



CHINA TIANRUI GROUP CEMENT COMPANY LIMITED

中國天瑞集團水泥有限公司

(Incorporated in the Cayman Islands with limited liability)

(Stock code: 1252)

**Environmental, Social,
and Governance Report
2019**

CHINA TIANRUI GROUP CEMENT COMPANY LIMITED
ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2019

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1 ABOUT THE COMPANY

The main scope of business of China Tianrui Group Cement Co. Limited (Stock Code: 01252) (“the Company” and, with its subsidiaries, collectively referred to as “the Group”) is production, sales and export of cement, clinker, fly ash, slag powder, concrete, aggregates and other cement products. The Group has 20 clinker production lines and 59 cement grinding production lines. The annual production capacity of clinker and cement is 28,400,000 tonnes and 56,700,000 tonnes respectively.

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

2 ABOUT THIS REPORT

2.1 BASIS OF PREPARATION OF REPORT AND SCOPE OF REPORTING

This report is prepared in accordance with Appendix 27 *Environmental, Social and Governance Reporting Guide* of the *Rules Governing the Listing of Securities of the Stock Exchange of Hong Kong Limited*, and is based on the principle of materiality, quantitative, balance and consistency. This report has fulfilled the “Comply or Explain” requirements set out in the reporting guide. It has also provided the performance of key performance indicators in regard to the Group’s social aspect, following the “recommended disclosure” requirements in the guidelines.

This report covers environmental, social and governance related activities from 1 January 2019 to 31 December 2019.

This ESG report covers the Group’s cement, clinker and aggregates production businesses in Henan, Liaoning, Tianjin and Anhui Province, among them, Henan and Liaoning account for the largest proportions.

2.2 CONTACT INFORMATION

The Group welcomes comments and suggestions related to the report. Please feel free to send us your feedback to ir@ctr cement.com.

3 MESSAGE FROM THE BOARD OF DIRECTORS

We are pleased to share the Group's significant achievements in promoting sustainable development in this 2019 Environmental, Social and Governance (ESG) report.

In 2019, the cement industry continued to implement a series of policies such as the government's supply-side reform and environmental protection, and implemented measures such as energy conservation and emission reduction, off-peak production and comprehensive rectification of mines. A number of backward production capacities was shut down and phased out. The industry concentration further increased, the self-discipline effect of the industry was significantly improved, and the supply and demand of the cement market was significantly improved.

The Chinese government has increased the intensity of implementing environmental protection laws and regulations related to eco-friendliness, pollution prevention, energy conservation and emission reduction. High pressure situations of "environmental protection inspections" have been maintained throughout the year. Legislation and law enforcement work have been carried out for the prevention of the main pollutants such as water, soil and atmosphere, which had a significant impact on major companies in the industry. Environmental protection policies and law enforcement supervision have made a significant impact on the cement industry and the Group. On one hand, they have brought on cost related pressures and challenges due to environmental protection matters, and on the other hand, they have promoted the elimination of backward production capacity and increase of industry barriers, which is conducive to the rebound of sales price, thus bringing positive effects.

The Group attaches great importance to corporate social responsibility and is committed to promoting business development and bringing greater returns to stakeholders. In 2019, the Group endeavored to fulfill its corporate social responsibility. The management focused on staff professional skills training and team building, and won numerous provincial and municipal quality awards. For example, the first place in Henan Province building materials chemical analysis workers group, the third place in building materials physical inspection workers group; Henan Province "Yi Mobao Cup" Technical Innovation Award Excellent Organization Award, won a total of 11 first-class awards, 15 second prizes, 17 third prizes; Yingkou Cement won the honor of "Liaoning Province Safety Culture Construction Demonstration Enterprise"; committed to striving for the advanced unit of "Zhengzhou Quality Improvement Several Policies" and also encouraged to promote Branches in the Zhengzhou area of Henan Province carried out incentive projects such as participating in the preparation of national industry standards, the declaration of enterprises with standardized good practices, the creation of CNAS laboratories, the certification of low-carbon products, and the certification of energy management systems. In 2019, we participated in public welfare activities such as student assistance and poverty alleviation, entered the community to volunteer services, created a stable and harmonious community environment, organized employees and their families to engage in various celebrations or entertainment activities on important festivals, and enriched employees' cultural life. In 2019, the Group is committed to fulfilling its own environmental responsibilities, continuously optimizing production processes, creating smart manufacturing demonstration enterprises, saving water and energy, reducing emissions, and doing a good job in environmental pollution prevention and control, and completing quality, environment, energy, occupational health and safety. The management system has also obtained the "Five in One" certification of the headquarter of the Cement Group and 31 molecular companies and the "Three Systems Expansion" certification of 12 clinker companies. Many branches have obtained a number of provincial and municipal green mines, green Factory, green supply chain and other honors. Among them, Tianrui Group Nanzhao Cement Co., Ltd. and Tianrui Group Guangshan Cement Co., Ltd. won the title of

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“Henan Province Green Supply Chain”, and Tianrui Xindeng Zhengzhou Cement Co., Ltd. and Dalian Tianrui Cement Co., Ltd. were awarded the provincial “green factory” title. Tianrui Group Zhengzhou Cement Co., Ltd. won the honor of "Henan Province Green Leading Enterprise".

The purpose of this report is to disclose the Group’s environmental, social and governance management methods and the overall performance achieved by each measure. We strive to play an important role in the circular economy, sparing no effort in the sustainable management of raw materials and by-products to continue to provide high quality products. We would like to thank all departments and teams for their dedication and contribution to the Group’s sustainable development.

4 STAKEHOLDER PARTICIPATION

The Group values the comments and feedback of each stakeholder, and firmly believes that understanding stakeholders’ expectations is critical to the direction of company development. In order to better understand their visions regarding corporate social responsibility, the Group has carried out intermittent contact with stakeholders through various channels, including clients, employees, government organizations and community organizations. Based on these consensus, the Group proposed a corporate social responsibility framework that covers four main areas, namely the **environment, product responsibility, manpower and society**, for the sustainable development goals of itself and its stakeholders.

5 OVERVIEW OF THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE PERFORMANCE

- Environment**
- Obtained the Environmental Management and Energy Management System Certification
 - Conducted carbon emissions accounting
 - Used denitrification system and high quality coal with low sulfur content to reduce emissions
 - Installed electrostatic bag composite dust remover to increase dust removal efficiency in exhaust
 - Used enclosed belt conveyors and storage sheds and installed vehicle cleaning equipment and dust collectors in loading lane to reduce dust
 - Used advanced NSP technology and waste heat recovery system in production line to increase energy efficiency during production
 - Installed water recycling system, implemented the recycling of water resources at the production lines to achieve zero industrial wastewater discharge
 - Used industrial by-products of other industries as production resources to build a cross-industry circular economy industry chain
 - Many branches have won many provincial and municipal Green Mines, Green Factories, Green Supply Chain and other honours
-

- Product Responsibility**
- Obtained Quality Management System Certification
 - Self-built laboratory obtained Cement Industry Laboratory Certification
 - Regularly allocated testing organizations at provincial-level or above to test product quality
 - Committed to completing investigations regarding complaints received by the relevant department within 24 hours
 - Held supplier exchange conferences to promote communication between parties
-

- Manpower**
- Valued multiculturalism, advocated gender equality
 - Obtained Occupational Health and Safety Management System Certification
 - Organized monthly comprehensive safety inspections
-

	<ul style="list-style-type: none">• Hired a third-party agency to conduct occupational health status assessments every three years• Provided employees with personal protection equipment
Society	<ul style="list-style-type: none">• Published the whistle-blowing telephone number, e-mail address and instant messenger number to ensure the confidentiality of reporting of incidents• Set up a prevention education division to educate the staff by using corruption and bribery cases• Established a work contact mechanism with the local auditing and judiciary department• Actively participated in volunteer tree planting activities and visits to underprivileged and needy families• Actively participated in charitable projects such as local road repairs and building water conservancy projects

6 ENVIRONMENT

6.1 EMISSION CONTROL MANAGEMENT

In response to the attention of our stakeholders regarding the emission performance, the Group has continuously adopted new management approaches and new supporting systems, and phased out old production approaches to strive to improve environmental protection quality. This has created a leading role for the Group to improve the environment..

The clinker production process in the cement industry is one of the main sources of atmospheric pollutant emission. Burning coal in the kiln is the main source that causes atmospheric pollutant emissions. Emissions include contaminants such as nitrogen oxide and suspended particulate matter. The Group has always adhered to high environmental protection standards by adopting various measures to reconstruct the production system. High quality coal with low sulfur content were used to reduce sulfide production. Electrostatic bag composite dust removers were installed to increase exhaust air dust removal efficiency. To reduce nitrogen oxide, denitrification systems were used. Enclosed belt conveyors were used to minimize the scattering of dust. The particulate matter concentration of all production lines of the Group are below the threshold of 10mg. The Group has installed flue gas treatment facilities such as denitrification systems and bag composite dust removers for all clinker production lines. The emission concentrations of sulfur dioxide, nitrogen oxides and particulate matter have been lower than the national pollutant emissions standard limits. The Group has also set up a central control room to track and inspect production instantaneously to ensure emission levels meet the requirements.

In the year, Dalian Branch added fast curtain doors, set up enclosed sheds, hardened roads, added sprinklers devices. Shangqiu Branch continued to implement environmental engineering projects, added and improved the installation of lane dust collectors to reduce emissions. Ningling branch enhanced material sheds, sealed ingredients scale and raw material transport belt, installed factory vehicle cleaning equipment and dust collectors in loading lane to reduce dust. Weihui Branch carried out the upgrading and modification work on the company's two coal mill dust collectors, two cement mill tail dust collectors and two cement mill system dust collectors, and passed the debugging, verification, testing and commissioning of online monitoring equipment. For the technical transformation of

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"ammonia-free denitration" of rotary kilns, the nitrogen oxide emission concentration after the transformation can be stabilized to less than 50mg / m³, which is an international advanced level and lays the foundation for energy saving, emission reduction and green development.

During the reporting period, the Group has complied with laws and regulations related to particulate matter, nitrogen oxide and sulfur dioxide emissions, such as:

- Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution;
- Measures for the Administration of Automatic Monitoring of Pollution Sources;
- Specifications and Test Procedures for Continuous Emission Monitoring Systems of Flue Gas Emitted from Stationary Sources.

Overview of Atmospheric Pollutant Emissions	
Pollutant Emissions ¹	Total Amount
Nitrogen oxide (Tonnes)	7,862
Particulate matter (Tonnes)	1,380

Moreover, burning coal in the kiln directly and other energy consuming equipment generates direct and indirect greenhouse gas emissions respectively. As such, the Group has identified carbon emission sources according to the requirements of the national and provincial development and reform commission policy and subcontractors' verification agencies. The Group has also calculated the carbon emission amount according to the relevant carbon emission policy and calculating method. Quantifiable carbon reduction goals have been developed and have been carried out during the production process. The effectiveness of carbon reduction would be evaluated regularly whereby problems and imperfections would be analysed and corrected. The Guangshan branch has set a quantifiable carbon reduction target, with the goal of reducing carbon dioxide emissions per ton of clinker by 5%. The Weihui branch uses calcined raw materials to reduce the annual coal consumption, thereby reducing carbon emissions.

Overview of Greenhouse Gas Emissions	
Greenhouse Gas Emissions ²	Total Amount
Scope 1: Direct emissions (from production line) (Tonnes of carbon dioxide equivalent)	22,751,744
Scope 2: Indirect emissions (from electricity consumption) (Tonnes of carbon dioxide equivalent)	1,003,004
Total amount of greenhouse gas emissions (Tonnes of carbon dioxide equivalent)	23,754,748
Intensity of greenhouse gas emissions (Tonnes of carbon dioxide equivalent/ tonnes of production)	0.91

¹ Pollutant emissions amount is based on the actual measurement of the on-site monitoring system at the factory.

² The figures reported in the previous year used the sum of the data in the greenhouse gas emission reports of the subsidiaries in Henan and Liaoning, two major producing provinces. However, due to the epidemic, the greenhouse gas emission reports of each subsidiary were delayed and could not be all included in this report. Therefore, the figures in the table were estimated based on the emission intensity which was obtained from the total greenhouse gas emissions and clinker production of the available greenhouse gas emission report of subsidiary, and then supplemented with the total production volume of the Group to estimate the total amount of greenhouse gases of subsidiaries in Henan, Liaoning, Tianjin and in Anhui Province. The greenhouse gas emission reports was calculated according to the Greenhouse Gas Emissions Calculation Method and Reporting Guide for China's Cement Production Companies (Trial).

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The Group has strongly adhered to the principle of recycling to handle waste materials generated during the production process. Hazardous and non-hazardous waste would be identified and segregated. Hazardous waste generated at the production site mainly came from chemicals used for machinery maintenance. Under certain circumstances, chemical waste produced from large production processes would be used again as lubricating material for on-site equipment and machinery. Other chemical wastes that could not be reused would be appropriately stored and handled according to local laws and regulations. The Xiaoxian branch company set hazardous waste reduction targets to reduce the amount of hazardous waste produced by 1% from previous years. Liaoyang Branch is committed to taking diversified measures to reduce hazardous waste, and has set a goal to reduce the amount of hazardous waste generated from previous years by 5%. The Group classified waste rock and soil from mining and sold to construction sites to be reused. Recyclable waste material such as steel scrap produced from equipment replacement would be regularly collected and handled by subcontracted recycling companies.

The relevant laws and regulations include:

- Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste;
- Standard for Pollution on the Storage and Disposal Site for General Industrial Solid Wastes

Waste Data Overview	
	Total Amount
Hazardous waste (Tonnes)	3.74
Non-hazardous waste (tonnes)	257.29

6.2 USE OF RESOURCES

In order to play a key role in building a green industry chain between industries, the Group makes good use of the unique nature of the industry and continually improves its own environmental protection performance, it has also used industrial by-products and wastes from other industries as production resource. The Group used its own production line to absorb fly ash from power plants, slag from steel plants, sulfuric acid slag and industrial by-products such as limestone tailings from chemical plants to use as production resources. The Group has set up factories near the main raw material, limestone, mining source and sales channels to reduce resources used for transportation of raw materials and finished products. The Group has obtained necessary licenses for limestone mining, and has satisfied the mining conditions and procedural requirements of paying mine resource compensation and taxes. This allowed the Group to carry out mining work in a manner that was compliant to the existing laws and regulations in the PRC.

To promote energy conservation, all clinker production lines have been equipped with advanced NSP technology to reduce energy consumption and carbon pollutant emissions. The energy usage of NSP technology was 7%-15%³ more efficient than traditional suspension pre-heater systems. To further reduce the raw materials used during production, the Group has

³ Reference was made to the Climate Technology Centre & Network , <https://www.ctc-n.org/products/new-suspension-preheaters-burning-system> accessed July 11, 2018.

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equipped most production lines with residual heat recovery system. The heat generated from the clinker production process would be captured and recycled through the heat recovery system for use in the cement production process. The overall energy needed to operate was reduced. Moreover, by increasing efficiency and reducing coal consumption, the Group has saved a substantial amount on cost and contributed to a cleaner production. The Tianjin Branch has set a quantifiable power saving target and strives to reduce the planned value of power consumption per ton of product processes by 1.95 kWh compared to previous years. Shangqiu Branch plans to save 200,000 kWh of electricity annually in order to actively promote green manufacturing policies. Weihui Branch renovated the cement mill hoist during the year. After the transformation, the operating load of the hoist decreased, which effectively reduced energy consumption, reduced production costs and increased benefits. Through adjustment of a batching plan and optimized vertical mill operations, production capacity was increased while reducing power consumption by about 5%, thereby reducing waste of resources and protecting the environment.

During the reporting period, the main sources of energy consumption was from electricity usage and coal consumption during the production process, and petrol and diesel used for transportation. The table below shows the energy consumption of the Group during the reporting period.

Overview of Energy Consumption of the Group ⁴	
Coal (MWh)	22,739,432
Petrol (MWh)	4,076
Diesel (MWh)	16,341
Liquified petroleum gas (MWh)	527
Natural gas (MWh)	17,582
Electricity (MWh)	1,715,227
Total energy consumption (MWh)	24,493,186
Energy intensity (MWh/ tonnes production)	0.93

As freshwater is extremely valuable, the Group has adopted water saving management policies by installing water recycling systems. Water resources at the production line would be treated and reused. In addition to being used in the production process, to achieve zero industrial wastewater discharge, recycled water was also used for dust control and irrigation in the surrounding areas of the production site. For sewage that must be discharged, the Group has strictly adhered to the requirements on the sewage discharge permit. According to the water quality analysis report of the production line's loop water, Yong'an Branch changed the supplementary water of the production line's loop water from the original underground deep well water to the drainage water of the power plant's loop water system as part of the supplementary water, which can save 100 tons of water per day. Tianjin Branch builds a sewage treatment station. The domestic sewage in restaurants and dormitories is treated and reused to produce a loop water system, and it is used to water trees, flowers and plants in the plant area. Shangqiu Branch set an annual target to reduce the average water consumption per ton of cement.

⁴ The figures reported in previous year used the energy consumption data in the greenhouse gas emission reports of each subsidiary. However, due to the epidemic, the greenhouse gas emission reports of each subsidiary were delayed and could not be included in this report. Therefore, the energy data in the table were obtained through the internal statistics of the operation regions. At the same time, this table also reports the energy consumption of operations in Henan, Liaoning, Tianjin and Anhui provinces, while in the previous year, only two major operation provinces of Henan and Liaoning were included.

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During the reporting period, the Group has treated wastewater in accordance with legal standards, and has achieved zero industrial wastewater discharge through full reuse of 4,805,195 m³ of recycled wastewater.

Overview of Water Consumption	
Total water consumption (m ³)	1,109,623
Intensity ('000 m ³ /Million tonnes production)	34

During the reporting period, the amount of material used for product packaging is as follows;

Overview of Amount of Packaging Material Used	
Total amount of packaging material (tonnes)	8,963
Intensity of packaging material usage ('000 tonnes/Million tonnes production)	0.28

6.3 ENVIRONMENT AND NATURAL RESOURCES

The Group has actively improved its environmental protection performance within the industry through various aspects, such as transforming hardware to increase production efficiency and enhancing its software by promoting environmental protection awareness. The Group and all subsidiaries of the Group have passed the four-in-one certifications for quality, environment, occupational health and safety management systems and products. All clinker production lines have passed the Energy Management System Certification.

The Group has established coal, energy, water and gas conservation management policies and measures, and have set incentives to encourage repair and reuse, and to conserve energy by technological transformation. The Group has placed great importance on promoting and educating employees on environmental protection in regards to daily work tasks and production by providing seminars and training on environmental protection periodically.

During the mining process, the Group vigorously carried out mine restoration and greening work, which effectively reduced the soil erosion in and around the mine. During the year, the Group actively carried out the construction and planting of green mines. The creation of green mines had achieved initial results and was included in the National Green Mine List by the Ministry of Natural Resources.

7 PRODUCT RESPONSIBILITY

7.1 SUPPLY CHAIN MANAGEMENT

As some of the materials procured have been derived from industrial by-products and waste, the Group's sustainable procurement policy has effectively aided various industries in improving waste material management and solving corporate social responsibility problems in the supply chain.

The Group's management committee, legal affairs department, control department, finance department, audit department and other professional management departments supervise, inspect and assess all material bidding of the Group. The control division of the Group is the

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main inspection body during the bidding procedures and is responsible for the Group's inspection work. During the procurement process, the Group would make supplier selections through bidding procedures based on quality, pricing, delivery time, service quality, reliability, and the geographical location. A closer proximity to the Group's operational site would enable better control on delivery time and reduce the environmental impacts caused by transportation.

The Group would regularly evaluate suppliers by assessing the quality, timeliness, after-sales service and other considerations such as suppliers' track record of compliance with relevant environmental and social laws. The Group would also regularly host networking events for suppliers to encourage exchange and trust between each party, strengthen partnerships and minimize risks caused by the supply chain.

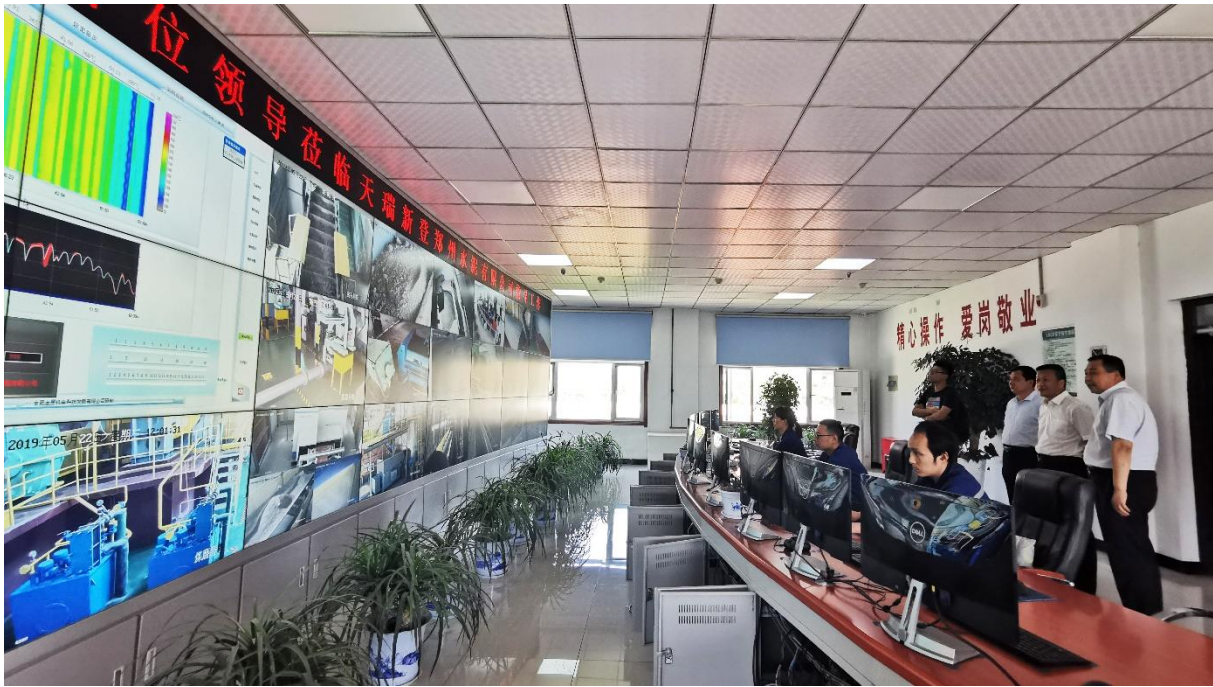
Number of suppliers by geographical region

Mainland China	176
Others	0

7.2 QUALITY AND COMPLIANCE MANAGEMENT

The Group's good reputation is based on the principle of customer first and service first for many years, insisting on winning applause with quality and service, producing and selling high-quality products without interruption, and always using a unified, open and fair publicity strategy. The Group supports benign competition, and has ensured that all aspects from raw material procurement to product sales are fair, complies with requirements and required by law. The Group has refused to promote monopoly by anti-competitive behavior.

The Group's quality control department is responsible for monitoring the production process and inspecting the quality output of the cement products. The quality control department ensures the products have met all relevant laws and customer requirements through inspecting suppliers to reviewing the requirements on the quality and health and safety of the products. Our laboratory has been awarded the Cement Enterprise Laboratory Certificate and would test the quality safety of the products and raw materials according to various requirements. The finished products were inspected and tested in accordance to a variety of national standards, including compressive strength and cement chemical analysis. The Group has also allocated testing organizations at provincial-level or above to regularly carry out product quality tests to verify the accuracy of the test results performed by the laboratory, and to ensure that the product inspection information is reliable and effective. The Group's recall procedure requires products that do not meet the requirements to be immediately recalled and investigated for improvement. The Group has strictly controlled the quality and remained committed to excellent after-sales service. Based on the ISO 9001 quality management international standards, the Group has established a comprehensive framework to manage quality of the products, and has obtained the Quality Management System Certification.



Inspection by Ministry of Industry and Information Technology

The Group has actively sought to improve the quality of its products and services through regular on-site visits, information exchange on the Internet, communicating with customers through telephone enquiries and collecting customer feedback. As an active approach to quality management, customer satisfactory surveys were initiated to help the Group improve the quality of its products and services. Contact method for complaints have been posted at the place of sales, online promotion platforms, product manuals and product packaging labels. The Group has established emergency response plans for customer complaints at all levels, and has set up a customer service hotline. Upon receiving complaints, the Group would immediately arrange for professionals to handle complaints and follow-up. Responsible departments would complete the investigation within 24 hours and convene with relevant departments to consult and resolve the issues. Responsible departments would collect customer feedback on a monthly basis, consolidate and analyze the information and follow up with any complaints. The Group's *Sales Customer Management Method* explains the content of collecting customers' personal information and details the departments that have the right to collect and use customers' personal information. The level of customers' information given to employees would correspond to the management level of the employee. Customers' personal information would be used only for business development, internal analysis and customer relationship contact by business related personnel and is strictly confidential.

The Group has a dedicated department responsible for monitoring intellectual property and customer information and has ensured that the Group abides to policies and laws related to information confidentiality and intellectual property. During the reporting period, the Group recorded no recalled products relating to health and safety issues and no substantiated complaints.

8 MANPOWER

8.1 EMPLOYMENT AND RESPECT FOR LABOUR RIGHTS

The Group respects for gender, ethnicity, age, religion and other differences, and has advocated a workplace that is inclusive and fair to all employees. The Group's employment culture focused on enhancing employees' work satisfaction and the Group's competitiveness in the long run by creating a diverse and respectful work environment. The Group believes that diversity has effectively promoted innovative ideas and experience sharing within the company.

The Group's the recruitment process focused on hiring suitable talents. The Group would initiate the salary adjustment mechanism according to external and internal factors such as the market standards and other companies within the cement industry, individual performance and, the Group's overall financial results, that affect the actual value of the employees' salary so as to make full use of the incentive function of salary in retaining and using talents. The Group's various managerial positions would be selected by external recruitment or internal selection. In the event that a position is available due to an addition of a role, a demotion or a resignation, an internal selection would typically be carried out initially before performing an external recruitment.

The Group's recruitment and employment procedures strictly complied with local related laws and regulations to prevent child and forced labour within the Group's operational boundaries. The Human Resources Department had been responsible for checking the age of applicants, overseeing employment issues, performing background screening and regular checking. All units have been set up with an employee feedback collection box that accepts employees' identified or anonymous comments. A meeting would be held to conduct research, processing and replies.

The Group had also paid endowment insurance, medical insurance, work injury insurance, unemployment insurance, maternity insurance and housing provident funds for its employees. To strengthen employees' sense of belonging and honor, in addition to salary, the Group would provide certain allowances and benefits to the employees based on the Group's financial situation, social responsibility and social customs. These allowance and benefits included on-the-job allowance, education allowance, summer heat subsidy, washing subsidy, work environment subsidy, holiday welfare, social insurance and paid vacations. During Mid-Autumn Festival and Spring Festival, the Group would provide holiday subsidies in cash or equivalent to all employees. The Group focused on providing employees with fair compensation and remuneration, reasonable working hours and rest periods, career development opportunities and a friendly working environment. To enhance good long-term career development for employees, a variety of employment training and external training opportunities were provided.

The Group had organized a number of activities for employees to promote company culture and employees' interactions. Team lunches, cooking classes, recreational sports, cultural activities and family gatherings were arranged to boost work-life balance and the physical and mental well-being of employees. During the year, the 70th birthday of the motherland was held to celebrate the 70th anniversary of the founding of the nation.

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“70th birthday of the motherland” Event



1st May with cultural and sports competitions



Dumpling wrapping for Winter Solstice



Lunar New Year Gala

The Group has strictly complied with relevant employment laws including the *Labour Law of the People’s Republic of China*, and there have been no cases of prosecution for violation of the relevant employment laws during the period.

Total number of employees by gender at the end of the period

Male	5,432
Female	2,059

Total number of employees by employment at the end of the period

Full-time	7,491
Part-time	0

Total number of employees by age group at the end of the period

Age 18-30	1,035
Age 31-45	2,807
Age 46-60	3,578
Age 61 and above	71

Total number of employees by location at the end of the period

Local Province	5,881
Other Provinces	1,610

Total workforce by employee category

Senior management	914
Middle management	912
Supervisor	324
General staff	5,341

Monthly average employee turnover rate by gender

Male	1%
Female	2%

Monthly average employee turnover rate by age group

Age 18-30	2%
Age 31-45	2%
Age 46-60	1%
Age 61 and above	10%

Monthly average employee turnover rate by geographical region,

Local Province	1%
Other Provinces	2%

8.2 SAFETY AND HEALTH

The Group promotes safety-first culture, fulfills the responsibility of maintaining a safe working environment. The Group has established an occupational health and safety system and has obtained relevant certifications. The Group has implemented the health and safety performance management process to create a healthy and safe working environment for employees, so as to benefit to the long-term development of the Group.

The Group has a specialized unit that is responsible for occupational health and safety matters. The Group would provide occupational health and safety educational training to raise employee awareness and strengthen employee awareness on operational procedures to minimize the risk of accidents and injuries. The Group has provided protection equipment such as hard hats, protective suits, construction boots for employees. Safety rope and other equipment and tools have been provided for work at high places. In the summer, heatstroke prevention, cooling medication and other first aid supplies would be given.

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The production unit would put up a dangerous operation notification card in high-risk areas of the workplace to identify and notify employees of the high-risk tasks in the employees' work procedures. For example, warning signs on noise and dust would be placed to remind employees of operations and equipment that could eliminate danger. The production unit has organized monthly comprehensive safety inspections and safety issues would be rectified within a certain time limit. To ensure employees' health, the Group would carry out regular occupational disease examination to identify potential problems early. Based on relevant national occupational health laws and regulations, the Group has hired a third-party organization to carry out occupational health status assessments every three years, and conduct occupational hazard testing work every year.



Annual occupational health examination

The Group has regularly organized a variety of safety education activities, such as “Safe Production Month” and “Fire Drill” to effectively enhance employees work safety and fire rescue awareness, in order to further strengthen employees' safety conduct



“Safe Production Month” event launching ceremony



Emergency Response drill

The Group has complied with relevant safety laws and regulations such as the *Law of the People’s Republic of China on Work Safety* and *Law on the Prevention and Treatment of Occupational Diseases*. There have been no cases of prosecution due to violation of laws related to occupational safety during this period. Through consistent training and strict compliance with health and safety laws and regulations.

Total Work-related Fatality and Work Injury

Total Work-related Fatality	0
Work-related Fatality Rate	0%
Lost Man-Day due to Work Injury	1,932

8.3 EDUCATION, TRAINING AND CAREER DEVELOPMENT

The Group believes that the growth of a corporation is attributed to the employee’s vocational development. All employees at managerial level would have to provide on-the-job training, guidance, job skills and business quality to their subordinates. Managers would make reasonable arrangement on the training content and time, and to assist and supervise subordinates to share and apply their training knowledge and skills in practical work. Newly hired employees would attend pre-job training organized by the hiring unit regarding introduction of the Group and associated units, company culture, management system, employee regulations, labour safety, policies, and job responsibilities.

Through diverse technical and managerial training courses, the Group focused on developing employees’ capabilities and provided training covering all areas of work and extensive career development programs. Training programs included direct purchase supervisor training, 5-in-1 comprehensive system training on product quality, environment, energy, occupational health and safety and product certification, as well as official document and reporting method training. The Group’s human resources strategy focused on identifying and developing high standard talents, and as such, managers would assess employee performance and potential based on the Group’s standards. The Group has also encouraged and supported employees to attend various academic training and would subsidize eligible applications.



Skills Competition

Percentage of employees that attended training per month by gender and Average number of training hours per employee per month

	<u>Percentage of employees that attended training</u>	<u>Average number of training hours per employee per month</u>
Male	95%	1
Female	83%	1

Percentage of employees that attended training per month by employment category and Average number of training hours per employee per month

	<u>Percentage of employees that attended training</u>	<u>Average number of training hours per employee per month</u>
Senior management	28%	0.1
Middle management	68%	0.7
Supervisor	100%	1.8
General staff	100%	1.5

9 SOCIETY

9.1 ETHICS, INTEGRITY AND ANTI-CORRUPTION

The Group understands that morals and integrity are the key foundations for winning trust and success, and therefore has established anti-corruption policies to monitor business operations and prevent bribery and corruption. The Group has developed a code of conduct for the employees, which specifies various job behaviours and anti-corruption and bribery work practices. Employees are not allowed to receive gifts from related parties. Gifts allowed to be accepted would be submitted to the relevant department by the unit. The Group would appoint professional personnel to set up a unit specialized in audit and supervision whereby the supervisor would be appointed to be responsible for internal review. The Group has established a working relationship mechanism with local auditing and judicial departments to observe and report crimes like bribery, extortion, fraud and money laundering.

An internal case investigation division has been set up to review all reports and set punishments based on rules and regulations. By publishing a report phone number, e-mail and WeChat number, the Group has also set up a reporting policy that would allow employees to report any possible corruption cases internally through confidential and comfortable reporting channels.

The Supervision Committee has also set up an education prevention division to educate the staff based on cases of corruption and bribery. The Group has also hired independent non-executive directors to supervise the company's operations.

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The Group has strictly complied with relevant anti-corruption and bribery laws, and there have been no cases of prosecution due to violation of *Regulations of the People's Republic of China for Suppression of Corruption* and other relevant laws.

9.2 COMMUNITY PARTICIPATION

While enhancing business operations, the Group endeavors to give back to the society, assume social responsibility, and strive to be a good corporate citizen, extending care to the community, thereby enabling the business to develop better. With a vision to create a stable and harmonious community, the Group actively participated in public welfare activities and work to support the underprivileged,. During the year, with mutual support among employees, the Group organized environmental promotion programs, volunteer tree planting activities and visits to underprivileged families.



Visiting Activities



Environmental Activities



Tree planting event

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All units of the Group provided strong support to relevant organizations of the local streets, communities and government departments in arranging employment, tax payment and poverty relief work. They also actively participated in public welfare activities such as local road repairs and water engineering projects, and have established good partnership relations with relevant departments and organizations. More than 2,500 hours and 570 thousand RMB have been dedicated to volunteer work during the period.

10 AWARDS AND RECOGNITION

Award / achievement name	Issuing authority
1st Prize in Building Materials Chemical Analysis Group Award	Henan Provincial Machinery Metallurgy and Building Materials Trade Union Committee, Henan Provincial Building Materials Industry Association
3rd Prize of Building Material Physical Inspection Group Award	Henan Provincial Machinery Metallurgy and Building Materials Trade Union Committee, Henan Provincial Building Materials Industry Association
Model Enterprise for Safety Culture Construction	Department of Emergency Management of Liaoning Province
The " Gezhouba Cement Cup " 2019 National Cement Quality Index Inspection Award	National Cement Quality Supervision and Inspection Center
Suzhou City in 2018 annual industry " top ten corporate tax "	Suzhou Municipal People's Government
"The Third Prize " for the Comprehensive Assessment of Industrial Enterprises in 2018	Xiao County People's Government
Advanced Unit in Work Safety in 2018	Management Committee of Xiaoxian Economic Development Zone
Won the honor of Anhui Provincial Model Workers' Home in 2018	Anhui Federation of Trade Unions
2019 Nian " Gezhouba Cement Cup ," the nation's first 17 second test cement quality indicators big contrast with excellent award	National Cement Quality Supervision and Inspection Center
Liang Shangqiu City Park tax advanced enterprises	CCP Shangqiu Liang Park District, beam garden Renminzhengfu
" Gezhouba Cement Cup " The 17th National Cement Quality Index Inspection Comparison " Full Qualification Award "	National Cement Quality Supervision and Inspection Center
Xingyang " industrial contribution Silver Cup "	Ying Yang City Hall
Evaluation certificate of integration management of two industries	China Academy of Information and Communications Technology

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Award / achievement name	Issuing authority
" Advanced Grassroots Trade Unions " in Puyang	Liyang Federation of Trade Unions
Zhengzhou City “ Three-to-two-down ” Energy Conservation and Emission Reduction Advanced Unit	Zhengzhou Federation of Trade Unions, Zhengzhou Development and Reform Commission, Zhengzhou Environmental Protection Bureau
Zhengzhou Transformation and Innovation Outstanding Enterprise	Zhengzhou Enterprise Federation, Zhengzhou Entrepreneurs Association, Zhengzhou Industrial Economy Federation
Green Mine Wins China Cement Energy-Saving Technology Pioneer Award	China Cement Association
Green Leading Enterprise in Henan Province	Henan Provincial Department of Industry and Information Technology , Henan Provincial Development and Reform Commission, Henan Environmental Protection Bureau, Henan Provincial Finance Department
Three-star enterprise in Ruzhou	People's Government of Ruzhou City
Ruzhou Advanced Enterprise for Tax Contribution	People's Government of Ruzhou City
Advanced Enterprise of Environmental Protection Investment in Ruzhou City	People's Government of Ruzhou City
The most socially responsible enterprise in Ruzhou	People's Government of Ruzhou City
Ruzhou Excellent Enterprise in Safe Production	People's Government of Ruzhou City
Zhengzhou Science and Technology Enterprise	Zhengzhou Science and Technology Bureau
Green Factory in Henan Province	Department of Industry and Information Technology of Henan Province
Green Leading Enterprises in 2019	Department of Ecological Environment of Henan Province
Passed the assessment of the integration of the two management systems	Ministry of Industry and Information Technology
Construction of AA Grade Enterprise in Henan Province Quality Integrity System	Henan Quality Association
Advanced Private Enterprise	United Front Department , Pingqiao District Committee, Xinyang , CPC
Excellent Laboratory of Henan Cement Enterprise	Henan Building Materials Industry Association
City-level water - saving enterprises	Pingdingshan Municipal Water Conservancy Bureau, Pingdingshan City of Industry and Information Technology Bureau
The " Gezhouba Cement Cup " 2019 National	National Cement Quality Supervision and Inspection Center

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Award / achievement name	Issuing authority
Cement Quality Index Inspection Award	
Certificate of Integrated Management System	China Electric Power Enterprise Federation Technology Development Service Center
City-level water - saving enterprises	Water Resources Bureau of Pingdingshan City, Industry and Information Bureau of Pingdingshan City
The " Gezhouba Cement Cup " 2019 National Cement Quality Index Inspection Award	National Cement Quality Supervision and Inspection Center
Certificate of Integrated Management System	China Electric Power Enterprise Federation Technology Development Service Center
2018 Excellent Laboratory of Henan Cement Enterprise	Henan Building Materials Industry Association
Private Leading Enterprise Tax Contribution Award	Taxation Bureau of Xuchang City, State Administration of Taxation
" One Hundred Enterprises Help Baicun " Contribute to the First Prize	Wenshu Town
2019 Henan Smart Workshop Smart Factory	Department of Industry and Information Technology of Henan Province, Department of Finance of Henan Province
By Werkhart a surveillance audit management system	Fangyuan Certification Group Co., Ltd.
Evaluation certificate of integration management of two industries	Ministry of Industry and Information
Supporting Enterprise	Nanzhao County Veterans Service Center
Safety Production Demonstration Unit	Henan Provincial People's Government Work Safety Committee Henan Work Safety Knowledge Contest Organizing Committee
Outstanding Enterprise in Environmental Pollution Prevention and Control in Yahe Industrial Zone of Nanyang City in 2018	Management Committee of Yahe Industrial Zone, Nanyang City
Wuyinjin Pacemaker Post, Nanyang City	Nanyang Federation of Trade Unions
Love students help lift poverty	Nanzhao County People's Government of CPC
Smart Manufacturing Demonstration Enterprise	Building Materials Industry Intelligent Manufacturing Promotion Alliance Building Materials Industry Information Center
Won the Outstanding Enterprise in Tianjin Building Materials Industry	Tianjin Building Materials Industry Association
2019 Nian " Gezhouba Cement Cup " national cement quality indicators big contrast test	National Cement Quality Supervision and Inspection Center

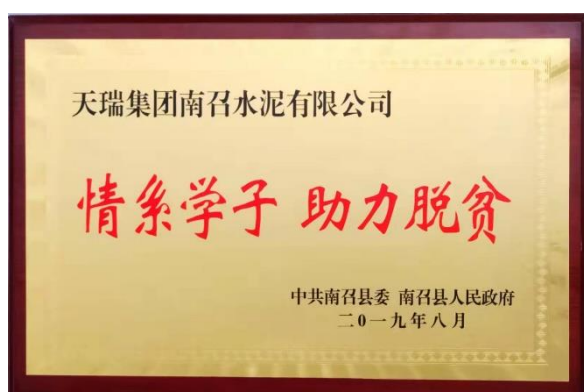
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Award / achievement name	Issuing authority
Seventeenth	
2018 by Tianjin entrepreneur team building " 111" project Binhai New Area " outstanding entrepreneurs "	Tianjin Binhai New District Talent Work Leading Group
Advanced Unit for Environmental Protection Work in 2018	Committee of Baisha Town, Zhengdong New District, Zhengzhou City, People's Government of Baisha Town, Zhengdong New District, Zhengzhou City
Quality Service Provider	China Railway Materials & Trade Group Wuhan Co., Ltd.
Evaluation certificate of integration management of two industries	China Classification Society Quality Certification Company
Model Enterprise for Safety Culture Construction	Department of Emergency Management of Liaoning Province
The 17th National Comparison of Cement Quality Index Inspections	National Cement Quality Supervision and Inspection Center
Liao Tower company won the honorary title of "Liaoyang Worker Pioneer"	Liaoyang Federation of Trade Unions
Liaota company won the certificate of standardized laboratory of cement production enterprise	China Building Materials Federation
Liao Tower Company won the title of "Liaoyang Enterprise Technology Center"	Liaoyang City Industrial and owned News Agency of Liaoyang Municipal Finance Bureau of Liaoyang City, the Inland Revenue Department
" 2018 Annual Liaoning Province cement quality indicators big contrast" all gifted Award	Cement Quality in Liaoning Province
The " five in one " management system audited in 2019	Fangyuan Logo Certification Group Audit Team
The " Gezhouba Cement Cup " won the full qualifying award in the national cement quality inspection in 2019	National Cement Quality Supervision and Inspection Center
Top 10 taxpayers in 2018	Wensheng District Committee of the Communist Party of China, Wensheng District People's Government
2019 Corporate Brand Value Evaluation Certificate	Liaoning Provincial Brand Construction Promotion Association
Staff Bookstore	All-China Federation of Trade Unions
Tian Li Feng won the Liaoyang City, non- public economic development Meritorious Entrepreneur	Liaoyang Federation of Industry and Commerce, Liaoyang General Chamber of Commerce



2019 Intelligent Manufacturing Demonstration Enterprise in the Building Materials Industry



Nanzhao Government, Love Students, Helping to Eradicate Poverty Recognition

11 VISION

As one of the national cement industry leaders receiving significant support from the government, and one of the national cement industries centralized and reorganized in Central China appointed by the Ministry of Industry and Information Technology, the Group shall take advantage from the policies and its own strengths by enhancing internal structure, refining management level. The Group shall also utilize the support from the Chinese government such as tax incentives, special projects or financing approvals and optimize production process to increase production efficiency, so as to promote regional market integration and synergy effect.

2020 is the last year of the "Three-Year Action Plan to Win the Blue Sky Defence Warfare". Air pollution and environmental governance will not be relaxed, local control measures will be more stringent, and the tightening of road transport overload control will help Regulation of the supply side of cement. The Group shall continue to strengthen pollution prevention and ecological construction, and expand the achievements of the Blue Sky Defense War by strengthening water and soil pollution prevention. The environmental protection policies have an important impact on the cement industry as they promote the elimination of backward production capacity and increase industry barriers, thus improving the industry supply and demand situation. The strict implementation of environmental protection standards will undoubtedly eliminate backward production capacity.

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A	Environment	Section
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KPI A.1.3	Total amount of hazardous waste produced and intensity	6.1
KPI A.1.4	Total amount of non-hazardous waste produced and intensity	6.1
KPI A.1.5	Description of emissions reduction measures and results	6.1
KPI A.1.6	Description of hazardous and non-hazardous waste handling methods, emissions reduction measures and results	6.1
<i>Scope A.2</i>	Use of resources	6.2
KPI A.2.1	Direct and/or indirect energy consumption and intensity by type	6.2
KPI A.2.2	Total amount of water consumption and intensity	6.2
KPI A.2.3	Description of effective use of energy plan and results	6.2
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<i>Scope A.3</i>	Environment and Natural Resources	6.3
KPI A.3.1	Description of impact the business has on the environment and natural resources, and management measures taken	No issues that had major impact on the environment and natural resources during the period
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KPI B.2.3	Description of occupational health and safety measures taken, and relevant execution and monitoring methods	8.2
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KPI B.3.1	Percentage of employees that attended training by gender and employment type	8.3
KPI B.3.2	Average number of training hours per employee by gender and employment type	8.3
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KPI B.4.1	Description of measures taken to review recruitment practices to avoid child labour and forced labour	8.1
KPI B.4.2	Description of steps taken to eliminate the situation after discovery of a violation	No violation in the period
<i>Scope B.5</i>	Supply Chain Management	7.1

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KPI B.5.1	Number of suppliers by geographical locations	7.1
KPI B.5.2	Description of practices for hiring suppliers, the number of suppliers, and the execution and monitoring methods of the relevant practices	7.1
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KPI B.6.4	Description of quality inspection process and product recall process	7.2
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KPI B.7.2	Description of preventive measures and reporting methods, and related execution and monitoring methods	9.1
<i>Scope B.8</i>	Community Participation	9.2
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