believes that an open and communicative industry atmosphere can promote technological progress and updated development in the entire industry. The Group actively responds to the call of the China Cement Association, adheres to the concept of open cooperation and win-win cooperation, strengthens technical exchanges and cooperation in the industry, promotes advanced production technology and equipment to improve the performance of cement products, support the low-carbon development of the cement industry, and promote high-quality development of the cement industry. The Group actively receives industry peers, government staff, and scientific researchers to conduct in-depth exchanges and discuss development together.

**Case: A delegation from Huanggang City, Hubei Province, visited Tianrui Yuzhou Qianjing Cement Co., Ltd. to exchange information on the implementation of its Integration of Generation-Grid-Load-Storage project**

A delegation from Huanggang City, Hubei Province, visited Tianrui Yuzhou Qianjing Cement Co., Ltd. to exchange information on the implementation of its Integration of Generation-Grid-Load-Storage project. The delegation visited the cement kiln line and the waste heat power generation project to learn more about the company's development history, technology research and development, power supply and energy saving, and exchanged views on energy use in the cement industry and problems encountered in advancing the Integration of Generation-Grid-Load-Storage initiative, as well as the future development trend of the wind power and photovoltaic industries and their application areas. As a major energy consumer in the manufacturing industry, Tianrui Yuzhou Qianjing Cement Co., Ltd. can effectively solve this problem and increase the capacity of new energy consumption in light of this initiative. Through the energy storage system, energy can be stored during the low load period and released during the peak load period, thus realising the graded utilisation of energy and reducing the cost of electricity consumption. As a next step, Tianrui Yuzhou Qianjing Cement Co., Ltd. will further communicate with relevant authorities to promote the implementation of the project and contribute to the high-quality development of Yuzhou's green, low-carbon economy.



## 8.2 Intelligent Manufacturing

The Group actively responds to national and industry policies and conducts operations by policies such as the "State Council's Issuance of the Digital Economy Development Plan for the 14th Five-Year Plan", the "14th Five-Year Plan for Intelligent Manufacturing Development", and the "Implementation Opinions on Improving Manufacturing Reliability". The intelligent and digital transformation of factory production and enterprise operations will comprehensively enhance the intelligent level of R&D, production, management, and services. Use informatization to drive industrialization, use industrialization to promote informatization, achieve "integration of the two informatization", and take a new path to industrialization. The Group continues to enhance its corporate competitiveness and promote sustainable development through digital construction. As of the end of the reporting period, the Group owned 21 smart factories and 26 factories that had obtained the "Integration of Informatization and Informatization" certification.

### 1. Production automation system

Production automation system construction, including clinker DCS system, waste heat power generation DCS system, denitration automatic control system and packaging machine automatic bag insertion system;

### 2. Network data connection and hierarchical partition management

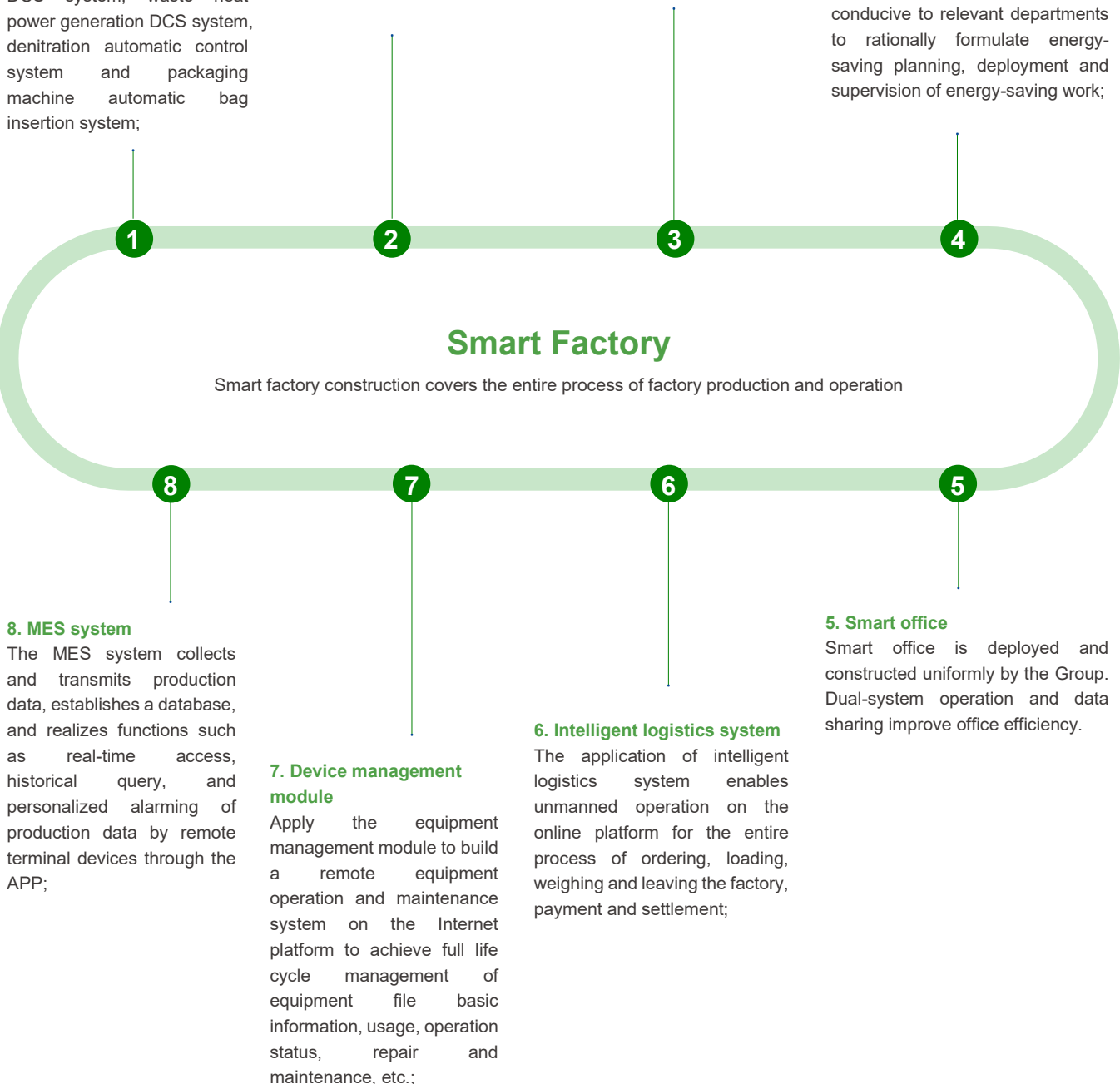
The company's network data connection and hierarchical partition management realize centralized management of multiple application functions, and have functions such as data backup and remote operation and maintenance;

### 3. Real-time upload of inspection equipment data

Inspection equipment data is uploaded in real time, and digital inspection equipment is applied to realize networked online monitoring and docking with quality personnel, which improves work efficiency and prevents data anomalies caused by manual intervention;

### 4. Energy management and energy consumption online monitoring system

Through the energy management and energy consumption online monitoring system, centralized real-time monitoring, statistics, analysis and in-depth management of energy-saving data are realized, and they are simultaneously uploaded to the Provincial Energy Bureau platform, which is conducive to relevant departments to rationally formulate energy-saving planning, deployment and supervision of energy-saving work;



Case: Henan Yongan Cement Co., Ltd. was approved as one of the first batch of digital transformation pilot enterprises in Zhengzhou City

Henan Yongan Cement Co., Ltd. was approved by Zhengzhou Municipal Bureau of Industry and Information Technology as one of the first batch of digital transformation pilot enterprises in Zhengzhou City.

（图：新闻中心，通知公告，正文）

关于郑州市中小企业数字化转型第一批试点企业的公示

来源：来源：来源：2024-04-23 10:09

根据《郑州市中小企业数字化转型试点工作方案》（郑政办〔2024〕10号）《郑州市工业和信息化局关于征集第一批中小企业数字化转型试点企业》（郑工信企〔2024〕3号），经企业申报、区县（市）推荐、专家评审、拟将郑州市豫机机电设备有限公司等153个企业列入郑州市中小企业数字化转型第一批试点企业名单。现将名单予以公示，如有异议，请于公示期间内以书面形式向市工信局反映。

公示时间：2024年4月23日-4月28日

联系电话：市工信局中小企业处：0371-89895244

序号	地区	企业名称
106	航空港区	河南长润自动化系统有限公司
107	新密市	郑州德众刚玉材料有限公司
108	新密市	郑州银泰冶金材料有限公司
109	上街区	郑州铝都阀门有限公司
110	巩义市	河南永安水泥有限责任公司
111	航空港区	河南福申电子科技有限公司

Case: Henan Yongan Cement Co., Ltd. was selected to be on the public list of Digital Energy and Carbon Management Centre of Henan Province

On 6 June 2024, the Department of Industry and Information Technology of Henan Province announced the results of the evaluation of the Digital Energy and Carbon Management Centre of Henan Province for the year 2024, and Henan Yongan Cement Co., Ltd. was selected to be on the public list of Digital Energy and Carbon Management Centre of Henan Province.

关于2024年度河南省数字化能碳管理中心评审结果的公示

发布日期：2024-06-06 11:01 浏览次数：757 收藏/分享/打印

公示时间：2024年6月6日——6月12日

监督电话：0371-65529913 0371-65529908

电子邮箱：hngzj@163.com

附件：2024年度河南省数字化能碳管理中心企业名单.pdf

附件：

2024 年度河南省数字化能碳管理中心企业名单

序号	地市	企业名称
1	郑州市	人民电建集团有限公司
2	郑州市	郑州通达工业机械服务股份有限公司
3	郑州市	河南新昌电工科技有限公司
4	郑州市	河南永安水泥有限责任公司
5	郑州市	河南正佳能源环保股份有限公司
6	郑州市	富联精密电子（郑州）有限公司
7	郑州市	河南天马新材料股份有限公司
8	郑州市	郑州金河源耐火材料有限公司
9	郑州市	富联裕展科技（河南）有限公司
10	郑州市	河南明晟新材料科技有限公司
11	郑州市	郑州同鑫铝业木业有限公司
12	郑州市	郑州日产汽车有限公司
13	郑州市	河南明泰科技发展有限公司
14	郑州市	登封市嵩基水泥有限公司
15	郑州市	巩义通达中原耐火技术有限公司

## Tianrui Mall APP Realizes Unmanned Procurement and Delivery Process

By using the Group's Tianrui Mall APP, customers can check the inventory, prices, and product characteristics of various types of materials in real-time. The customer enters the pickup vehicle information (differentiated by license plate number) on the APP, and binds the company information and payment account. Place an order online on the APP and bind the corresponding pick-up vehicle. When the pick-up vehicle enters the factory to pick up the goods, the license plate number is recognized and released through the information processing system, and the vehicle enters the warehouse according to the instructions; the system puts the materials according to the order details, and achieves accurate placement through the automated control system; after the placement is completed, the goods are picked up. The vehicle is weighed and the amount of material discharged is verified again for double control. The vehicle passed the information identification system again and left the factory smoothly. At this point, the procurement and delivery process is completed through the online platform, making the entire process unmanned. The Group has significantly improved delivery efficiency and reduced energy consumption through smart factory construction and terminal APP development.



## 8.3 Quality Assurance

### Product Quality Management

The Group strictly implements the "Product Quality Law of the People's Republic of China", "Quality Management Regulations for Cement Production Enterprises", "General Silicate Cement (GB175-2007)" and other laws and regulations, and actively responds to the "Regulations on Improving the Quality of Cement Products in the Cement Market" "Opinions on Order", the Group has compiled and implemented a "Quality Control Manual" within the Group, and established a complete product quality management system. The Group has obtained ISO 9001 quality management system certification.

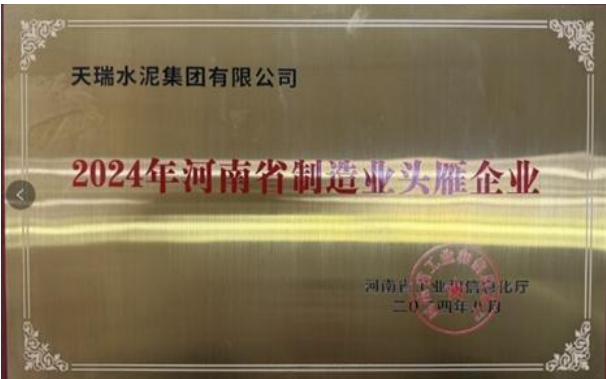
The Group's quality control department is specifically responsible for supervising the production process and inspecting the output quality of cement products. The quality management system covers quality management target setting, raw material compliance management regulations, production process monitoring, product quality inspection before leaving the factory, and market product sampling inspection management system, quality accident management system, etc., run through the entire process of raw material procurement, production process, factory products, and after-sales service; we will resolutely crack down on counterfeit and infringing products and safeguard the legitimate rights and interests of users.

The Group's product recycling process stipulates that once products that do not meet the requirements must be recycled immediately, the reasons must be investigated, improvements must be made, quality must be actively and strictly controlled, and good after-sales service must be maintained. During the reporting period, the Group did not recall any sold or shipped products due to safety, health, or quality reasons.

The laboratories of our group have passed the relevant tests of the Cement Association and obtained certificates from the local cement association. Before the products are officially shipped out of the factory, the laboratories of our Group have passed the relevant tests of the Cement Association. We conduct inspections according to national standards such as the Mud, Clay, and Sand Strength Test Method (GB/T 17671-2021) and Cement Chemical Analysis Method (GB/T 176-2017) to ensure the quality and stability of factory products. During the reporting period, the Group received recognition and honors from many parties for its excellent product performance, stable quality, and quality services, and honor.

**Case: Tianrui Cement Group Limited was selected as one of the "2024 Leading Goose Enterprises in Henan Province's Manufacturing Industry"**

Tianrui Cement Group Limited was selected as one of the "2024 Leading Goose Enterprises in Henan Province's Manufacturing Industry", which is the fourth consecutive year for the Group to be selected, and the only enterprise in Henan Province's cement industry.





### Case: The Group's subsidiaries learnt to implement the new cement standard

"General Silicate Cement (GB175-2023)" was formally implemented on 1 June 2024. In order to prompt the staff to grasp the updated content of the new cement standard in a timely manner and to better organise production, ensure quality, open up markets and serve customers, the subsidiaries of the Group launched various activities to learn, promote and implement the new cement standard.



### Case: Won the "Excellence Prize" in the 19th National Cement Chemical Analysis Proficiency Testing (Tianbao Huarui Cup)

Tianrui Yuzhou Cement Co., Ltd. Qianjing Branch has been awarded the "Excellence Prize" in the 19th National Cement Chemical Analysis Proficiency Testing (Tianbao Huarui Cup).

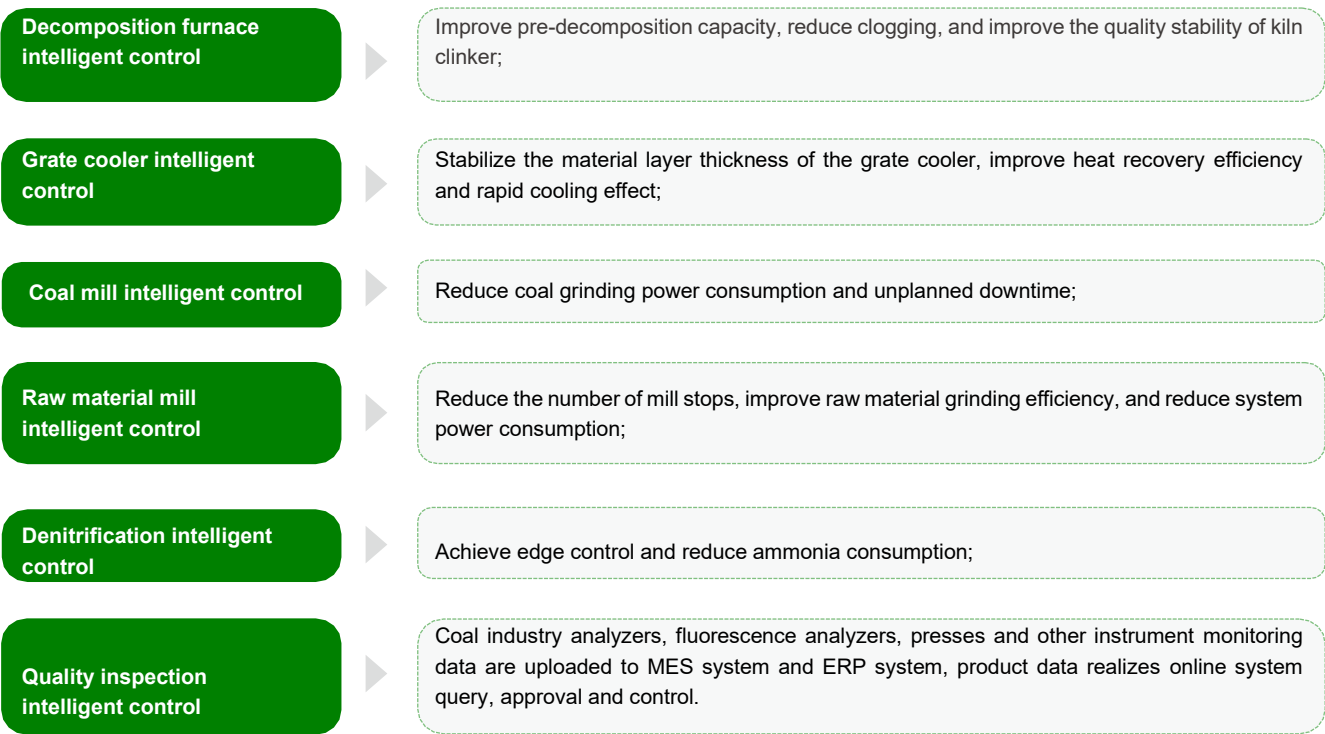


318	福建省大田县鑫城水泥工业有限公司
319	葛洲坝当阳水泥有限公司
320	天瑞集团禹州水泥有限公司浅井分公司
321	青海宏扬水泥有限责任公司
322	福建春驰集团国产实业水泥有限公司



## Digital Quality Control

The Group strives to promote digital construction and intelligent production, ensure product quality with intelligent manufacturing, and establish standardized and programmed quality management processes. Ensure product quality stability through intelligent control systems, timely identify and handle abnormal situations in each production link, improve the standardization and accuracy of operations in the production process, reduce production abnormalities caused by improper manual operations, improve resource utilization efficiency, and reduce unit products energy consumption. Record, cause analysis, and correction of production data to improve quality management efficiency and accuracy.



## 8.4 Customer First

### Customer Service

The Group upholds the value of customer first, adheres to the spirit of integrity and pragmatism, puts customer experience at the core of corporate development, and is committed to providing products and services of excellent quality and fully protecting the rights and interests of customers. In the process of constantly pursuing high-quality products, we continue to improve our service experience to meet the diverse needs of customers.

During the reporting period, the Group refined and upgraded its customer service plan based on the original customer management system. It improved the customer management system in terms of customer type and business type, paid attention to details, paid attention to feedback, maintained close communication with customers, and continuously optimized products and services. At the same time, the company also invests manpower and material resources to strengthen training for employees, dealers, and related parties and conducts technical exchanges and quality return visits with dealers and customers regularly or irregularly to provide full-process services before, during, and after sales.

### Customer Privacy Protection

The Group attaches great importance to the protection of customer privacy and strictly abides by the "Cybersecurity Law of the People's Republic of China", the "Personal Information Protection Law of the People's Republic of China" and other relevant laws and regulations as well as applicable laws and regulations in the places where it operates. It has established and abides by the "Sales Customers" within the Group "Management Measures", which divides and explains the scope of collection and use of customer's personal information, conducts hierarchical control of customer privacy according to employee functions and management levels and establishes a series of data system access control and office equipment access control, etc. Internal measures protect customer privacy. Customer personal information will only be used for business development, internal analysis, and customer relations, and is strictly prohibited from being leaked out.

During the reporting period, the Group did not experience any customer information leakage or customer privacy-related complaints.

### Complaint Handling

In terms of handling customer complaints, the Group has established a complete management system and process, as well as a complete after-sales service system to safeguard the rights and interests of customers. The Group has always adhered to a customer-centric approach and provided customers with convenient information feedback and complaint channels. Contact and complaint methods are clearly stated on the sales site, online promotion channels, product manuals, packaging labels, and other links. At the same time, the Group actively maintains close communication with customers through multiple channels, including regular on-site visits, real-time Internet information interaction, and

proactive telephone inquiries. We know that our customers' opinions and suggestions are crucial to the progress of our products and services, so we launch a customer satisfaction survey to comprehensively understand our customers' needs and expectations, to continuously optimize our products and services and ensure customer satisfaction continuous improvement.

The Group insists on starting from the needs of customers. Once the responsible department receives a customer complaint, we promise to initiate an investigation process and respond to the customer complaint within 24 hours. We focus on the accuracy and openness of the survey to ensure that the survey results truly reflect the nature of the problem. For complex issues, the Group actively mobilizes resources to promote multi-department collaboration to respond to customer needs. Analyze and integrate the collected customer complaints and needs to deeply understand customer expectations, and use this as an important source of information for future corporate operations to improve corporate service levels. The Group treats every customer complaint with an open, inclusive, and cherished attitude and strives to turn it into motivation to improve service quality. The Group firmly believes that through continuous efforts and improvements, we can win the trust and support of more customers and achieve sustainable development of the enterprise. During the reporting period, the Group received no complaints from customers.

Customer complaints overview		
Index	Unit	2024
Number of complaints about products and services	Piece	0
Number of customer complaints handled	Piece	0
Customer complaint handling percentage	%	Not applicable

## 8.5 Supply Chain Management

The Group firmly believes that by promoting the concepts of "green procurement" and "sunshine procurement" and continuing our efforts and innovation, we can make positive contributions to building a more sustainable industrial chain. The group management committee, legal affairs, supervision, finance, auditing and related professional management departments are responsible for supervising, inspecting and evaluating all material bidding of the Group. As the supervisory body of bidding activities, the group supervision unit is responsible for coordinating all aspects of supervision work of the Group.

## Supplier Management

In terms of supply chain management, the Group strives to build a full life cycle management mechanism for suppliers, focusing on supplier access, evaluation, and approval, from supplier inspection, warehousing and shortlisting, procurement bidding, contract management, and contract performance. Closed-loop management of the entire process including evaluation and survival of the fittest. Adhere to a quantifiable evaluation system, and the evaluation indicators cover the entire life cycle of suppliers, making them assessable and traceable.

During the procurement process, the Group selects suppliers through a bidding process based on factors such as product quality, price, delivery time, service quality, reliability, geographical location, and environmental and social risks. In view that being close to the Group's operating locations will help to better control delivery times, ensure supply stability, and reduce the environmental impact caused by transportation, the Group will give priority to suppliers close to production locations after balancing multiple factors. For suppliers in the resource pool, the Group conducts regular assessments covering product quality, supplier stability, after-sales service, and corporate ESG performance.

## Green Supply Chain

The Group formulates and implements the "Material Supply Management Regulations" and "Material Procurement Management Measures", clarifies the scope and principles of green supply chain management and green procurement, adheres to the concept of safe, timely, economical and green supply, and adheres to resource-saving and recycling. The principle of utilization-oriented and environment-friendly material procurement is in response to national environmental protection and energy conservation requirements.

To promote the healthy development of the supply chain, the Group integrates ESG risk factors into the supplier evaluation and cooperation process to achieve ESG risk management in all aspects of the supply chain, and through qualification review, on-site inspections, face-to-face communication, information collection, and background investigations. Through other methods, we identify, determine and evaluate the ESG risks of suppliers, and supervise the ESG risks of major suppliers. By the company's supplier evaluation system, during the reporting period, the Group conducted environmental, social, and governance evaluations on 448 suppliers, with a coverage rate of 100%.

When conducting supplier selection and public bidding, if all suppliers meet the basic requirements, the Group will give priority to environmental protection-related management system certifications, environmental awards, and environmental protection demonstration organizations recognized by government departments. For production suppliers, ISO 14001 environmental management system and ISO 45001 occupational health and safety system certifications are required.

At the same time, the Group takes environmental protection as its central concept. On the one hand, it continues to purchase energy-saving and consumption-reducing products. It has strict requirements on environmental pollution and does not prioritize price. Most of its products are purchased nearby, and it continues to achieve energy conservation and environmental protection at the transportation level. On the other hand, based on the characteristics of the cement industry, we actively consume solid waste materials and municipal solid waste from other industries to achieve a circular economy at the social level.

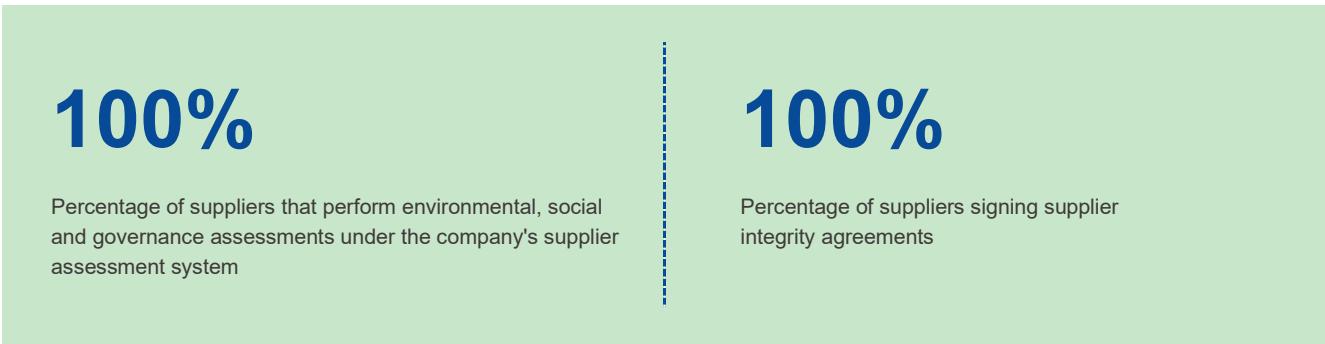
Sunshine Procurement

The Group has long adhered to transparent procurement. The Group adheres to the principles of openness, fairness, and impartiality in the procurement process, strengthens transparency, scientificity, and standardization in the procurement process, promotes healthy competition among suppliers, and promotes a healthy and healthy industry economy. To develop and improve procurement efficiency while avoiding corruption incidents, the Group provides supervision and reporting contact information and accepts supervision from all walks of life. The Group requires all suppliers to sign the "Integrity and Self-Discipline Agreement", and also attaches reporting email addresses and "Tianrui Group Audit" WeChat ID and other acceptance channels to ensure the creation of a clean supply chain.

During the reporting period, the anti-corruption policies and procedures organized by the Group have been communicated to all suppliers, customers, engineering clients, and other business partners, with a coverage rate of 100%.

Dealer Cooperation

The Group has always adhered to the concept of symbiosis, win-win, and hand-in-hand progress. It regards every dealer as an important partner of the company. It empowers the dealers from multiple aspects such as product knowledge, marketing strategies, and daily management. It is market-oriented and adapts to the market together with the dealers. Changes, adjust marketing strategies promptly and establish long-term friendly, open, and honest cooperative relationships in product marketing, market expansion, etc.



Supplier situation overview		
Index	Unit	2024
Total number of suppliers	Count	448
Number of suppliers in Mainland China	Count	448
Number of suppliers overseas and in Hong Kong, Macao and Taiwan	Count	0
Percentage of suppliers that perform environmental, social and governance assessments under the company's supplier assessment system	%	100%
Percentage of suppliers signing supplier integrity agreements	%	100%

# 09

## SHOULDER SOCIAL RESPONSIBILITY AND DRIVE REGIONAL GROWTH



## 9. SHOULDER SOCIAL RESPONSIBILITY AND DRIVE REGIONAL GROWTH

### 9.1 Give Back to the Community

The Group actively fulfills its corporate social responsibilities and civic obligations, focuses on the coordinated development of corporate development, the economy, society, resources, and the environment, solves community difficulties, and maintains community relations. The Group's external donations and sponsorship include donations and sponsorships to disaster-stricken areas, designated poverty alleviation areas, designated assistance areas, disadvantaged social groups in need, as well as social welfare undertakings such as science, education, culture and health, environmental protection, energy conservation, and emission reduction. During the reporting period, the Group participated in several charitable donation activities, with a total charitable donation amount of RMB1,384,720.

**1.38** Million RMB

Charitable donation investment

Overview of community and public welfare achievements		
Indicators	Unit	2024
Total hours of volunteer service	Hours	36
Charitable donation investment	Million RMB	1.38

### 9.2 Public Welfare Undertakings

The Group has always adhered to the people-oriented modern management philosophy, strengthened corporate responsibility and responsibility, actively fulfilled social responsibilities, and continued to promote the steady progress of the Group. The Group actively participates in public welfare undertakings and provides guarantee and support for various public welfare volunteer activities in terms of personnel organization, working mechanism, time arrangement, financial support, and communication. The Group supports its employees to actively participate in various volunteer activities such as blood donation, material donation, environmental protection, and charitable donations to spread warmth.



### Case: Unit with Outstanding Contributions to Love Donations

On 15 March 2024, Tianrui Guangshan Cement Co., Ltd. was awarded the medal of "Civilised and Honest Enterprise" in Xinyang City, which was held by the Market Supervision Administration of Guangshan County as the main activity of Xinyang City's 3.15 Consumer's Rights Day Honesty Education.



## 9.3 Rural Revitalization

The Group actively responds to policy plans, comprehensively supports rural revitalization, carries out rural assistance activities, and helps promote the sustainable development of rural areas. During the reporting period, the Group continued to support rural revitalization and county economic development, and made active efforts in promoting the development of township education, donating student aid, caring for the next generation, and promoting local economic development, and has received a series of honors: The Group's Tianrui Xindeng Cement Co., Ltd. was awarded the title of "Unit Member of Zhengzhou Narcotic Control Association".

## 9.4 Promote Local Development

While focusing on its development, the Group also hopes to promote the economic development of the local areas where its business is conducted. During the reporting period, the Group concentrated on operating its business, actively fulfilled its social responsibilities, operated by the law, paid taxes with integrity, created a good and harmonious tax-enterprise relationship with the places where it operates, and made contributions to drive local economic and social development, promote local employment, and build harmonious labor relations. made a positive contribution.

During the reporting period, the Group's Tianrui Group Guangshan Cement Co., Ltd. was awarded the honorary title of "Xinyang City Civilised Enterprise", Tianrui Group Yuzhou Cement Co., Ltd. was awarded the title of "Advanced Enterprise for Employment Absorption", and Yingkou Tianrui Cement Co., Ltd. was awarded the honorary title of "Worker Pioneer" from the All-China Federation of Trade Unions. For a long time, the Group has been actively building harmonious and stable labor relations, standardizing labor employment processes, and actively absorbing the local qualified labor force to promote local employment levels. At the same time, the Group has continuously improved the level of labor security management, continued to improve the salary system, and effectively protected the legitimate rights and interests of employees. And provide employees with multiple channels of career planning, skills training, labor protection, and collective care to improve employees' sense of gain and happiness.

## 10. LIST OF LAWS AND REGULATIONS

The laws and regulations that have a significant impact on the Group's business operations in Mainland China and Hong Kong are as follows:

ESG scope	Chinese Mainland	Hong Kong
Environment	The Environmental Protection Law of the People's Republic of China	Chapter 311, Air Pollution Control Ordinance
	The Environmental Impact Assessment Law of the People's Republic of China	Chapter 354, Waste Disposal Ordinance
	The Environmental Protection Tax Law of the People's Republic of China	
	Regulations on the Implementation of the Environmental Protection Tax Law of the People's Republic of China	
	The Law of the People's Republic of China on the Prevention and Control of Air Pollution:	
	The Law of the People's Republic of China on the Prevention and Control of Water Pollution,	
	Law of the People's Republic of China on the Prevention and Control of Environmental Pollution caused by Solid Waste	
	Measure for the Administration of Sewage Discharge Permits (for Trial Implementation)	
	Measures for the Administration of Enterprise Environmental Information Disclosure according to Law	
	Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution	
Employment and labor regulations	The Energy Conservation Law of the People's Republic of China	
	The Water Law of the People's Republic of China,	
	The Labor Law of the People's Republic of China,	Chapter 57, Employment Ordinance
	The Labor Contract Law of the People's Republic of China	Chapter 480, Gender Discrimination Ordinance
	The Social Insurance Law of the People's Republic of China,	Chapter 487, Disability Discrimination Ordinance

ESG scope	Chinese Mainland	Hong Kong
Employment and labor regulations	The Law of the People's Republic of China on the Protection of Minors	Chapter 602, the Racial Discrimination Ordinance
	Regulations on the Prohibition of Child Labor	
Work health and safety	Law of the People's Republic of China on the Prevention and Control of Occupational Diseases	Employees' Compensation Ordinance, Chapter 282, Laws of Hong Kong
	Production Safety Law of the People's Republic of China	The Occupational Safety and Health Ordinance, Chapter 509, Laws of Hong Kong
	Fire Protection Law of the People's Republic of China	
	Regulations on the Safety Management of Hazardous Chemicals	
	Special Equipment Safety Supervision Regulations	
Product liability	Copyright Law of the People's Republic of China	The Trade Descriptions Ordinance, Chapter 362, Laws of Hong Kong
	Patent Law of the People's Republic of China	Personal Data (Privacy) Ordinance, Chapter 486, Laws of Hong Kong
	Trademark Law of the People's Republic of China	Trademarks Ordinance, Chapter 559, Laws of Hong Kong
	Intellectual Property Law of the People's Republic of China	Securities and Futures Ordinance, Chapter 571, Laws of Hong Kong
	Product Quality Law of the People's Republic of China	
	Civil Code of the People's Republic of China	
	Consumer Rights and Interests Protection Law of the People's Republic of China	
Anti-corruption	Advertising Law of the People's Republic of China	
	Anti-Money Laundering Law of the People's Republic of China	Chapter 201, the Prevention of Bribery Ordinance
	The Anti-Unfair Competition Law of the People's Republic of China	Chapter 204, the ICAC Ordinance
	The Anti-Monopoly Law of the People's Republic of China	Chapter 615 Ordinance against Money Laundering and Terrorist Financing
	The State Administration for Industry and Commerce on the prohibition of Commerce Interim Provisions on Bribery Behavior	Chapter 622, Companies Ordinance

# 11. INDEX OF MATRIC

## 11.1 Index of HKEX ESG Guidelines

Aspects, general disclosures and key performance indicators	Description	Relevant chapters of this report
<b>Main Categories A. Environment</b>		
<b>Level A1: Emissions</b>		
General disclosure	Regarding waste gas and greenhouse gas emissions, discharge of pollutants to water and land, generation of hazardous and non-hazardous waste, etc.: (a) policy; and (b) Information on compliance with relevant laws and regulations that have a significant impact on the issuer.	6.1 Environmental management
KPI A1.1	Emission types and related emission data.	6.4 Emissions management
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, if applicable, intensity (e.g. per unit of production, per facility).	6.2 Low-carbon production
KPI A1.3	Total amount of hazardous waste generated (in tonnes) and, if applicable, density (e.g. per unit of output, per facility).	6.4 Emissions management
KPI A1.4	Total amount of non-hazardous waste generated (in tonnes) and, if applicable, density (e.g. per unit of output, per facility).	6.4 Emissions management
KPI A1.5	Describe the emissions targets established and the steps taken to achieve them.	6.1 Environmental management 6.2 Low-carbon production 6.4 Emissions management
KPI A1.6	Describe methods for handling hazardous and non-hazardous waste, and describe the waste reduction goals established and the steps taken to achieve these goals.	6.4 Emissions management
<b>Level A2: Resource usage</b>		
General disclosure	Policy for the effective use of resources (including energy, water, and other raw materials).	6.3 Resource usage
KPI A2.1	Total direct and/or indirect energy consumption (e.g. electricity, gas or oil) by type (in thousands of kilowatt hours) and intensity (e.g. per unit of production, per facility).	6.3 Resource usage
KPI A2.2	Total water consumption and density (e.g. per unit of production, per facility).	6.3 Resource usage
KPI A2.3	Describe the energy efficiency goals established and the steps taken to achieve these goals.	6.3 Resource usage
KPI A2.4	Describe any issues that may arise in sourcing suitable water sources, as well as the water efficiency targets set and the steps taken to achieve these targets.	6.3 Resource usage
KPI A2.5	The total amount of packaging materials used in finished goods (in tonnes) and, if applicable, per unit produced.	6.3 Resource usage

Aspects, general disclosures and key performance indicators	Description	Relevant chapters of this report
<b>Level A3: Environment and natural resources</b>		
General disclosure	Policies to reduce the issuer's significant impact on the environment and natural resources.	6.1 Environmental management 6.2 Low-carbon production 6.3 Resource usage
KPI A3.1	Describe the significant impacts of business activities on the environment and natural resources and the actions taken to manage the impacts.	6.2 Low-carbon production 6.3 Resource usage 6.4 Emissions management 6.6 Green mine
<b>Level A4: Climate change</b>		
General disclosure	Policies for identifying and responding to significant climate-related matters that have impacted and may impact the issuer.	6.5 Addressing climate change
KPI A4.1	Describe the major climate-related issues that have and may have an impact on the issuer, and the response actions.	6.5 Addressing climate change
<b>Main Areas B. Social Employment and Labor Practices</b>		
<b>Level B1: Employment</b>		
General disclosure	Regarding pay and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination and other benefits and benefits: (a) policy; and (b) Information on compliance with relevant laws and regulations that have a significant impact on the issuer.	7.1 Employment of employees
KPI B1.1	Total number of employees by gender, employment type (such as full-time or part-time), age group and region.	7.1 Employment of employees
KPI B2.2	Employee turnover rates by gender, age group and region.	7.1 Employment of employees
<b>Level B2: Health and safety</b>		
General disclosure	Regarding the provision of a safe working environment and the protection of employees from occupational hazards: (a) policies; and (b) Information on compliance with relevant laws and regulations that have a significant impact on the issuer.	7.4 Occupational health and security
KPI B2.1	The number and rate of work-related fatalities in each of the past three years (including the reporting year).	7.4 Occupational health and security
KPI B2.2	Number of days lost due to work-related injury.	7.4 Occupational health and security
KPI B2.3	Describe the occupational health and safety measures adopted and how they are implemented and monitored.	7.4 Occupational health and security
<b>Level B3: Development and training</b>		
General disclosure	Policy on enhancing employees' knowledge and skills in performing their job duties. Describe the training activities.	7.2 Employee training and promotion

Aspects, general disclosures and key performance indicators	Description	Relevant chapters of this report
KPI B3.1	Percentage of trained employees by sex and category of employees (e.g. senior management, middle management, etc.)	7.2 Employee training and promotion
KPI B3.2	Average number of hours of training completed per employee by sex and type of employee.	7.2 Employee training and promotion
<b>Level B4: Labour code</b>		
General disclosure	Relating to the prevention of child or forced Labour: (a) Policy; and (b) Information on compliance with relevant laws and regulations which have a material impact on the issuer.	7.1 Employment of employees
KPI B4.1	Describe measures to review recruitment practices to avoid child and forced Labour.	7.1 Employment of employees
KPI B4.2	Describe the steps taken to eliminate a violation when it is discovered.	7.1 Employment of employees
<b>Level B5: Supply chain management</b>		
General disclosure	Policies to manage environmental and social risks in the supply chain.	8.5 Supply chain management
KPI B5.1	Number of suppliers by region.	8.5 Supply chain management
KPI B5.2	Describe the practices relating to the employment of suppliers, the number of suppliers to whom the practices are performed, and the methods of enforcement and monitoring of the practices.	8.5 Supply chain management
KPI B5.3	Describe the practices for identifying environmental and social risks at each stage of the supply chain, as well as the relevant enforcement and monitoring methods.	8.5 Supply chain management
KPI B5.4	Describe the practices that promote greater use of environmentally friendly products and services in the selection of suppliers, and the relevant enforcement and monitoring methods.	8.5 Supply chain management
<b>Level B6: Product liability</b>		
General disclosure	Regarding health and safety, advertising, labelling and privacy matters and remedies for the products and services provided: (a) Policy; and (b) Information on compliance with relevant laws and regulations which have a material impact on the issuer.	8.3 Quality assurance 8.4 Customer first
KPI B6.1	Percentage of total products sold or shipped that must be recalled for safety and health reasons.	8.3 Quality assurance



Aspects, general disclosures and key performance indicators	Description	Relevant chapters of this report
KPI B6.2	Number of complaints received about products and services and how to respond.	8.4 Customer first
KPI B6.3	Describe practices related to the maintenance and protection of intellectual property rights.	8.1 Innovation awards
KPI B6.4	Describe the quality verification process and product recovery procedures.	8.3 Quality assurance
KPI B6.5	Describe the consumer data protection and privacy policy, as well as the relevant enforcement and monitoring methods.	8.4 Customer first
<b>Level B7: Anti-corruption</b>		
General disclosure	Related to the prevention of bribery, extortion, fraud and money laundering: (a) Policy; and (b) Information on compliance with relevant laws and regulations which have a material impact on the issuer.	5.7 Steady operation
KPI B7.1	The number and outcome of corruption proceedings initiated and concluded against the issuer or its employees during the reporting period.	5.7 Steady operation
KPI B7.2	Describe preventive measures and reporting procedures, as well as relevant enforcement and monitoring methods.	5.7 Steady operation
KPI B7.3	Describe the anti-corruption training provided to directors and staff.	5.7 Steady operation
<b>Level B8: Community investment</b>		
General disclosure	A policy on community engagement to understand the needs of the community in which it operates and to ensure that its business activities take into account the interests of the community.	9. Shoulder social responsibility and drive regional growth
KPI B8.1	Focus on areas of contribution (e.g. education, environmental issues, Labour needs, health, culture, sports).	9. Shoulder social responsibility and drive regional growth
KPI B8.2	The use of resources (such as money or time) in the area of focus.	9. Shoulder social responsibility and drive regional growth

## 11.2 GRI Content Index

GRI content index			
Direction for use	China Tianrui Group Cement Co., Ltd. reported the information referenced in this GRI Content Index with reference to GRI standards between 1 January 2024 and 31 December 2024		
Using GRI 1	GRI 1: Foundation 2021		
GRI standard	Disclosure item	Position	Reason for omission
GRI 2: General disclosure 2021			
Organization and its reporting practices	2-1 Organization details	1. About this report	
	2-2 Entities included in organizational sustainability reporting	1. About this report	
	2-3 Reporting period, reporting frequency and contacts	1. About this report	
	2-4 Information restatement	Not applicable	This case is not involved
	2-5 External authentication	Not applicable	This case is not involved
Activities and workers	2-6 Activities, value chains and other business relationships	1. About this report; 3. Chairman's speech; 8.5 Supply chain management	
	2-7 Employees	7. Engagement with people-oriented culture to seek common development	
	2-8 Workers other than employees	7.1 Employment of employees	
Governance	2-9 Governance structure and composition	5.1 Corporate governance; Please refer to the 2024 Annual Report of the Company	
	2-10 Nomination and selection of the highest governing bodies	Please refer to the 2024 Annual Report of the Company	
	2-11 Chairman of the highest governing body	Please refer to the 2024 Annual Report of the Company	
	2-12 Oversight role of the Supreme governing body in terms of management impact	5.1 Corporate governance; 5.2 ESG governance structure	
	2-13 Delegating responsibility for managing impact	5.1 Corporate governance; 5.2 ESG governance structure	
	2-14 Role of supreme governing bodies in sustainable development reporting	5.1 Corporate governance; 5.2 ESG governance structure	
	2-15 Conflict of interest	Please refer to the 2024 Annual Report of the Company	
	2-16 Communication on issues of major concern	5.3 Stakeholder communication; 5.4 ESG materiality assessment	
	2-17 Common knowledge of the highest governing bodies	5.2 ESG governance structure; 5.3 Stakeholder communication; 5.4 ESG materiality assessment	

GRI standard	Disclosure item	Position	Reason for omission
Governance	2-18 Performance evaluation of the highest governing body	Please refer to the 2024 Annual Report of the Company	
	2-19 Remuneration policy	7.3 Employee welfare and care; Please refer to the 2024 Annual Report of the Company	
	2-20 Procedures for determining remuneration	7.3 Employee welfare and care; Please refer to the 2024 Annual Report of the Company	
	2-21 Total compensation ratio	Please refer to the 2024 Annual Report of the Company	
Strategy, policy and practice	2-22 Statement on sustainable development strategy	5.5 Core values of sustainable development; 5.6 Uphold un sustainable development goals	
	2-23 Policy Commitments	5.1 Corporate governance; 5.2 ESG governance structure; 5.7 Steady operation	
	2-24 Integration Policy Commitments	Please refer to the Policy and management section of each chapter for details	
	2-25 Procedures for remedying negative effects	6.4 Emission management; 6.6 Green mine; 7.4 Occupational health and safety; 8.4 Customer first	
	2-26 Mechanisms for seeking advice and raising concerns	5.3 Stakeholder communication; 5.7 Steady operation; 8.4 Customer first; 8.5 Supply chain management	
	2-27 Comply with laws and regulations	5.1 Corporate governance; 5.7 Steady operation; 10. List of laws and regulations; Please refer to the Policy and management section of each chapter for details	
	2-28 Membership of the association	4. Sustainability performance highlights	
Stakeholder participation	2-29 Approaches to stakeholder engagement	5.3 Stakeholder communication	
	2-30 Collective Bargaining Agreement	Not applicable	There is no formal collective bargaining agreement within the group, however employees are free to join unions.
Substantive issue			
GRI 3: Substantive Issues 2021	3-1 Process for determining substantive issues	5.3 Stakeholder communication; 5.4 ESG materiality assessment	
	3-2 List of substantive issues	5.4 ESG materiality assessment	
	3-3 Management of substantive issues	5.4 ESG materiality assessment	

GRI standard	Disclosure item	Position	Reason for omission
GRI 201: Economic performance 2016	201-1 Economic value directly generated and distributed	Please refer to the 2024 Annual Report of the Company	
	201-2 Financial impacts of climate change and other risks and opportunities	6.5 Addressing climate change	
	201-3 Mandatory defined benefit plans and other retirement plans	Please refer to the 2024 Annual Report of the Company	
	201-4 Financial subsidies granted by the Government	Please refer to the 2024 Annual Report of the Company	
GRI 202: Market performance 2016	202-1 By gender standard starting salary level wages with local minimum wage ratio	Not applicable	Due to the differences between the starting salaries of different subsidiaries of the Group, it is not possible to obtain a uniform ratio, but the standard starting salary level of all subsidiaries is higher than the local minimum wage, and the competitive salary is raised above it.
	202-2 Percentage of executives hired from the local community	Not applicable	As group executives manage from multiple points of operation, it is not possible to clearly distinguish the communities to which they belong.
GRI 203: Indirect economic impact 2016	203-1 Infrastructure investment and support services	6.6 Green mine; 6.7 Smart mine construction; 9. Shoulder social responsibility and drive regional growth	
	203-2 Significant indirect economic impact	8.4 Customer first; 8.5 Supply chain management	
GRI 204: Procurement practice 2016	204-1 Proportion of procurement expenditure from local suppliers	Not applicable	The Group will preferentially select suppliers close to production locations.
GRI 205: Anti-corruption 2016	205-1 Operating points where corruption risk assessments have been conducted	5.7 Steady operation	
	205-2 Communication and training of anti-corruption policies and procedures	5.7 Steady operation	
	205-3 Confirmed incidents of corruption and actions taken	5.7 Steady operation	
GRI 206: Anti-competitive behavior 2016	206-1 Legal action for anti-competitive conduct, antitrust, and antitrust practices	5.7 Steady operation	

GRI standard	Disclosure item	Position	Reason for omission
GRI 207: Tax 2019	207-1 Tax policy	Please refer to the 2024 Annual Report of the Company	
	207-2 Tax governance, control and risk management	Please refer to the 2024 Annual Report of the Company	
	207-3 Stakeholder engagement and management in relation to tax concerns	Please refer to the 2024 Annual Report of the Company	
	207-4 Country reports	Not applicable	This case is not involved
GRI 301: Item 2016	301-1 Weight or volume of the material used	6.3 Resource usage	
	301-2 Feed used for recycling	6.3 Resource usage	
	301-3 Reclaimed products and their packaging materials	6.3 Resource usage	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	6.3 Resource usage	
	302-2 Energy consumption outside of the organization	6.2 Low-carbon production; 6.3 Resource usage	
	302-3 Energy intensity	6.3 Resource usage	
	302-4 Reduce energy consumption	6.3 Resource usage	
	302-5 Reduce energy demand for products and services	6.3 Resource usage	
GRI 303: Water resources and sewage 2018	303-1 Tissue and water as a common resource interrelationship	6.3 Resource usage	
	303-2 Management of the impacts related to the drainage of the water	6.4 Emission management	
	303-3 Water intake	6.3 Resource usage	
	303-4 Drain	6.4 Emission management	
	303-5 Water consumption	6.3 Resource usage	
GRI 304: Biodiversity 2016	304-1 Organizations own, lease, manage operational points in biodiversity-rich areas located outside or near reserves and reserves	not applicable	The case is not involved
	304-2 Activities, products, and services for biodiversity enormous impact	6.4 Emission management; 6.6 Green mines	

GRI standard	Disclosure item	Position	Reason for omission
GRI 304: Biodiversity 2016	304-3 Protected or restored habitat	not applicable	The case is not involved
	304-4 Operational impacted habitats have been listed in the (IUCN) Red List and national protection	not applicable	The case is not involved
GRI 305: Emissions 2016	305-1 Direct (Category 1) greenhouse gas emissions	6.2 Low-carbon production	
	305-2 Indirect (Category 2) GHG emissions from energy	6.2 Low-carbon production	
	305-3 Other indirect (category 3) greenhouse gas emissions	6.2 Low-carbon production	
	305-4 Greenhouse gas emission intensity	6.2 Low-carbon production	
	305-5 Greenhouse gas reduction	6.2 Low-carbon production	
	305-6 Emissions of ozone-depleting substances (ODS)	not applicable	The case is not involved
	305-7 Nitrogen oxide (NOX), Sulfur oxide (SOX), And other major gas emissions	6.2 Low-carbon production	
GRI 306: Waste product 2020	306-1 Waste generation and waste related enormous impact	6.4 Emission management	
	306-2 Management of significant impacts related to waste	6.4 Emission management	
	306-3 Waste products generated	6.4 Emission management	
	306-4 Waste transferred from the disposal	6.4 Emission management	
	306-5 Waste entering the disposal	6.4 Emission management	
GRI 308: Supplier environmental assessment 2016	308-1 New screening using environmental evaluation dimensions supplier	8.5 Supply chain management	
	308-2 Negative environmental impacts in the supply chain and the actions taken	8.5 Supply chain management	
GRI 401: Hire 2016	401-1 New hire and turnover	7.1 Employment of employees	

GRI standard	Disclosure item	Position	Reason for omission
GRI 401: Hire 2016	401-2 Benefits provided to full-time employees (excluding temporary or part-time employees)	7.3 Employee welfare and care.	The Group provides employees with appropriate benefits and protection in accordance with the law.
	401-3 Parental leave	not applicable	
GRI 402: Industrial relations 2016	402-1 Minimum notice period for operational changes	not applicable	Notices of major operational changes of the Group are subject to a publicity period.
GRI 403: Occupational health and safety 2018	403-1 Occupational health and safety management system	7.4 Occupational health and safety	
	403-2 Hazard identification, risk assessment and incident investigation	7.4 Occupational health and safety	
	403-3 Occupational health Services	7.4 Occupational health and safety	
	403-4 Occupational health and safety matters: worker participation, consultation and communication	7.4 Occupational health and safety	
	403-5 Occupational health and safety training for workers	7.4 Occupational health and safety	
	403-6 Promoting worker health	7.4 Occupational health and safety	
	403-7 Prevention and mitigation are directly related to business relations related occupational health and safety implications	7.4 Occupational health and safety	
	403-8 Occupational health and safety management body covered worker	7.4 Occupational health and safety	
	403-9 Work-related injury	7.4 Occupational health and safety	
	403-10 Work-related health problems	7.4 Occupational health and safety	



GRI standard	Disclosure item	Position	Reason for omission
GRI 404: Training and education, 2016	404-1 Each employee is trained every year mean hours	7.2 Employee training and promotion	
	404-2 Employee skills upgrading programs and transitions assistance scheme	7.2 Employee training and promotion	
	404-3 Regular acceptance of performance and career development percentage of employees assessed	not applicable	The case is not involved
GRI 405: Diversity and equal opportunity 2016	405-1 Diversity of institutions and staff	5.1 Corporate governance; 7.1 Employment of employees	
	405-2 The ratio of basic wages and remuneration for men and women	not applicable	The Group adheres to equal pay for equal work and does not discriminate on the basis of gender.
GRI 406: Anti-discrimination 2016	406-1 Events of discrimination and corrective action taken	7.1 Employment of employees	
GRI 407: Freedom of association and collective bargaining 2016	407-1 Operating sites and suppliers where freedom of association and collective bargaining rights may be at risk	not applicable	The case is not involved
GRI 408: Child labor 2016	408-1 Operating points and suppliers with the risk of major child labor events	not applicable	The case is not involved
GRI 409: Forced or forced labor 2016	409-1 Operating points and suppliers with significant risk of forced or forced labor events	not applicable	The case is not involved
GRI 410: Security practice 2016	410-1 Security personnel who are trained in human rights policy or procedures	not applicable	The case is not involved
GRI 411: Aboriginal rights 2016	411-1 incidents involving violations of indigenous rights	not applicable	The case is not involved
GRI 413: Local community 2016	413-1 Operating points with local community engagement, impact assessment and development plans	9. Shoulder social responsibility and drive regional growth	
	413-2 Operating points with actual or potential significant negative impacts on the local community	not applicable	The case is not involved

GRI standard	Disclosure item	Position	Reason for omission
GRI 414: Supplier social assessment 2016	414-1 New suppliers screened using the social evaluation dimension	8.5 Supply chain management	
	414-2 Negative social impacts of supply chains and actions to be taken	8.5 Supply chain management	
GRI 415 Public policy 2016	415-1 Political contributions	not applicable	The case is not involved
GRI 416: Customer health and safety 2016	416-1 Assess the health and safety impacts of product and service categories	8.3 Quality assurance	
	416-2 Violations involving health and safety impacts of products and services	8.3 Quality assurance	
GRI 417: Marketing and logo 2016	417-1 Requirements for information and identification of products and services	8.3 Quality assurance	
	417-2 Violations involving product and service information and labeling	not applicable	The case is not involved
	417-3 Violations involving marketing communications	not applicable	The case is not involved
GRI 418: Customer privacy 2016	418-1 Substantiated complaints concerning violations of customer privacy and loss of customer data	8.4 Customer first	

## 12. EXPLANATION OF TERMS

Proper noun	Paraphrase
Greenhouse gases	Including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.
CCER	CCER (Chinese Certified Emission Reduction) refers to China's certified emission reduction. According to the Interim Measures for the Management of Voluntary Greenhouse Gas Emission Reduction Trading, the emission reduction participating in voluntary emission reduction shall be registered and filed in the national voluntary emission reduction trading register by the competent national authorities. The recorded emission reduction is called China Certified Emission Reduction CCER. After the voluntary emission reduction project has been filed, it shall be traded in the registered trading institution.
Nitrogen oxide	Including a variety of compounds, such as nitrous oxide (N <sub>2</sub> O), nitric oxide (NO), nitrogen dioxide (NO <sub>2</sub> ), nitrous oxide (N <sub>2</sub> O <sub>3</sub> ), nitrous oxide (N <sub>2</sub> O <sub>4</sub> ) and nitrous oxide pentoxide (N <sub>2</sub> O <sub>5</sub> ). In addition to nitrogen dioxide, other nitrogen oxides are extremely unstable, when exposed to light, humidity or heat into nitrogen dioxide and nitric oxide, nitric oxide into nitrogen dioxide. Therefore, the occupational environment is exposed to several gas mixtures, often called smoke (gas), mainly nitric oxide and nitrogen dioxide, and mainly nitrogen dioxide. Nitrogen oxides have varying degrees of toxicity.
Denitration technology	Technical measures to prevent excessive nitrogen oxides and NO <sub>x</sub> from polluting the environment after coal combustion in cement kilns, reduce the production of NO <sub>x</sub> and remove NO <sub>x</sub> from flue gas.
Desulphur technique	Technical measures to prevent excessive SO <sub>2</sub> from polluting the environment after coal combustion in cement kilns, reduce SO <sub>2</sub> production and remove SO <sub>2</sub> from flue gas.
Waste heat generation technology of cement kiln	Technology that uses waste heat generated during cement production to generate electricity. In the process of cement production, kiln head and kiln tail will discharge a lot of waste heat waste, the temperature of these waste is usually below 350°C, cement kiln waste heat power generation technology refers to the recovery of heat in these waste gases, through the waste heat boiler to generate steam, drive turbine power generation. The technology helps to improve energy efficiency, reduce production costs, and reduce environmental impact.
Enclosed belt corridor transport	Enclosed belt corridor transport for long distance transport of ore bulk materials. The belt corridor will transport raw materials from the mine to the cement production plant, composed of conveyor belts, driving devices, brackets, etc., with simple structure, reliable operation, easy maintenance and other advantages, can reduce the carbon emissions generated by the vehicle transportation of raw materials in the cement plant, and also reduce the dust diffusion caused by the transportation of raw materials.
Cement kiln collaborative solid waste disposal	Cement kiln collaborative solid waste disposal is a kind of technology that puts solid waste into cement kiln, and realizes the harmless treatment of waste while producing cement. In the collaborative disposal of hazardous wastes in cement kilns, due to high temperature, large heat capacity and long residence time of waste, organic harmful substances can be burned more thoroughly and dioxins can be avoided. The alkaline environment of cement kiln can absorb acid gas in incineration and realize harmless treatment of hazardous waste.
Climate change	In its current common usage, climate change describes global warming and its effects on the Earth's climate system.
Climate adaptation	Climate adaptation refers to the process of adapting to the effects of climate change, which may be present or expected. Climate adaptation requires human actions to help adjust natural systems, to mitigate or avoid the harm of climate change to humans, and to take advantage of opportunities.
6S management	6S management refers to the six projects of sorting SEIRI, sorting SEITON, cleaning SEISO, cleaning SEIKETSU, literacy SHITSUKE and SECURITY, which all start with S and are referred to as 6S, aiming to improve the overall quality of work.

# 13. READER FEEDBACK

Dear readers,

Hello! Thank you very much for taking time out of your busy schedule to read the China Tianrui Cement 2024 Environmental, Social and Governance Report. In order to continuously improve the level of report preparation and continuously enhance the ability to perform responsibilities, we look forward to your valuable comments or suggestions. Please help to complete the relevant questions in the feedback form, and choose the following ways to feedback to us:

Your comments on this report: (Please tick √ )

1. Please evaluate the significant impact of China Tianrui Cement on the economy, society and environment  
☐ Great    ☐ Good    ☐ General    ☐ Poor    ☐ Do not understand
2. Please comment on the response and disclosure of the concerns of stakeholders  
☐ Great    ☐ Good    ☐ General    ☐ Poor    ☐ Do not understand
3. Please evaluate the clarity, accuracy and completeness of the information, indicators and data disclosed in this report  
☐ Great    ☐ Good    ☐ General    ☐ Poor    ☐ Do not understand
4. Please evaluate the readability performance of this report  
☐ Great    ☐ Good    ☐ General    ☐ Poor    ☐ Do not understand
5. Please make a comprehensive evaluation of the Annual Environment, Society and Governance Report of China Tianrui Cement in 2024  
☐ Great    ☐ Good    ☐ General    ☐ Poor    ☐ Do not understand
6. What do you think is most satisfactory with this report?  

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7. What shortcomings do you think exist in this report?  

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8. What other suggestions do you have for our future environmental, social and governance reports?  

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Your Information: Which of the following stakeholders do you belong to?

- ☐ Government                      ☐ Shareholders    ☐ Customers                      ☐ Employees                      ☐ Regulators
- ☐ Suppliers and partners    ☐ Community                      ☐ Public and media    ☐ Other:

Thanks again for your participation!  
The Group welcomes any comments or suggestions regarding this report, please email [ir@tianrui.com](mailto:ir@tianrui.com) or [ir@ctrcement.com](mailto:ir@ctrcement.com) to provide your feedback



**中國天瑞集團水泥有限公司**  
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(Incorporated in the Cayman Islands with limited liability)  
Stock Code : 1252