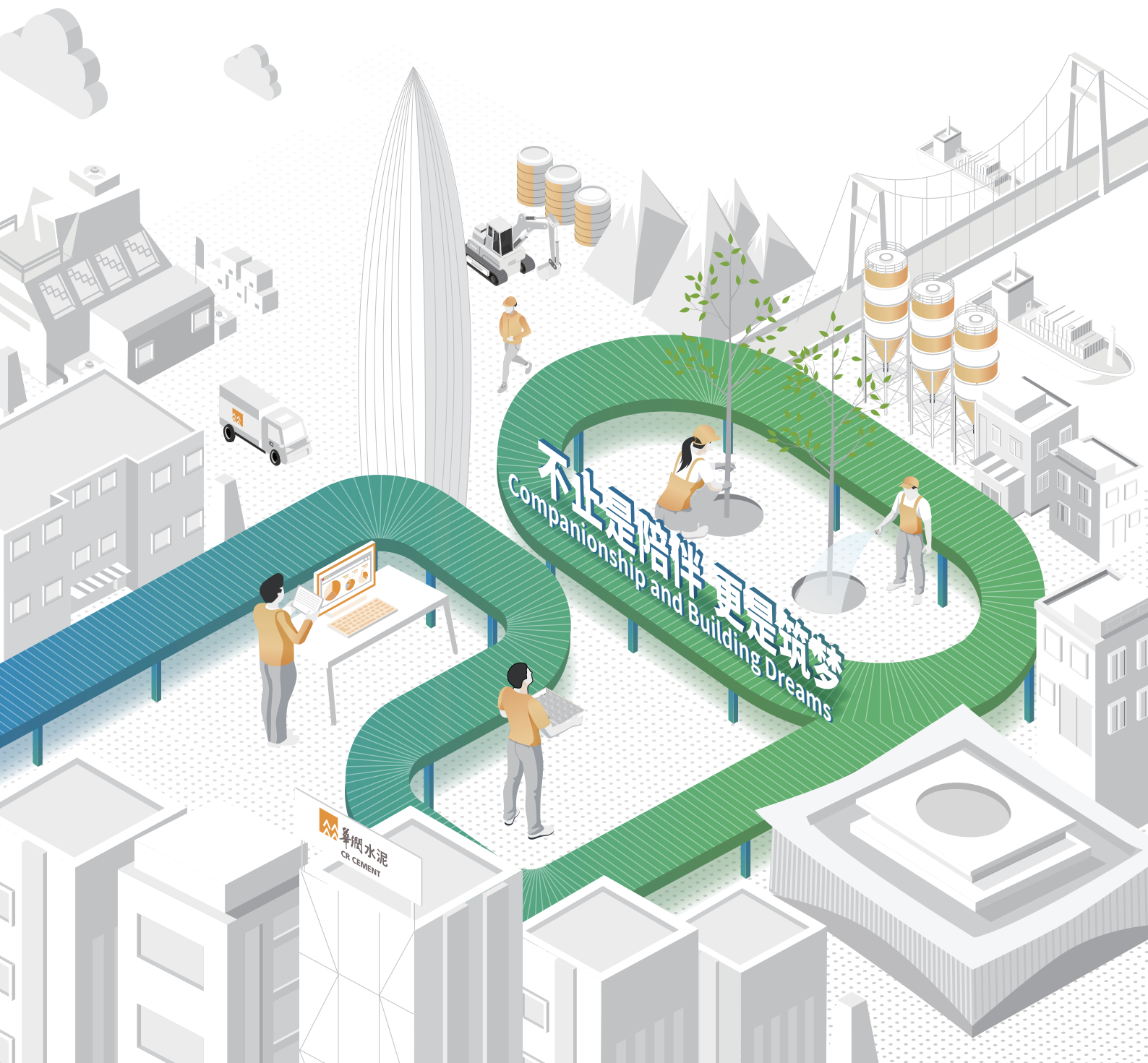


China Resources Cement Holdings Limited  
**Sustainability Report 2022**





**华润水泥控股有限公司**

**China Resources Cement Holdings Limited**

# Foreword

This Report, following the Corporate Social Responsibility (CSR) Reports of previous nine consecutive years, is the first Sustainability Report of China Resources Cement Holdings Limited (CR Cement) published to the public. In accordance with the principles of materiality, quantitative, balance and consistency, this Report details CR Cement's management of sustainable development and highlights the performance of its economic responsibilities and responsibilities to employees, customers, environment, partners and the public in 2022.

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## Reporting Period

This Report covers the period from January 1, 2022 to December 31, 2022. Any content beyond the stated period have been otherwise specified.

## Description of References:

For ease of presentation, "CR Cement", "the Company" or "we/us/our/ours" made in this report refer to "China Resources Cement Holdings Limited and its subsidiaries" collectively.

## Basis of Reference

- "GRI Sustainability Reporting Standards" of Global Reporting Initiative
- "The Guide for Business Action on the United Nations Sustainable Development Goals (SDGs)"
- "Guidance on Social Responsibility Reporting" of GB/T36001-2015
- Appendix 27 "Environmental, Social and Governance Reporting Guide" of the "Rules Governing the Listing of Securities" of the Stock Exchange of Hong Kong Limited
- "Guidance on Climate Disclosures" of the Stock Exchange of Hong Kong Limited
- "Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR4.0)" of Chinese Academy of Social Sciences
- "Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR5.0)" of Chinese Academy of Social Sciences
- "Guidance on Social Responsibility of Cement Enterprise" and "Guide for Corporate Social Responsibility Reporting of Cement Enterprise" of China Cement Association
- "Social Responsibility Evaluation Index System of Cement Enterprise"
- "China Resources Group Management Measures for Social Responsibility"

## Reporting Principles

**Materiality:** Through the evaluation of substantive issues, the impact of sustainable development-related issues on various stakeholders is confirmed, so that material sustainable development-related issues of CR Cement are identified and reported, with focus placed on responses to and disclosures of those of higher materiality.

**Quantitative:** Key performance indicators (KPIs) for sustainable development are presented in a measurable manner where feasible along with three-year vertical comparisons. Data on the KPIs contained in this Report are from statistics of relevant departments, and the calculation method of quantitative KPI is disclosed in the Report.

**Balance:** This Report reflects the objective facts regarding CR Cement's performance in sustainable development-related supported by both positive and negative indicators. At the same time, this Report has been reviewed by the Board to ensure those indicators honestly reflect the Company's sustainable development.

**Consistency:** Unless otherwise specified, the statistical methodology used in this Report is consistent with that used in previous reports to ensure the sustainable development-related data in this reporting period are comparable with historical and future data. Any difference in statistical methodology will be otherwise noted.

## Data Description:

All data contained in this Report are sourced from CR Cement's official documents and statistical reports, of which the consolidated financial statements have been audited by Ernst & Young. The Company undertakes that there are no misrepresentations, misleading statements or material omissions in the contents of this report.

## Preparation Procedures

This Report is prepared with reference to the abovementioned standards and has gone through the procedures of industry benchmarking, questionnaire survey, information gathering and review, report preparation and final review by the senior management and the Board, so as to ensure the completeness, authenticity and balance in the contents of the Report.

## Access to this Report:

Electronic versions, in Chinese and English (in case of any discrepancy therebetween, the Chinese version shall prevail), are available for download on the Company's website.

## Contact Information

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# A Letter to Stakeholders

## Dear Stakeholders:

The 2022 Sustainability Report of CR Cement has been presented to you as expected. In order to better respond to the expectations and concerns of stakeholders, CR Cement has merged the CSR and ESG reports into the Sustainability Report for the first time to share with you our actions and achievements in the fields of environment, society and governance in the past year.

2022 marked the year of the 20th CPC National Congress. CR Cement, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, prioritizes learning, disseminating and implementing the spirit of the 20th CPC National Congress as the most important political mission. Through its "four reshaping" program and centering on the annual management theme of "promoting development, focusing innovation and stabilizing operation", the Company fully implemented its "stable growth" task and accelerated its transformation, innovation and green development, continued to improve its overall business structure with a positive trend in transformation and upgrade.



**In 2022, we deepened the innovation-driven reform of the state-owned enterprise (SOE) and took concrete steps towards high-quality development.** We invested more in R&D and generally formed the framework of "3C" carbon-reduction theory system with steady improvement on carbon reduction technology. We continued to push ahead the digital and intelligent development, set a benchmark role model for intelligent manufacturing, bring forward intelligent upgrading of factories, and establish the vertical platform for building materials industry and the "Runfeng Intelligence" industrial Internet platform, with initial achievements in digital sales transformation. We fully completed missions for the three-year action plan for SOE reform, presenting practical achievements in SOE reform and solid execution of organizational reform. We firmly expanded beyond the six provinces in Southern China with new breakthroughs in nationwide coverage. We proactively acquired mine resources to sharply increase the resource reserves of limestone and aggregates mines and consolidate business foundation. We continued to optimize our industrial chains by incubating businesses in new materials. We initiated business reshaping in Hong Kong and strengthened M&A investments in Hong Kong, as a result, both our assets and number of employees in Hong Kong doubled.

**In 2022, adhering to the customer-oriented philosophy, we stressed high-standard quality and services to empower brand development and jointly create a win-win collaboration ecosystem.** Always upholding its core values of "honesty and trustworthiness", CR Cement assumed due corporate responsibilities. It focused on R&D investments and innovation to ensure industry-leading product quality and technology. It launched promotion education of brand knowledge and product quality enhancement programs, and officially released "Runpin", the unified

product brand of functional building materials business, in Chinese Mainland and Hong Kong. It carried out the double brand strategies for Runfeng and Runpin, which continuously gained customers' recognition and trust. It set up the Runfeng Trading Development Co., Ltd., marking the transformation of a procurement functional department to a professional service provider. It continued to deepen all-round communications and cooperation by adhering to the principle of "forward-looking, win-win cooperation for mutual growth".

**In 2022, adhering to the idea of ecology-first, green development, we brought forward green, low-carbon transformation in an all-round manner and spared no efforts to build an environment-friendly enterprise.** We attached greater importance to resource recycling to minimize resource consumption and pollutant emission, and continued to pilot alternative fuel and implement co-processing projects for large-scale carbon reduction. We launched special checks and rectifications on carbon emission data quality to ensure effective carbon emission control. We stressed green, low-carbon transformation, perfected the EHS management system, and strengthened the EHS management of new economic and social enterprises and counterparties to improve the level of clean production and continuously explore the means of production with harmonious development of the Company and the nature.

**In 2022, adhering to the people-oriented value and driven by our mission, we continued to improve our ability to perform due responsibilities.** Giving prior-

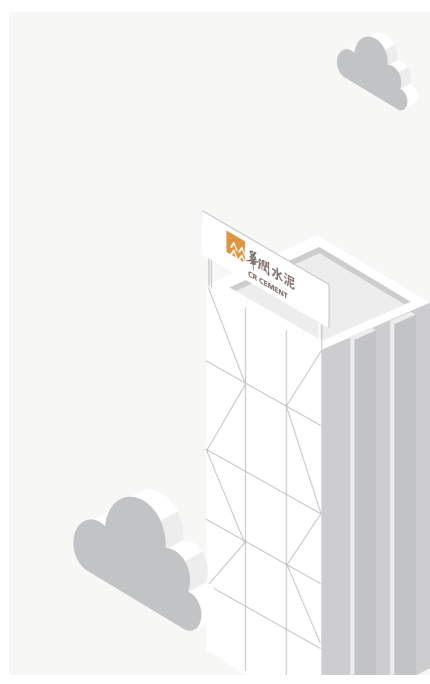
ity to recruiting and cultivating talents, we strengthened building of talent teams. Centering on the needs of the transformation, we formed young and specialized cadre teams, motivated all employees with the cement spirit and stimulated their passion at work and entrepreneurship. We played an active role in community charity to benefit the society and people and organized various charity practice to help build a better and more harmonious society with practical actions.

There's still a long way to go and so we shall keep moving on. In the year 2023, the 20th birthday of CR Cement, the Company in the new era and the new journey will focus on learning, disseminating and implementing the spirit of the 20th CPC National Congress, stick to long-term development, ensure its strategic, organizational and cultural consistence, and strive to open a new chapter of its high-quality development.





# About CR Cement



China Resources Cement Holdings Limited was incorporated in 2003. It is a Hong Kong listed company under the state-owned China Resources Group.

Stock code

**1313.HK**

## Company Profile

### CR Cement focuses on business segments of



Basic building materials



Structural building materials

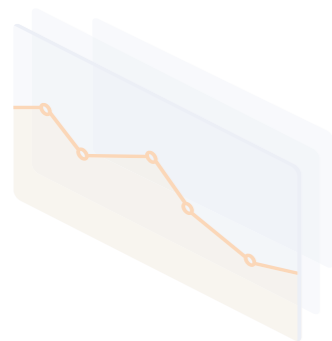


Functional building materials



New materials

By fully leveraging on the positive synergies between different businesses, CR Cement is a large-scale and competitive cement, clinker and concrete producer in Southern China.



### Ranked fourth

in the 2022 "Comprehensive Strength Ranking of Listed Chinese Cement Companies" by the China Cement Association.

Included in **13** indexes including

the Hang Seng Composite Index, Hang Seng China-Affiliated Corporations Index, Hang Seng China High Dividend Yield Index, Hang Seng Composite Industry Index (Properties & Construction), Hang Seng Composite MidCap Index, Hang Seng Composite LargeCap & MidCap Index, Hang Seng Composite Large-Mid Cap (Investable) Index, Hang Seng Stock Connect Hong Kong Index, Hang Seng Stock Connect Hong Kong Greater Bay Area Index, Hang Seng China Central SOEs Index, Hang Seng China State-holding Enterprises Index, Hang Seng SCHK High Dividend Yield Index, and Hang Seng Stock Connect Greater Bay Area Composite Index.

### Ranked second

in the 2022 Chinese Corporate Social Responsibility Development Index – Building Materials Industry.



## Strategic Goals During the 14th Five-Year

We will consolidate and enhance the Company's market position in terms of cement and commodity concrete, build and become leading enterprises in the domestic aggregates and engineered stone industries, achieve breakthroughs in the transformation of new materials business, and significantly increase the revenue share of strategic emerging businesses; promote the high-end, intelligent, and green transformation and development of the Company, further enhance the technological innovation capabilities, significantly increase the intensity of research and development investments, and strive for carbon peaking by 2025.

## Culture Concept



The "Fourteenth Five-Year" Corporate Culture Concept System of CR Cement



## Business Segments



Annual production capacity of cement: **112** million tons, including **90.1** million tons from **101** cement grinding lines operated by the Company

Annual production capacity of concrete: **42.9** million m<sup>3</sup>, including **38.5** million m<sup>3</sup> from **63** batching plants operated by the Company

Annual production capacity of clinker: **75.7** million tons, including **63.6** million tons from **49** production lines operated by the Company

Annual production capacity of aggregates: **151** million tons (including projects under construction and under planning)

Annual production capacity of engineered stone: **26.1** million m<sup>2</sup> (including projects under construction)

Annual production capacity of prefabricated construction: **1.4** million m<sup>3</sup> (including projects under construction and under planning)



## Business Distribution

CR Cement is a large-scale and competitive cement, clinker and concrete producer in Southern China. The Company's operations range from the excavation of limestone to the production, sale and distribution of cement, clinker and concrete. The Company's products are primarily used in the construction of infrastructure projects such as railways, highways, subways, bridges, airports, ports, dams, hydroelectric power stations and nuclear power stations, as well as the construction of high-rise buildings and development of suburban and rural areas. Products are mainly sold in Guangdong, Guangxi, Fujian, Hainan, Yunnan, Guizhou, Shanxi and Hunan through well-established waterway, railway and road logistics networks.

Locations and production capacities of production facilities are as follows:

Province/Autonomous Region/SAR	Cement		Clinker		Concrete	
	Number of production lines	Production capacity (million tons)	Number of production lines	Production capacity (million tons)	Number of batching plants	Production capacity (million cubic meters)
Guangdong	32	27.7	12	15.5	22	14.3
Guangxi	35	34.8	19	28.0	28	17.6
Fujian	14	10.1	6	7.0	-	-
Hainan	5	4.4	3	3.3	5	2.7
Yunnan	7	5.1	4	3.9	1	0.6
Guizhou	4	4.0	2	2.9	-	-
Shanxi	2	2.0	1	1.5	1	0.6
Hunan	2	2.0	2	1.5	-	-
Zhejiang	-	-	-	-	2	1.1
Hong Kong	-	-	-	-	4	1.6
Total	101	90.1	49	63.6	63	38.5

In addition, through equity interests in associates and joint ventures, the Company owns a total of 74 cement grinding lines, 30 clinker production lines, and 19 concrete batching plants with total annual production capacities of 64.7 million tons of cement, 37.0 million tons of clinker, and 9.4 million m<sup>3</sup> of concrete respectively, which are located in Guangdong, Hong Kong, Fujian, Yunnan, and Inner Mongolia. The respective annual production capacities attributable to the Company's equity interests in these associates and joint ventures were 22.3 million tons of cement, 12.1 million tons of clinker, and 4.4 million m<sup>3</sup> of concrete.

## Product Brands



- **Scope of Application:** Basic building materials and structural building materials
- Launched on 28 June 2016, ranked **117**th in China's Top 500 Most Valuable Brands in 2020 with brand value of RMB **51,958** million.



- **Scope of Application:** engineered stone and tile adhesive



- Sub-brand of "Runfeng"
- High-end cement specially for decoration



- **Scope of Application:** inorganic engineered stone

## Project Cases

### Southern China (including Hong Kong):

- Hong Kong-Zhuhai-Macao Bridge, Shenzhen-Zhongshan Bridge, Shenzhen Airport, Shenzhen Yantian Port, Shenzhen Mixc, China Resources Tower, Guangzhou-Shenzhen Expressway, Guangzhou-Shenzhen Riverside Expressway, Canton Tower, Guangzhou Metro, Shenzhen Metro, Foshan Metro, Ganzhou-Shenzhen Railway, Shantou-Shanwei Railway, Guangzhou-Huadu Railway, Zhanjiang High-Speed Rail, Zhuhai-Zhaoqing High-Speed Rail, Taipingling Nuclear Power Plant, Lufeng Nuclear Power Plant, Zhongshan Science Park, Northern Industrial Park of Zhaoqing Hi-Tech Zone, etc.;
- Hong Kong International Airport, Hong Kong International Finance Center, Hong Kong Tsing Ma Bridge, Ting Kau Bridge, Hong Kong Palace Museum, etc.;
- Nanning Mixc, Guangxi Xijiang Shipping Hub, Qin Zhou-Beihai Expressway, Bailongtan Hydropower Station, Nanning-Guangzhou High-Speed Rail, Guiyang-Nanning High-Speed Rail, Nanning-Chongzuo Railway, Datengxia Hydro-Junction Project, Nanning Metro, Longmen Bridge, Hezhou-Bama Expressway, Cangwu-Zhaoping Expressway, Hengxian-Qin Zhou Expressway, etc.;
- Hainan Wenchang Spacecraft Launch Site, Hainan Island Ring Expressway, Changjiang Nuclear Power Plant, Wenchang-Lingao Expressway, etc.

### East China:

- Xiamen Cross-Strait Financial Center, Zhangzhou-Yong'an Expressway, Xiamen Yuzhou University City, Xingguo-Quanzhou Railway, Zhangzhou Nuclear Power Plant, Xiapu Nuclear Power Plant, Fuzhou-Xiamen High-Speed Rail, Danyang-Xinyang Section of G104 Highway, etc.;
- Zhejiang San'ao Nuclear Power Plant, etc.

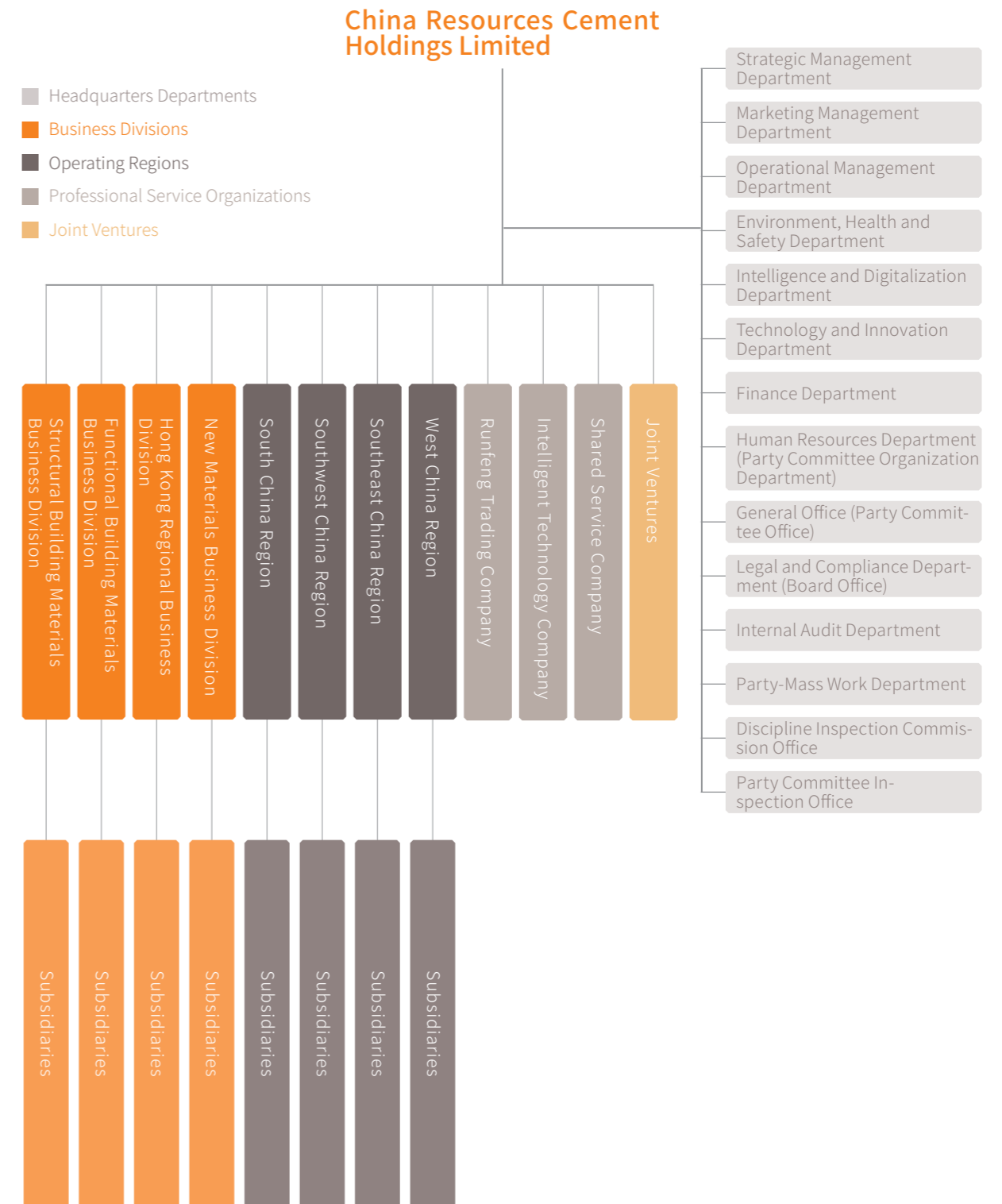
### North China:

- Shanxi Taiyuan-Jiaozuo Railway, G209 Highway reconstruction, G341 Highway reconstruction, etc.

### Southwest China:

- Ya'an-Linzi Section and Xinjin Section of new Sichuan-Tibet Railway, Tibet Rumei Hydropower Station, etc.;
- Yumo Section of China/Kunming-Laos/Vientiane Railway, Lijiang-Shangrila Railway, Guangtong-Dali Railway, Lincang Airport, Shangrila-Lijiang Expressway, Dianzhong Water Diversion Project, Chuxiong-Dali Expressway, Nanjian-Jingdong Expressway, Heqing-Guanpo Expressway, Lincang-Qingshuihe railway, etc.;
- Guizhou Jiayan Dam, Guizhou Maotai Airport, Jiangjin-Xishui-Gulin Expressway, Renhuai-Zunyi Expressway, Guiyang-Jinsha-Gulin Expressway, etc.

## Organizational Structure





## CR Cement in 2022

The project **"key technology of producing high-quality green inorganic engineered stone and its application"**, co-developed by CR Cement's subsidiaries DongGuan Universal Classical Material Ltd., Shenzhen Runfeng New Materials Technology Company Limited and China Resources Cement Technology R&D Co., Ltd., passed the verification of technical achievement, which is of important significance in driving for the technological progress in the industry.

CR Cement officially launched **"Runpin"** as the unified product brand of functional building materials. The birth of "Runpin" is an important breakthrough in driving for innovation and transformation.

CR Cement's **first 10-million-ton new-type environment-friendly high-end aggregates project** completed construction and commenced trial production in Nanning, which added strong momentum to its transformation into a technology-based building materials company, accelerating the construction of the New Land and Marine Routes for Western Regions and fostering the high-quality economic development of Guangxi.

CR Cement held the 2022 **"Entrepreneur Day"** themed around intensive studies, promotion and thorough execution of the spirit of the 20th CPC National Congress and vigorously promoted **the entrepreneur spirit** and **the spirit of innovation**.

January

**The Joint Laboratory of Scientific and Technological Innovation and Industry Incubation**, a joint laboratory built by CR Cement and the China Academy of Space Technology, was officially unveiled. This is the Company's first laboratory jointly built with the space sector, marking an important step towards R&D platform collaboration with China's top research institutions.

March

CR Cement and ZTC established the **"5G+ smart building material"** joint innovation laboratory for the joint R&D on 5G module and terminal in the building materials sector, aiming at mass production of light 5G modules and scalable deployment of 5G terminals.

March

June

CR Cement was awarded honors of the **"demonstrative enterprise of product innovation"**, the **"demonstrative enterprise of technological innovation"** and the **"demonstrative enterprise of green development"** by the China Stone Material Association, which added new driving forces for its high-quality development.

July

August

CR Cement **won the bid for the mining rights of a basalt quarry for construction use in Shiniuling, Guigang of Guangxi**, which is the first basalt mine won by CR Cement, reflecting the Company's confidence and determination to grow and strengthen its aggregates business.

December

CR Cement was included on the list of **"2022 intelligent manufacturing demonstration factory"** of the Ministry of Industry and Information Technology to create whole-process green and smart factory with intensive application of new technologies such as 5G and AI through its smart manufacturing pilot project in Tianyang.

December

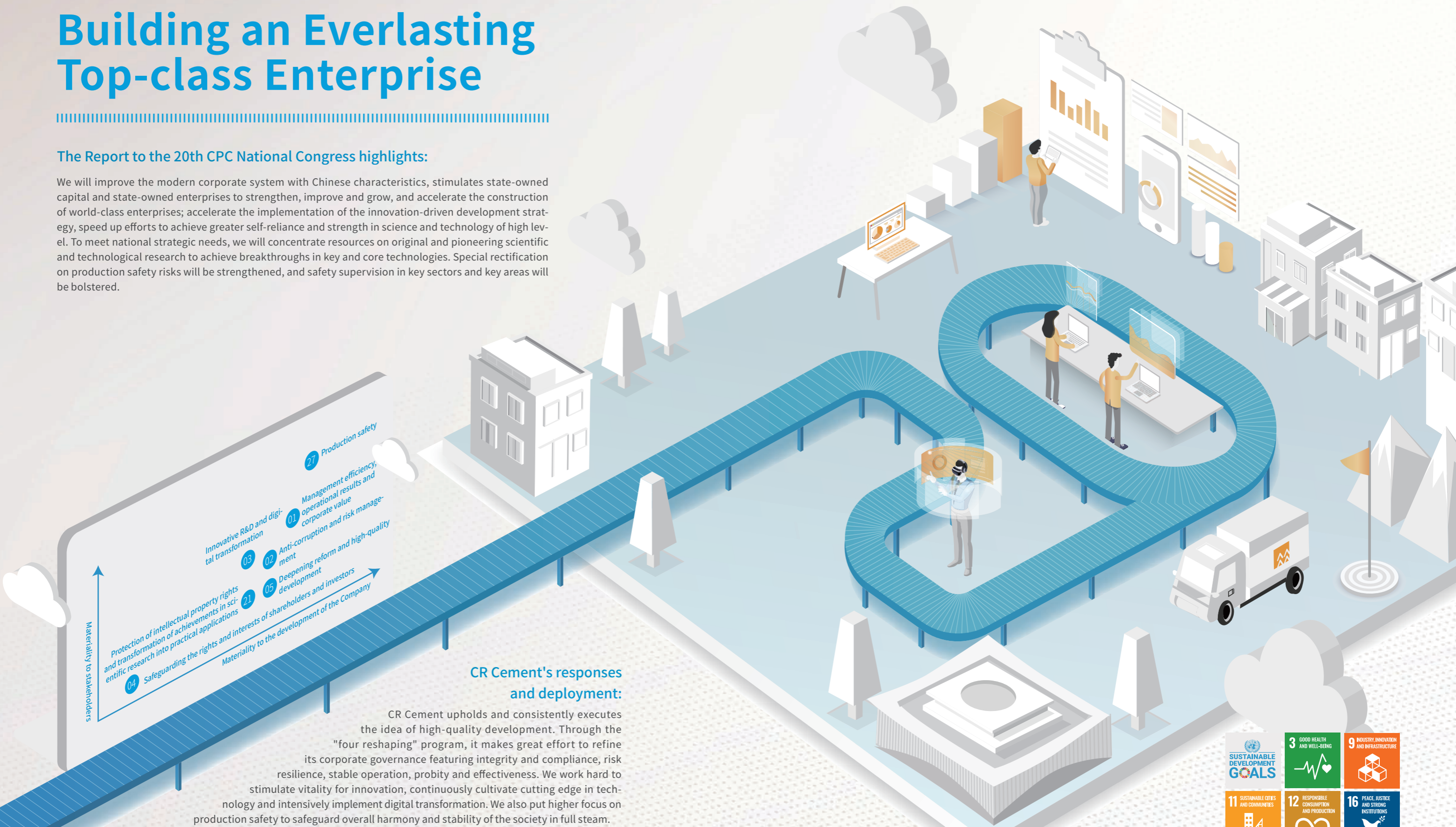
December



# Building an Everlasting Top-class Enterprise

## The Report to the 20th CPC National Congress highlights:

We will improve the modern corporate system with Chinese characteristics, stimulates state-owned capital and state-owned enterprises to strengthen, improve and grow, and accelerate the construction of world-class enterprises; accelerate the implementation of the innovation-driven development strategy, speed up efforts to achieve greater self-reliance and strength in science and technology of high level. To meet national strategic needs, we will concentrate resources on original and pioneering scientific and technological research to achieve breakthroughs in key and core technologies. Special rectification on production safety risks will be strengthened, and safety supervision in key sectors and key areas will be bolstered.



- Materiality to stakeholders
- 01 Management efficiency, operational results and corporate value
  - 02 Anti-corruption and risk management
  - 03 Innovative R&D and digital transformation
  - 04 Safeguarding the rights and interests of shareholders and investors
  - 05 Deepening reform and high-quality development
  - 21 Protection of intellectual property rights and transformation of achievements in scientific research into practical applications
  - 27 Production safety
- Materiality to the development of the Company

### CR Cement's responses and deployment:

CR Cement upholds and consistently executes the idea of high-quality development. Through the "four reshaping" program, it makes great effort to refine its corporate governance featuring integrity and compliance, risk resilience, stable operation, probity and effectiveness. We work hard to stimulate vitality for innovation, continuously cultivate cutting edge in technology and intensively implement digital transformation. We also put higher focus on production safety to safeguard overall harmony and stability of the society in full steam.







## Digital and Intelligent Technologies Enable New Generation Smart Factories

Intelligent manufacturing, big data, NFT, VR, AR... The age of Industry 4.0 has come along with a series of new concepts. Developing the digital economy is China's strategic move to grasp the new opportunities brought by the new round technological revolution and industrial transformation. To answer the call of times, CR Cement aims to lead the digital and intelligent upgrading and build the new generation smart factories.

### Creating Fundamental Platforms and Intelligent Think Tanks

China is advancing the application of digital, network and intelligent technologies to the manufacturing sector. In this context, better application of digital technology to industrial production becomes the key powerhouse for intelligent transformation. Backed by its decade-long IT and digital practices as well as its new generation technology resources, CR Cement presented the Runfeng Intelligence industrial connection (vertical industries)

platform for building material industry and the Runfeng Intelligence industrial Internet platform, which combines new factors of production, such as industrial application, algorithm and data, to back up smart production.

On June 27, 2022, the Runfeng Intelligence Industrial Internet Platform (V1.0) was launched to serve more than 30 cement production plants of CR Cement. Currently, it is connected

to approximately 47,000 equipment and collecting units and capable of collecting 100G data and over 100 algorithms of 26 categories on a daily basis. The platform's resource allocation strength and tiered application management and cloud-edge computing synergy helped reduce infrastructure investment by 30% in smart manufacturing scenarios and improve application promotion by 50% in mature scenarios.

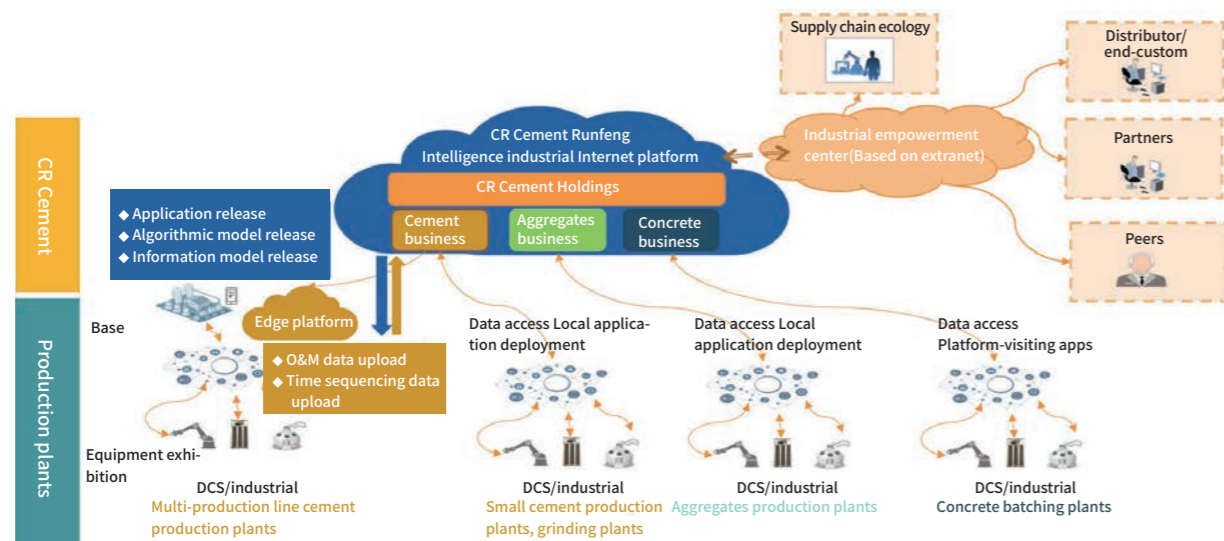


Diagram of Runfeng Intelligence Industrial Internet platform

## Expanding Application Scenarios and Building Smart Factories

Will 5G, AI, big data, VR/AR technologies cause chemical reactions when applied to factories? Based on its Runfeng Intelligence industrial Internet platform, CR Cement refined the six application scenarios and made Tianyang Cement the first fully 5G-covered smart factory of China Resources Group.

### Scenario 1: Digital green mine

Mining and distribution processes are digitalized through 5G and 3D modeling technologies. The unmanned mining trucks, controlled by the intelligent dispatch system, can automatically perform both loading and transporting missions, achieving unmanned operation in transportation, promoting mine operations and improving production efficiency. The comprehensive resource utilization rate reached 100%, leading the mining technology development in the cement industry.



Unmanned mining truck

### Scenario 2: Advanced cement kiln grinding control

By using the independently developed advanced kiln grinding control module, big data analysis and AI algorithms, CR Cement realized smart control over the process of kiln, grinding and residual heat recovery generator, achieving the results of "excellent craftsmanship, stable quality, low energy consumption, and controllable technology". Operator's per capita production capacity can be improved by approximately 33%, and approximately RMB 130 million of production cost can be saved upon full coverage at all production plants of CR Cement.



Configuration and trend of the advanced kiln grinding control system

### Scenario 3: Digital quality monitoring

Testing equipment, such as online field analysis and intelligent lab, are integrated to enable automatic sampling, preparation, testing and reporting to the proportioning system and quality management system. In this way, all quality-related data are correlated. As a result, automatic proportioning of raw materials can be achieved, improving the KH passing rate of raw materials by 10%, and the per capita efficiency of process quality testers by 50%.



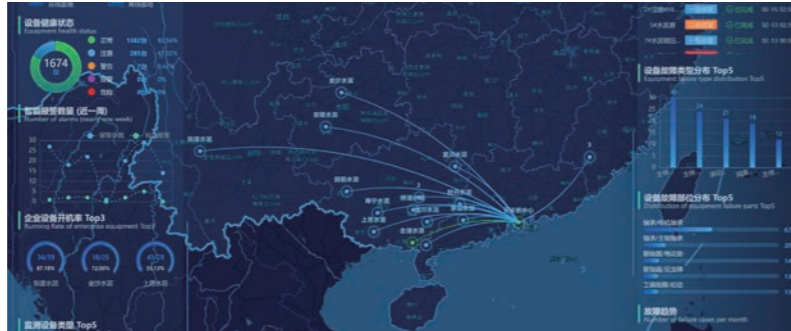
Intelligent integrated sampling, preparation and testing lab





### Scenario 4: Smart equipment O&M

Data on key equipment's vibration and temperature are gathered and monitored through Internet of Things 5G communication equipment, and then input into Runfeng Intelligence Industrial Internet Platform where over 100 mechanical models and algorithms are created for smart data processing, in order to forecast potential risks and guide field operation and maintenance. As a result, the frequency of defect-related equipment shutdown was reduced by 48.15% year on year and the duration for shutdown was lowered by 77.71% year on year.



Display of smart equipment O&M monitor

### Scenario 5: Smart safety management

Automatic identification and monitor of on-site operation behaviour, safety training education, occupational health protection and counterparty management are achieved through multi-level application such as promotion of AI intelligent video conference, comprehensive management system for production safety, intelligent parks, VR safety training halls, smart bracelets, counterparty EHS self-service training and examination. Behaviours in violation of regulations were reduced. As a result, probability for occurrence of safety incidents decreased, operational risks were prevented, and safety management work efficiency increased by approximately 30%.



VR safety training

### Scenario 6: Smart logistics

The Smart Logistics Card delivery system, consisting such features as self-service order, self-service card validation, automatic queuing, automatic weighing, automatic feeding, precise loading, load limit control, and dynamic monitoring during travel, allows unmanned delivery in plants, improving overall delivery efficiency by 30%.

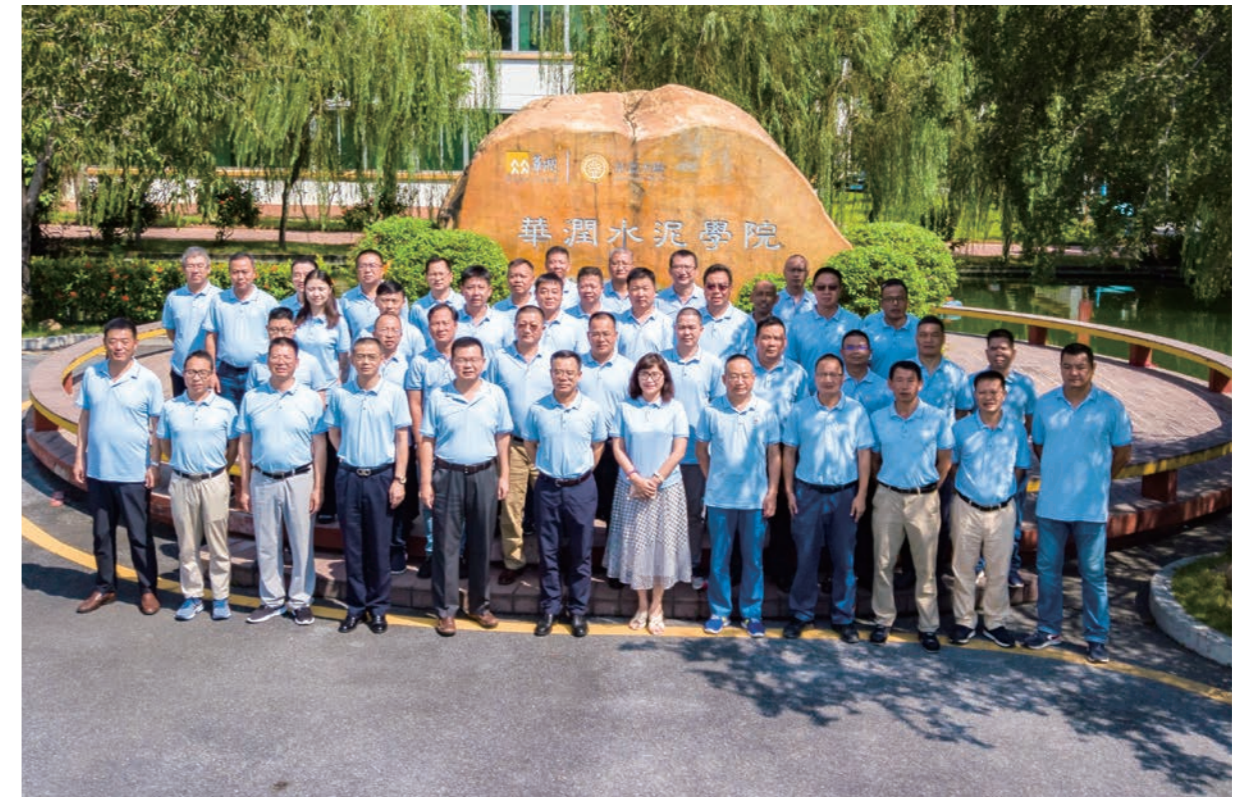
## Deepening Capacity Building to Support Digital Development

The smart factories project, a large system of CR Cement, needs both "hard supports" from platforms and "soft supports" by capacity building. The Company developed three capability building programs, namely digital organizational support, company-wide digital ability and corporate innovation dynamics. It also set up a digital transformation taskforce and incorporated Runfeng Intelligent Tech-

nology Co., Ltd. specializing in intelligent and digital services to provide strong organizational supports. The tiered digital ability fostering system, consisting of "star sky", "star spark" and "star light" courses, offers training series on digital technology and have fostered a professional, innovative and reliable team to escort the launch of the new generation smart factories. CR Cement also provided "digital + busi-

ness" innovation context to encourage high-quality innovations in business frontlines and generate endless innovation powers for the Company.

Working with partners, CR Cement built the "5G + smart building materials" joint innovation lab on 5G module/terminal R&D. Outcomes include prototypes of 5G safety helmet and smart O&M terminal.



The "star sky" course

CR Cement's digitalization umbrella covered approximately half of its cement production plants and would reach the rest during the 14th Five-year Plan period, so as to generate more and bigger digital transformation values and make greater contributions to the high-quality development of the Company and the industry.





# Operation · Consolidate the Base of Governance

## Improve Governance System

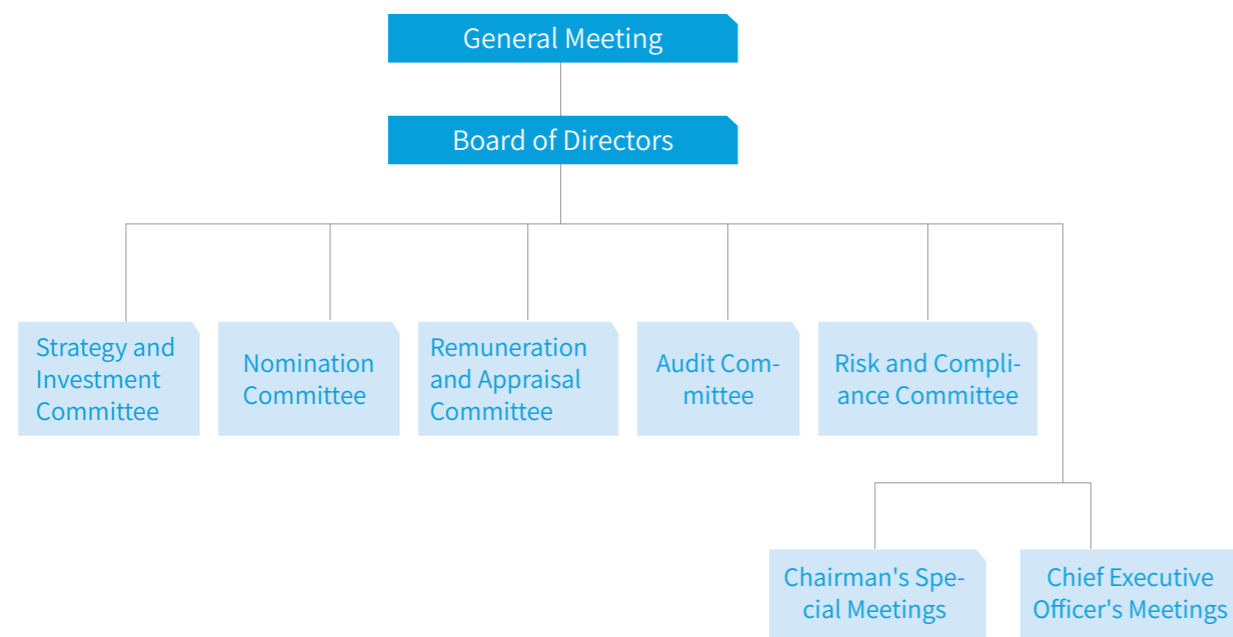
### Policy Development

CR Cement made coordinated advances in the establishment of systems. According to the Plan for Implementing the Functions and Powers of the Board of Directors of China Resources Cement Holdings Limited, the Company revised the Memorandum and Articles of Association of China Resources Cement Holdings Limited and the terms of reference for each committee under the Board of Directors, and issued the Rules of Procedures for Board Meetings of China Resources Cement Holdings Limited (2022 Edition), the Delegation Management System of the Board of Directors of China Resources Cement Holdings Limited (trial implementation), the List of Decisions Made and Authorized by the Board of Directors of China Resources Cement Holdings Limited, Rules for the Board Chairman to Exercise the Work Authorized by the Board of Directors of China Resources Cement Holdings Limited (trial implementation), Rules of Procedure of the CEO's Meetings of China Resources Cement Holdings Limited (2022 Edition), to fully implement the board's six key functions and powers and the mechanism for delegating authority to managers, and further improve the scientific and standardized decision-making procedures.

### Governance Framework

CR Cement's corporate governance structure, with distinct liability division and checks and balances, are established in strictly compliance with the Corporate Governance Code set out in Appendix 14 of HKEX Listing Rules and the Articles of Association. Such a structure ensures scientific decision-making and effective operation of the Company.

Governance framework of CR Cement



### General Meeting

The General Meeting is the supreme authority of the Company. In 2022, the Company held one Annual General Meeting which took forms of proxy voting, written inquiry to the Board and live broadcasting to ensure all shareholders could effectively execute their rights to know, participate, inquire and vote. The Meeting adopted eight proposals including that on amending the Articles of Association and Rules of China Resources Cement Holdings Limited adopted as a special resolution.

### Board of Directors

The Board of Directors is the major decision-making authority of the Company and accountable to the General Meeting. In 2022, the Board honestly performed its responsibilities for the interests of all shareholders. It held eight Board meetings at which 93 resolutions on annual business plan, investment projects, financial reports, appointment/dismissal of director/senior management, remuneration, appraisal, among others, were reviewed and 10 reports were heard.

### Risk and Compliance Committee

On March 18, 2022, the Corporate Governance Committee was renamed the Risk and Compliance Committee. Chaired by an independent non-executive director, it consists of two non-executive directors and two independent non-executive directors. The Committee supervises corporate governance, legal and compliance, risk management (including ESG risks) and internal control, and makes recommendations to the Board. In 2022, the Committee held four meetings to review 9 proposals.



### Strategy and Investment Committee

Established on March 18, 2022, the Committee reviews the Company's strategic planning, investment projects and corporate culture, and makes recommendations to the Board. It is chaired by the Board Chairman, and its members consist of three non-executive directors and one independent non-executive director. In 2022, the Committee held four meetings to review 9 proposals.

### Audit Committee

Chaired by an independent non-executive director, it consists of one non-executive director and three independent non-executive directors. The Committee advises the Board on the Company's financial statements and results announcements, external auditors' independence and remuneration. In 2022, the Committee held seven meetings to review 31 proposals.

### Remuneration and Appraisal Committee

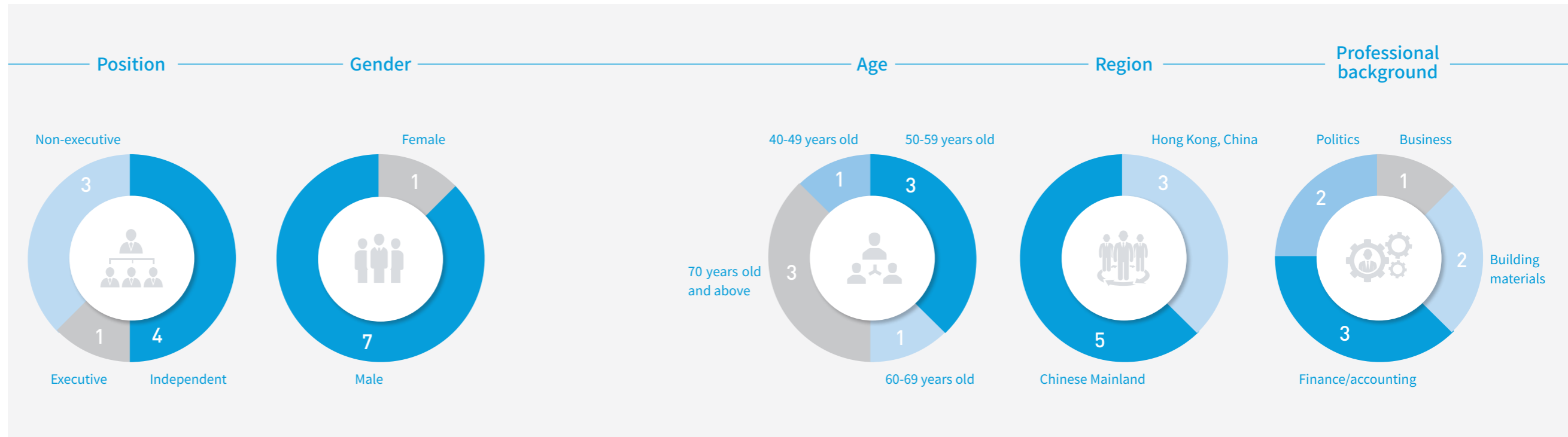
On March 18, 2022, the Remuneration Committee was renamed the Remuneration and Appraisal Committee. Chaired by an independent non-executive director, it consists of one non-executive director and three independent non-executive directors. The Committee advises the Board on the remuneration and appraisal of directors and senior management members as well as their total salaries. In 2022, the Committee held two meetings to review 8 proposals.

### Nomination Committee

Consisting of the Chairman served by the Board Chairman, one non-executive directors and three independent non-executive directors. The Committee is responsible for appointment criteria and appointment/dismissal proposals on directors and senior management members, annual evaluation on Board diversification and independence of independent non-executive directors, and advising the Board. In 2022, the Committee held five meetings to review 18 proposals.

## Board Diversification

The Board Diversity Policy, as amended, specifies that Board members shall be equipped with various skills and experiences needed by the Company's business growth. They shall be of different ages and years of service, and the percentage of female members shall be gradually increased. This is to ensure that the Board makes decisions in a scientific manner. As of the end of 2022, the Board had eight members including seven non-executive director, accounting for 87.5%.



## Board Independence

To ensure their independence and objectiveness, the independent non-executive directors were appointed in strict compliance with the Listing Rules and the Articles of Association. To date, there were four independent non-executive directors, over one-third of total directors. One of the independent non-executive directors is a Hong Kong qualified accountant. In 2022, all the independent non-executive directors

diligently performed their duties and attended all meetings. They played active and important roles in major decision-making processes, review of regular reports and financial reports, giving independent advice and opinions to the Company, the Board and its committees, protecting the rights and interests of minority shareholders and stakeholders, and standard operation of the Company.



Non-executive directors site visit the Southeast China Region

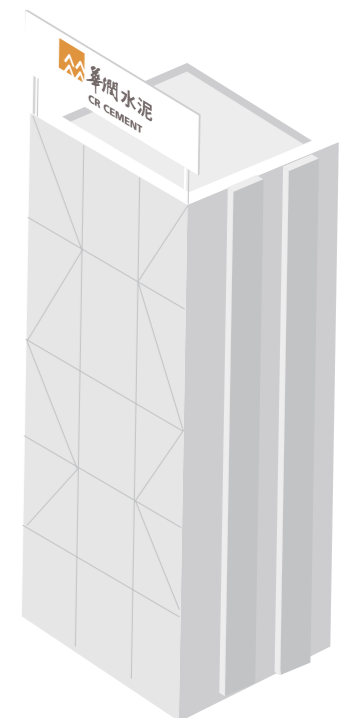
**4** Independent non-executive directors

Attendance at the meeting **100%**

## Board Development

CR Cement continued to refine the Board policies and systems for more standard and effective management. The Board had completed its functional bodies and defined the powers and responsibilities of the Board meeting. The Company assigned the Board with full powers of making mid-long term development decisions, selecting and recruiting senior management, performance appraisal for senior management, managing remuneration of senior management, managing salary allocation of employees and managing major financial matters. It restructured the Board and its committees, formulated/revised necessary rules, established Board mechanisms for long-term standard operation, resolution execution dynamic tracing, annual work reporting and non-executive directors' performance reporting to ensure scientific decision-making and execution of Board resolutions. It made policies on

Board's delegation to the senior management and lists of Board decisions and Board-delegated items, perfected the delegation mechanisms for regular reporting, tracing & supervising and dynamic readjustment, and clarified the powers and responsibilities of the Board and the senior management as governance bodies.



## Legal Compliance

In strict compliance with the Civil Code of the People's Republic of China, the Company Law of the People's Republic of China, the Anti-Monopoly Law of the People's Republic of China, the Anti-Money Laundry Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China and other applicable laws and regulations, CR Cement has formed "four cornerstones" of its legal compliance system regarding organizational system, institutional system, operation mechanism and cultural context and gradually established a three-prong compliance management structure involving the business, functional and supervising units, giving shape to a full-coverage, whole-process compliance management system emphasizing before-event policy regulation, during-event dynamic supervision and post-event accountability and supported by IT and digital technology.

### Optimize policy system

The Company formulated and issued 14 rules on cement share-holding compliance management, released approximately 40 management tips and risk reminders, and collated and perfected positive and negative lists for all functions in reference to the "major supervision" system, so as to clarify business compliance bottom lines. It also completed compliance obligation collation and categorization and listing of compliance audit items for bidding and procurement segments.

### Enhance compliance management

The Company streamlined compliance audit procedures and piloted the compliance management system in bidding and procurement segments (non-engineering) at the end of December 2022. It made regular checking on the compliance status of its operations and special checking on that of sensitive posts, bidding and procurement, policy development and business reception. In the year, 31 items were audited and no violations or affiliated transactions were found.

### Compliance culture

The Company carried out official promotion of its compliance management system and organized compliance training and legal knowledge popularization events. In 2022, the Company organized six compliance training courses, including those on "investment management case study" and "bidding and procurement case study", totaling 440 trainees.

### The three-prong compliance management structure



## Enhanced Risk Prevention

CR Cement prioritized risk management and internal control. It defined the basic framework and standards and organized risk appraisals. In November 2022, it finalized the top 10 risk appraisal for 2023. The Company formulated the Criteria on Identifying Internal Control Defects according to which defect correction and newly found defects were addressed in a quarterly fashion and reports and statistics were presented. It organized the 2022 internal control appraisals where the 13 business processes were appraised through self-appraisal (all subsidiaries) and supervisory appraisal (44 subsidiaries) in order to detect defects for correction.

## Practice of Integrity

### Shaping the "major supervision" system

CR Cement strictly complied with the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China, and other laws and regulations, adhered to the overarching leadership, level-by-level responsibility, sound organizational structure and comprehensive governance. It established the long-term pre-warning mechanism to fight commercial bribery and corruption, improved its anti-corruption standards, policies and systems, perfected the "major supervision" system for multi-departmental collaboration, and incorporated anti-commercial bribery and anti-corruption into audit accountabilities to standardize its business operation. Any one shall be prohibited from abusing their powers to ask for or take bribery, seeking personal benefits through illegal practices, or engaging in extortion, fraud or money laundry. In 2022, 159 persons were subject to CR Cement's audit accountability investigation.

### Foster culture of integrity

CR Cement organized the "integrity culture week" themed "Company tradition and defense line of integrity". The campaign covered all employees and their families, external partners like suppliers and customers, and joint ventures. 228 integrity education events and 153 alert education events were held in 2022 at all levels and reaching 7,481 persons. Among them, executive director and non-executive directors hosted or attended 4 alert and integrity education events and independent non-executive directors studied the relevant training materials.

On July 12, CR Cement organized the first alert education conference and collective integrity talks for the year, which was presided over by the Chairman of the Board of Directors and attended by three non-executive directors and all officials, aiming to implement the spirit of its 2022 integrity and anti-corruption meeting and the first alert education conference and help all directors, cadres and employees stand clear of corruption.

### Improved appealing and reporting system

CR Cement had multiple reporting channels including its website, hot line, email, and complaint box. It streamlined the reporting and handling procedures to prioritize reported issues, protect complainants' personal information, and impose penalty to false allegations and clarification to those slandered.

## Curb malpractice with upright exercise of power



A poster of the "integrity culture week"

Executive director and non-executive directors hosted or attended Integrity education events

4 venues

Integrity education events at all levels

228 venues

Reaching

7,481 persons

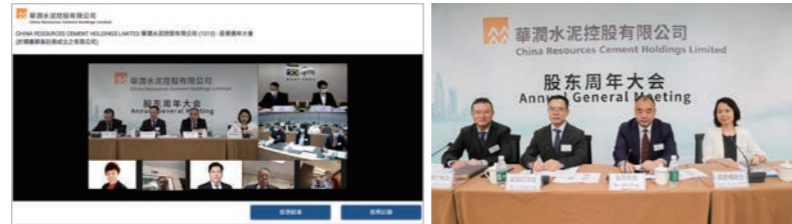
Organized alert education events

153 venues



## Protect the Interests of Shareholders

CR Cement held General Meetings in strict compliance with the Listing Rules and the Articles of Association to ensure the General Meetings make resolutions in the open and just manner and protect the rights and interests of shareholders. Medium and minority shareholders could attend and vote at the General Meetings in person or by proxy, inquire or advise the Board, and, as permitted by the Articles of Association, nominate directors and convene General Meetings.



CR Cement convenes an Annual General Meeting (online e-conference system)      CR Cement convenes an Annual General Meeting (Shenzhen venue)

## Investor Relations Management

Pursuant to the Listing Rules and its appendix, CR Cement disclosed major issues, such as operation, governance and environmental protection, through smooth communication channels, so as to actively respond to the daily inquiries by shareholders and investors and help investors gain better knowledge and recognition of the Company. During the reporting period, we facilitated the communication between investors and shareholders by means of our official website, tele-conference, video meetings, investor promotions, investor meetings, road shows and investor forums.

In 2022, the Company organized and attended four results briefings, seven investment bank strategy meetings, 20 collective road shows and reverse road shows and 32 one-on-one roadshows covering over 1,000 investors. In the year, the Company recorded zero administrative penalty due to information disclosure-related violation.

The Company organized and attended

**4** results briefings

**7** investment bank strategy meetings

**20** collective road shows and reverse road shows

**32** one-on-one roadshows

Covering over **1,000** investors



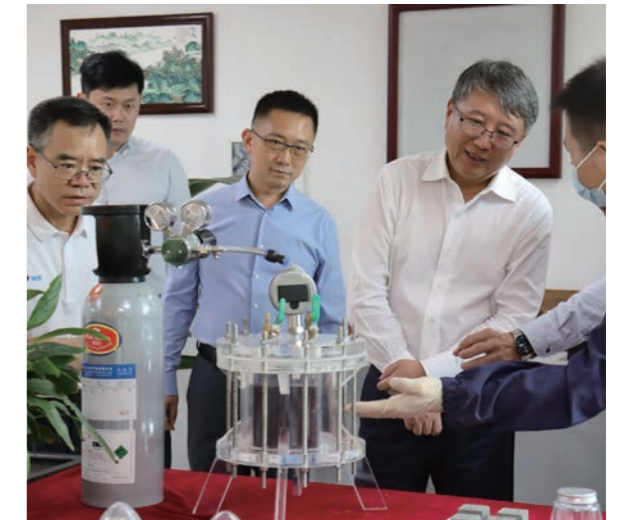
2022 Annual Results Presentation

## Deepening Reform and Transformation

Aiming to rebuild its values, businesses, organizational structure and spirit, CR Cement accomplished its three-year SOE reform to serve the national strategy. Referring to world leaders, it reinforced teams of cadres and talents and continued to deepen excellent operation management. It advanced the development of emerging businesses, formulated strategic plans for the new materials business, and accelerated the rebuilding of Hong Kong businesses by intensifying investment and M&A. It made more inputs in R&D to generate greater digital powers for all businesses. It successfully released the Runfeng Intelligence industrial Internet platform to support the digital marketing transformation and the unified product brand Runpin of functional building materials in the Chinese Mainland and Hong Kong.



Mr. Wang Xiangming, Chairman of China Resources Group, visited at CR Cement Headquarters.



Mr. Wang Cuijun, General Manager of China Resources Group, visited China Resources Cement Technology R&D Co., Ltd. and Zhujiang Cement.



CR Cement holds the 2022 "Entrepreneur Day" themed the spirit of the 20th CPC National Congress.



# Innovation · Empower Transformation

## Innovation System Development

CR Cement perfected its technological innovation management system and standardized works to this regard. It revised such policies as the Administrative Measures for R&D Projects and the Administrative Measures for R&D Investment, continued to improve its management system documents, and formed innovation synergies of the Technology R&D Company, industrial expert database, joint labs, industry-college-research cooperation, and IP management. In 2022, the Company's total R&D investment amounted to RMB320 million, and the intensity of R&D investment was 1.03%.

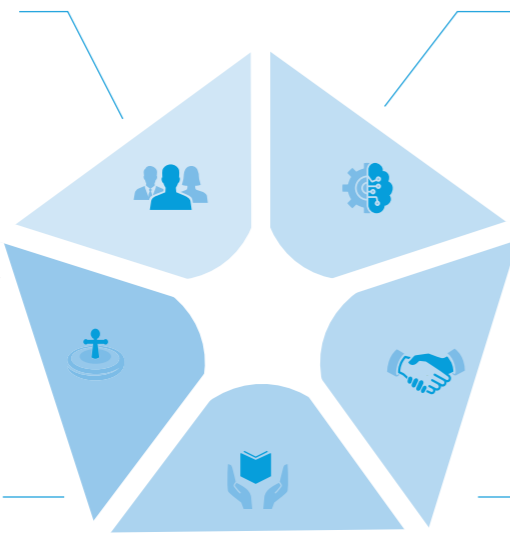


Tao Congxi is honored "2022 Top 10 technological leaders" in the building materials sector.

The first technological innovation forum is held.

### Fully leverage expert think tanks

CR Cement kept upgrading the industrial expert database to give full play to the roles of experts in technological consultation and industrial development, effectively promote industrial exchanges and grasp cutting-edge technologies at home and abroad. On November 17, 2022, CR Cement's chief expert Tao Congxi was honored "2022 Top 10 technological leaders" in the building materials sector.



### Fully leverage the Technology R&D Company in a major role

In 2022, the Company founded the China Resources Cement (International) Center for Technology and Innovation at Hong Kong Science Park. It is the first of its kind set up offshore, aiming to strengthen technological coordination and R&D.

### Creating a coordinated innovation community

CR Cement and China Academy of Space Technology co-established the joint lab of technological innovation and industrial incubation, in order to make in-depth research on new building materials, new materials R&D and application, intelligent manufacturing and technological innovation management. It successfully held the first technological innovation forum to facilitate inter-sector, inter-discipline academic exchanges, technological exchanges and talent exchanges.

### Attach Importance to intellectual property protection

CR Cement implemented the "Policy on Management of Intellectual Property Rights", the "Policy on Management of Patents" and the "Guidelines for Brand Protection" to enhance protection on IP achievements and ownership. As of the year end of 2022, the Company held 291 patent licenses, including 42 inventions and 249 utility models. In the year, the Company registered 54 new grants, up 22.8% over the previous year, as well as seven new article contributions.

### Deepening industry-college-research-application cooperation

CR Cement cooperated with colleges and research institutions, such as the Southeast University, South China University of Technology and Wuhan University of Technology. They worked on joint projects to reinforce basic research on new concepts, new theories and new methods and R&D on new technology, new technique and new product to create innovation engines.

## Product and Technology R&D

CR Cement paid continuous attention to product R&D, and independently developed 18 varieties of cement grinding aid falling into six series which were applied to 23 cement production plants. Series of products, including carbon-sequestering, autoclave- and aeration-free concrete, CAB, high tenacity cement-based engineered stone, functional paint, compound cement, ALC mortar, gangue products, etc.,

were developed and applied. Outcomes of production technology research included divided cement grinding technology, optimized raw materials and cement grinding system, raw materials rolling machine resistance reduction, application of vertical grinder new type separator and ceramic crusher ball. As a result, the innovation chain, industrial chain and value chain achieved synergic development.

### "High-quality green inorganic engineered stone" project passed technological achievement appraisal

Case study

On March 31, 2022, CR Cement held the technical appraisal on the "high-quality green inorganic engineered stone" project in Dongguan. The appraisal was organized by China Building Materials Federation. The appraisal panel of nine experts from colleges, research institutions and industrial associations recognized that the project resulted in world-leading technology. As of the end of 2022, the project was granted 10 invention patents including engineered stone production technology and products, four utility modes and two group standards.



Construction of Shenzhen Metro Line 10 and Line 4 used 90,000 m<sup>2</sup> of inorganic engineered stones produced by CR Cement.



The project "Research, Development and Application of New-Type High-Efficiency Cement Grinding Aids" was honoured with the First Prize of the Science and Technology Progress Award



The project "Key Technology and its Application of High-Quality Cementitious Materials Made of Industrial Waste" was honoured with the First Prize of the Science and Technology Progress Award



## Promoting Smart Development

Our digital transformation focused on "three key business areas" of factory, logistics and marketing as well as "a set of corporate governance system". We built intelligent digital platforms to connect the entire value chains of R&D, supply, factory-logistics and marketing horizontally and all management levels

vertically. Our digital transformation was targeted at "smart factory", "smart marketing", "smart logistics" and "digital smart governance" to support our strategies, improve management efficiency, optimize operation and create values.



Based on the Fengkai Lighthouse Factory Project, we, together with China Telecom and ZTE, jointly submitted the theme project of "5G Collaborative Safe, Low-carbon Transformation of High Energy Consumption Enterprises", which won the second prize for smart industry at the 5th "Bloom Cup" 5G Application Competition.



Our "Mobile Internet of Things + AI"-based Industrial Equipment Smart Maintenance Project and 5G IoT Low-carbon Smart Manufacturing Cloud Network Integrated Scale Application Project were included into the 2022 typical mobile IoT application cases of the Ministry of Industry and Information Technology.



The "Whole Process Cement Smart Manufacturing Demonstration Factory" presented by our smart manufacturing Pilot Project in Tianyang was included into the "2022 Smart Manufacturing Demonstration Factories".



The project "Development and Application of Environment-friendly Admixture Based on Single-row Center of Gravity" won the third prize of 2021 Technology Invention Award of China Concrete and Cement-based Products Association.

## Safety · Guarantee Operational Stability

### Strengthening Safety Management

CR Cement always adheres to the people-centered principle of "no production when unsafe", and strictly abides by the responsibilities and obligations specified in the Production Safety Law of the People's Republic of China. We enhanced organizational guarantee by continuously improving the EHS organization system and clarifying the differentiated management and control requirements of EHS organizations at all levels. We perfected policies and systems. In 2022, we issued 15 EHS policies and specifications to provide guidance for safety production. We standardized the management process through formulating the EHS factors management system audit standards of CR Cement and making demonstrative audits. To strengthen practical guidance, we established a safety standardization audit guidance group to guide and supervise the safety production standardization at production plants. To enhance management capabilities, we perfected the incentive mechanism for registered safety engineers and encouraged employees to obtain registered safety engineer certificates. By the end of 2022, CR Cement had 217 full-time safety management personnel (including 81 registered safety engineers).

### Improved Emergency Response System

We actively carried out emergency management works and improved emergency rescue system and organization. We promulgated the Comprehensive Emergency Plan for Production Safety Accidents, the Emergency Plan for Unexpected Environmental Events and the Plan for Implementing Emergency Rescue Capacity Building to explore the construction of a comprehensive platform for emergency rescue and an information system for emergency rescue command. We also urged all units to carry out emergency rescue capacity building in an all-round way to improve their ability to deal with emergencies in all cases. In 2022, all production plants conducted a total of 1,711 safety emergency drills attended by 24,721 participants.



Jinsha Cement carries out a special emergency rescue drill for coal mill fire and explosion accidents



## Intelligence-backed Safety

CR Cement understands technology is important and necessary for safety and spares no effort to incorporate safety protection into new infrastructure such as big data and 5G. It has established a comprehensive management system for safety production and integrated the production plant intelligent park system, forming a comprehensive management solution for production plant intelligent early warning to ensure systematic, mobile and intelligent safety management. It also upgraded mine production and transportation safety through technology and equipment innovations.

### Apply intelligent systems to modern park management

CR Cement advanced EHS intelligent and automation projects. The smart park in Fengkai Cement is equipped with integrated management systems such as personnel positioning, intelligent access control, electronic fence, operation monitoring and human health monitoring to regulate staff operation.

### Improve safe mine operation through digital construction

Pingnan Cement used 3D visualization technology to build a smart mine system for effective control over mine blasting, stope slope, vehicle and personnel operation and environmental monitoring. In Tianyang Cement, new technologies and equipment, such as unmanned mining truck, cement delivery robot, unmanned cement loading, 5G helmet remote-enabled remote diagnosis and equipment maintenance, and digital mine, were applied to root out health and safe accidents during production.

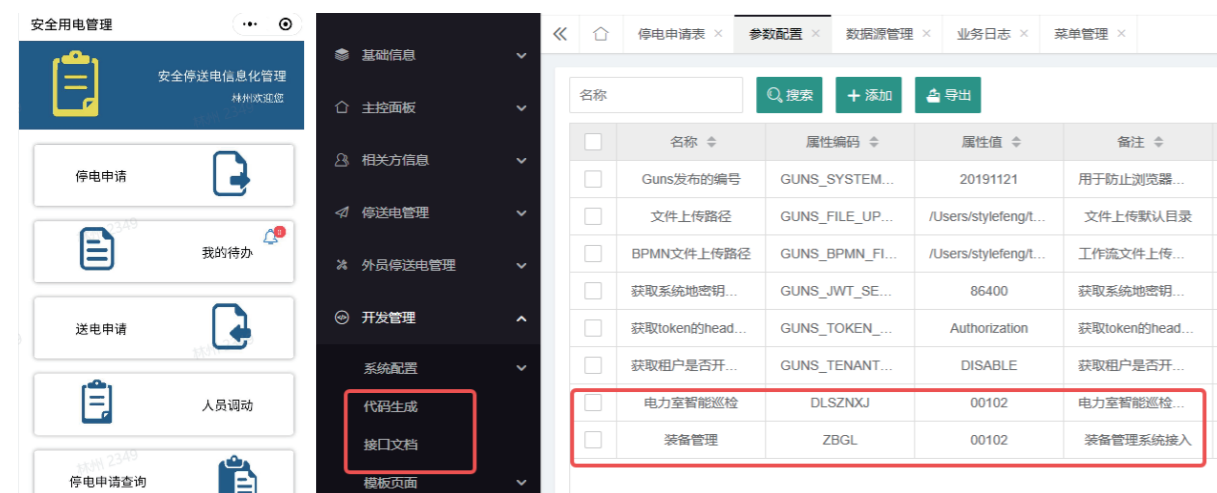
### Intelligent risk control system ensured safe driving of truck fleet

CR Cement Actively applied intelligent driver's compartment risk control system to its 60 mixer trucks and introduced the system to its counterparts. By the end of 2022, the risk control system were applied to 431 mixer trucks, which greatly reduced safety risks caused by driver fatigue driving and blind area as well as driver violations.

### Use advanced equipment to prevent safety risks during blasting and mining

Seven production plant mines, including Yongding and Changzhi, invested more than RMB70 million in nine heavy hydraulic hammers to prevent potential safety risks brought by blasting vibration and flying rocks on operators, thus effectively solved the problem of blasting safety distance.

Seven production plant mines, including Yongding and Changzhi, invested more than RMB **70 million** in **9** heavy hydraulic hammers



Intelligent power control system in Luchuan Cement

## Specialized Governance

CR Cement urged the production plants to improve the dual prevention mechanism for safety risk classification control and potential risk investigation and management, in order to enhance the three-year plan for production safety improvement. In 2022, the Company carried out EHS investigations and special inspections on 25 units to thoroughly analyze common problems and prominent risks in safe production.



Tianyang Cement made leakage inspection and is removed from the "black list"

## Safety Education

CR Cement actively organized and encouraged employees to participate in safety trainings as well as theme activities, such as the Safety Production Month, Traffic Safety Publicity Week, Occupational Disease Prevention and Control Publicity

Week and the 7th EHS Knowledge Competition. In 2022, it gave safety training courses to both employees and counterparts, totaling 332,000 and 75,000 hours respectively.

In 2022, it gave safety training courses to both employees and counterparts, totaling **332,000** hours and **75,000** hours respectively



Zhanjiang Cement has a wall of family messages



The 7th EHS Knowledge Competition of CR Cement



Structural Building Materials Business Division organizes the emergency skill competition



# Striving for Perfection and Shaping the Brand to Create Better Value

## The Report to the 20th CPC National Congress highlights:

Pursuing high-quality development as our overarching task, we will make sure that our implementation of the strategy to expand domestic demand is integrated with our efforts to deepen supply-side structural reform; we will move faster to build a modernized economy. We will raise total factor productivity, make China's industrial and supply chains more resilient and secure, so as to effectively upgrade and appropriately expand China's economic output.

## CR Cement's responses and deployment:

CR Cement sticks to effective and overall planning to advance business transformation. It incorporates technology and responsibility into every product and service to fully convey its brand values, grasps every link from production to after-sales with internal control standards superior to national standards, provides high-quality products and services and systematic solutions for the public, and strives "to become a respected world-class building materials company."

- 19 Product innovation and smart marketing
- 20 Rights, interests and satisfaction of customers
- 18 Product and service quality management

Materiality to stakeholders

Materiality to the development of the Company







## "Runfeng + Runpin", Quality Products with Artisan Spirit

Along with the solid progress of China's new urbanization, the quality of urban development steadily improves and the public turn to demand for diverse, quality and green building materials. In face of the constant updating of the building materials industry, CR Cement adheres to the quality-first artisan spirit, constantly presents new products to meet the ever-changing market demand, and strives to enhance the brand values of "Runfeng" and "Runpin", writing a new chapter about both brand coverage and values.

### Fine Building Materials for Quality Life

"When stone meets art, it gives endless possibilities. "Runpin" values the natural charm of every piece of stone and uses technology to bring the beauty to every one of us..." On June 23, 2022, the promotional film unveiled the Runpin brand release conference, the Runpin Luxury settlement ceremony and the signing ceremony of the strategic cooperation deepening agreement between China Resources Land and CR Cement. Runpin is a unified product brand of functional building materials. As highlighted by Chairman and CEO Mr. Ji Youhong in his address, "functional building materials belong to consumer building materials which is a new driving force for the sustainable growth of CR Cement. The main objective of establishing the "Runpin Luxury" is to provide better experience to our customers so as to become an integrated provider and an industry pioneer of building materials products and services for end-users."

ternational Stone Fair. CR Cement gave a presentation on the whole series of engineered stone products of "Runpin" and shared the brand connotation and the product system. Chairman of China Stone Association, Mr. Chen Guoqing expressed his faith in Runpin, saying he hoped CR Cement could lead the high-quality development of the industry, and set a benchmark and an example for the construction of the "six zero" demonstration factory and the implementation of intelligent manufacturing.

On December 13, CR Cement participated in the Construction Innovation Expo 2022 with its two major brands, "Runfeng" and "Runpin". During the Expo, the Company organized the 2022 Hong Kong Client Networking Event & Runpin Brand Launch, together witnessing the official launch of "Runpin" in Hong Kong. This was also the first appearance of CR Cement and its product brands in a large-scale exhibition in Hong Kong.



The unveiling of "Runpin Luxury"

Supported by CR Cement's strong R&D, expertise on building materials product manufacturing and experiences in new building materials R&D, production, operation and promotion, Runpin quickly won recognition of communities. From July 30 to August 2, Runpin first appeared in an industry exhibition, the 22nd China Xiamen In-



"Runpin" brand release conference



The unveiling ceremony of Runpin in Hong Kong



CR Cement and its product brand first appear in a large-scale exhibition in Hong Kong



Shining Debut of "Runpin" at the 2022 New-Type Building Materials Conference of Xiamen Stone Fair



A group photo at the Fair



Runfeng New Materials Technology Co., Ltd. under CR Cement was granted honors of "demonstrative enterprise of product innovation", "demonstrative enterprise of technological innovation" and "demonstrative enterprise of green development" by China Stone Material Association; DongGuan Universal Classical Material Ltd. under CR Cement was selected as the "Deputy Director Unit" of the Special Committee of Engineered Stone of China Stone Material Association.

### Runxin Helps in Industrial Prosperity

Unlike the young brand Runpin, Runfeng was officially launched in 2016. It had gone through the development milestones from brand trademark, advertising slogan, brand spokesperson "Run Xiaofeng", to becoming a brand with a value of more than RMB51.9 billion. During those years, there were too many stories about how the brand and its customers grew together.

Li Jianping, a veteran in the cement sector from Yunnan, had worked on cement for decades before he had an amazing connection with Runfeng. "Cement selling was hard in the past and subject to many factors like producers' instability in production, sales policies and product quality. Now with Runfeng, I'm no longer bothered by such worries. I have but one goal: work together to bring Runfeng to everyone." Talking about how Runfeng changed his career, Li Jianping couldn't help smiling.

from Fujian Zhongdi Trading Co., Ltd. was proud when looking at the buildings and roads made with Runfeng cement.

"From the moment its first delivery to Zhongshan, we became a loyal customer of CR Cement. We, as a distributor and brand guard, spared no efforts to expand market share and unveiled the cooperation with China Resources in making changes to life." Fang Jungang, a distributor and a loyal customer in Zhongshan of Southern China, grew together with Runfeng.

"We've gone through these and I'm grateful that CR Cement give us a top agent platform and our hard works paid back. I have no doubt that Runfeng will have a brighter future and lead us to more glories." He Qichun

Time changes, yet we stay true to our original aspirations. Looking into the future, CR Cement will continue to practice the brand concept of "Runfeng" and "Runpin", focus on long-term development, adhere to product quality, upgrade product services, and join hands with all parties to write more beautiful stories.





## Product · Continue to Upgrade

### Improve Product Performance

CR Cement stresses product performance stability and improvement. It reduced the clinker preparation coefficient by 10%, and strengthened R&D and promotion of special cement products. It successfully used gangues to produce ultra-light functional aggregates and light-weight high-strength aggregates with EPS and PET core-shell structure, and found from gangues the natural aggregate-carborundum which can greatly reduce the cost of engineered stone. It actively expanded prefabricated construction business, developed ALC products and prefabricated products adapted to special projects, and further expanded the promotion and application of special products and project customized products.

High-standard, high-quality product performance proven at DJI Sky City

Case study

DJI Sky City, a masterpiece headquarters of tech firms and a smart landmark in the Greater Bay region, is known of its harsh requirement on decorative panels and product quality. Through project research, Runpin optimized the formula to reduce the defect rate of large-sized and fine aggregate products, adopted series of innovative production processes to present a perfect matte design with guaranteed material installation and effect. The material well fits the overall space style thanks to the good plasticity and customization of Runpin engineered stone.



### Rich Product Variety

China Resources Cement focuses on enriching product categories. Its stone business has been subdivided into product series and colors for engineering, home decoration and other scenarios. Its tile adhesive business has launched diverse products such as high-strength interface agent, color reinforcement agent, plugging adhesive, back adhesive, impermeable mildew-proof sealant and waterproof paints. It developed new silicon-based material products, actively studied silicon-based materials, and studied the occurrence of impurities in quartz raw materials, so as to provide technical reserves and technical support for the development of silicon-based new material industry. It actively researched calcium-based materials, improve the utilization rate of mineral resources through grinding, modification and other means, in order to enhance the added value of downstream products and provide technical support for the development path of calcium-based industry. It continuously strengthened the development of basalt materials, developed a series of basalt fiber-based products based on the characteristics of basaltic new materials and marine application environment, making breakthroughs in the manufacturing, processing and application of in the field of basalt-base materials.

The launch ceremony of Runpin's new tile adhesive products and customer exchange meeting was successfully held

Case study

On January 5, the launch ceremony of Runpin's new tile adhesive products and customer exchange meeting was successfully held at China Resources Cement (Fengkai) Co., Ltd. The adhesive, whose formula was independently developed by CR Cement, features excellent adhesive performance and application. The formula can be tailored for different scenarios and customers. Together with engineered stone and white cement businesses, it can provide customers with systematic solutions and help further improve our core competitiveness.



### Expanding Product Matrix

In 2022, CR Cement won the rights of mining building basalts in Shiniuling, Muzi Town, Gangnan District, Guigang of Guangxi. Guangxi Runhan New Materials' 10-million-ton aggregates project, the first 10-million-ton new-type eco-friendly high-end aggregates project, was put into operation in Nanjing. M&A of Zhongsheng Mining Aggregates projects in Wushan County of Chongqing completed smoothly, bringing experience in the Company's expansion and aggregates business in Chongqing and along the Yangtze River.

### Advancing Brand Building

CR Cement stresses brand building. It created Runfeng and Runpin brands, established a three-level brand management structure of Holding-region/business division-area, designed and released brand image identification system, developed several system processes, and gradually formed a brand management system featuring "Holding controls direction, regions/business divisions refine strategy, and areas implement". In 2022, CR Cement formulated and released the medium-term development plan for "Runfeng" brand, which officially expands the coverage of "Runfeng" to concrete, aggregates and prefabricated construction to create a unified industrial chain brand. It held "Runpin" brand release conferences in Shenzhen and Hong Kong, striving to build "Runpin" into a well-known brand in the field of functional building materials.



China Resources Cement Holds the 6th Brand Anniversary of Runfeng

# Quality · Adhere to First-class Standards

## Product Quality Management

The construction of quality management system has been completed in

**20** production plants

In strict compliance with the Product Quality Law of the People's Republic of China and the Management Manual (Quality Management) of CR Cement, the Company has established the quality standards covering raw materials, coal and clinkers, and formulated the Management Measures for Production Process of Basic Building Materials and the Management Standards for Grinding (Combustion) Agents, forming a whole-process quality control system covering raw materials, process control, products delivery and after-sales. It strictly implemented the standards for raw materials and auxiliary materials, processes, semi-finished products, finished products, packaging and inspection to supervise the whole production process, and improved product quality with the help of intelligent quality control. By the end of December 2022, the construction of quality management system has been completed in 20 production plants such as Pingnan, Guigang and Nanning. All production plants of CR Cement have passed the GB/T19001-2015 quality system certification and product quality certification, and all types and grades of cement meet the GB175-2007 standard.

## CR Cement's quality verification process is as follows

### Quality plan

- On the basis of national standards, the internal control index of cement products is formulated according to the market demand.
- Rationally formulate the control index of raw materials, and test each batch into the plant.
- Make a general survey of the quality of raw material resources in the production plants, and establish a sound resource file.



### Quality control

- The quality control department supervises and tests the clinker and cement production process 24 hours a day.
- Check the production process layer by layer, and implement the quality assessment.



### Quality improvement

- Make market research, to provide front-end service for production.
- Continuously improve products according to customer feedback.
- Technology research and development centers carry out innovative research.

### Quality assurance

- Cooperate with China National Center for Quality Inspection and Testing of Cement for comparative verification.
- Organize special spot checks covering raw materials and products twice a year, focusing on checking and controlling toxic substances such as chloride ion, hexavalent chromium and radioactivity.



The Certificate for Quality Management System Certification, Guigang Cement



The Certificate for Quality Management System Certification, Nanning Cement

## Intelligent Quality Control

CR Cement used Runfeng Intelligence production and operation management application to boost product quality improvement. Through online analyzer and other quality testing equipment and quality management system, it applied all-round and whole-process digital quality management and control to allow intelligent proportioning and testing and effectively improve product quality stability.

## Smart management of raw materials and fuels

The Company strengthened source control, improved governance effectiveness through digital supervision, and formed a multi-sectoral joint supervision mechanism to standardize the sampling and inspection management of access of raw materials and fuels. In Tianyang, Nanning, Fengkai and other production plants, on-line coal analysis systems were used to timely detect coal quality and guide the storage and use of coal. Hepu, Caoxi, Fengkai and other production plants used online analysis technology to establish databases on the quality of multiple mining faces of limestone, which help design reasonable proportion according to the mining planning and quality indicators to ensure the quality stability of raw materials.

## Intelligent lab

In November 2022, intelligent labs were piloted in Fengkai, Tianyang and other production plants. This move relieved the labs of repeated manual operation, allowed automatic sampling, sample preparation and testing in cement production process, eliminated influence of human factors on test results, and improved test accuracy and raw materials proportioning. The labs ensure the efficiency of automatic sampling and sample preparation tests and data statistics and improve test stability and timeliness.



Hepu Cement wins special prize of the 18th Meinolf Cup National Cement Chemical Analysis Comparison

## Product Recall Management

CR Cement has established the quality accident management system to perfect the defected product disposal plan, compensation standard, recall mechanism and disposal process. In case products are confirmed defective or serious in-use quality problems are reported, customers will be notified to cease use or isolate relevant batches. Unused products of such batches will be recalled and customers' losses compensated based on assessment results. The Company will make in-depth investigation to identify the root cause and accountabilities, and formulate and implement rectification measures. In 2022, the Company didn't report any recall of sold or delivered products due to safety, health or quality reasons.



# Service · Upgrade Customer Experience

## Protection of the Interests of Customers



### Fair trade

CR Cement adheres to equality and voluntariness, equal value and price, fairness and justice, honesty and credit throughout its cooperation. It exercises rights and assumes obligations equally with customers, and prevents any bad events such as compulsory sales, in order to create partnerships based on equality, transparency and mutual respect.



### Information protection

Customer information are the core business secret of the company and is protected pursuant to the relevant management requirements including the Regulations on Managing Confidentiality Work and the Management Measures on Trade Secrets of the Company. Customer information are collected, filed and updated by dedicated staff and subject to inquiry and access authorities to ensure information security. In 2022, the Company didn't report any cyber information safety accidents or infringement of customer privacy.



### Responsible marketing

CR Cement is committed to providing customers with accurate product information. It prints product manuals and carries out promotion activities in compliance with the Advertising Law of the People's Republic of China to further ensure standard marketing and honest, reliable product promotion.



### Transparency

CR Cement actively organizes various product exchange meetings and training courses to introduce products and exchange knowhow with customers, and help them better understand our products' performances and usage. Product instructions and tips are printed on the outer packages to help minimize potential misuse. We also make public product price to create a transparent consumption context.



### Fighting piracy

CR Cement is committed to providing high-quality products and attaches great importance to IP protection through continuous and lawful trademark registration, right confirmation and copyright registration against piracy. The Company established a traceable supervision system for product quality which integrates the weighbridge and packaging system into the ERP system, and ensured each bag of cement delivered from factories was printed an identification code so as to provide technical support for subsequent product quality supervision and fight against piracy. At the same time, the Company promoted the registration and protection of trademarks including "Runfeng", "Wang pai gong jiang" and "Runpin" to provide support for subsequent trademark protection. In 2022, there was no piracy cases or incidents of the Company that were investigated and dealt with by administrative or judicial authorities.

## Improve Customer Service

CR Cement has established the customer needs-oriented service system, and formulated a distinctive regional customer service policy. Customers were classified according to their nature for pertinent customer maintenance strategies. We paid regular visits to customers to listen to their voices. We constantly improved the customer demand response mechanism for faster responses. We enriched service scope, strengthened the management of diversified value-added services, provided active after-sales services, and extensively carried out customer exchange meetings. We optimized the customer complaint handling process. All the staff of the Company are the recipients of customer complaints, and the customer service staff shall respond to customer complaints within 24 hours, find the cause of customer complaints through on-site investigation, sampling and testing, and explain or offer solutions to customers. In 2022, the Company revised and issued the Measures for Customer Service Management (2022 Version), according to which dedicated staff would be appointed to handle complaints by nature and category, so as to ensure 100% response rate.

In 2022, CR Cement continued the customer satisfaction survey. The 5,231 valid responses showed a customer satisfaction rate of 97.6%.

### Diversified value-added services convey brand values

### Case study

During the project, the Functional Building Materials Business Division carried out all-round service management through pre-sale technical training, assigning project managers and technicians to follow up project progress on site, and providing timely technical guidance and repairs for after-sales quality problems. During the construction of Nanjiang Hope Town, the Company arranged commissioners for a field survey. They communicated with the project team about the overall display plan, so as to ensure pre-sale, in-sale and after-sale services.



Runpin engineered stones are used in Nanjiang Hope Town Art Museum

### Strengthening rapid maintenance of cement pipe piles in response to customer demands

### Case study

Pipe piles are the most sensitive to cement quality. According to cement market satisfaction survey data, routine visits and after-sales services, pipe pile customers were are satisfactory about product quality.

In December 2022, Zhongshan Huayu pipe pile customers reported that they needed a batch of PII42.5R cement products with rapid maintenance strength to shorten the autoclaving time and reduce costs. Fengkai Cement rapidly responded to customer needs. In addition to sharing information about cement quality, standard maintenance strength, rapid maintenance strength and respective conditions, it actively undertook tests. The large mill trial production of PII52.5R cement and the small mill trial production of special grinding aids for mixed pipe piles were launched and at the end of the month and samples were mail to the customer. Customer inspection data showed sharp improvement, effectively solving customer's needs.

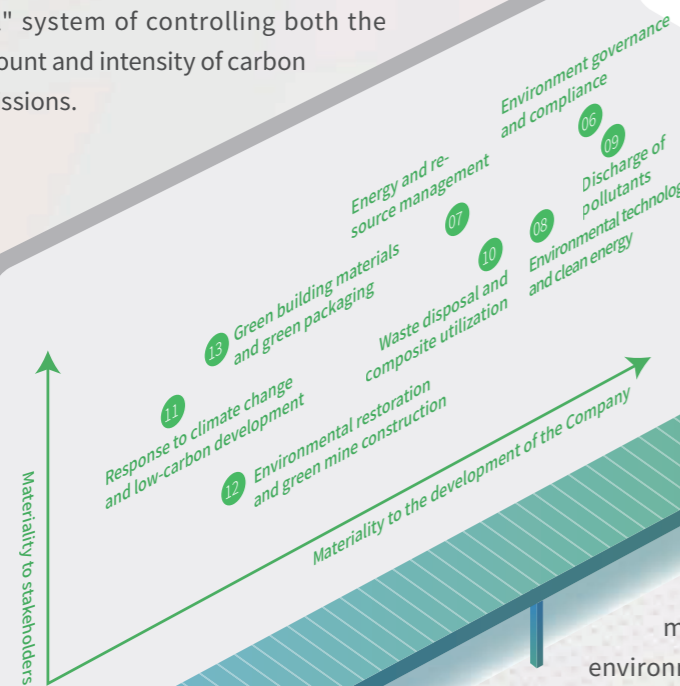


Huayu pipe pile customers are invited to survey Fengkai Cement.

# Respecting Nature with Deep Engagement in Ecological Protection

## The Report to the 20th CPC National Congress highlights:

We must work faster to adjust and improve the industrial structure, the energy mix, and the composition of the transportation sector. We will implement a comprehensive conservation strategy, conserve resources of all types and use them efficiently, and move faster to put in place a system for recycling waste and used materials. Pollutants will be controlled in a better-coordinated way. The environmental infrastructure will be upgraded and living environments in both urban and rural areas will be improved. Major projects for preserving and restoring key ecosystems will be carried out. We will get actively involved in global governance in response to climate change. We will exercise better control over the amount and intensity of energy consumption, particularly of fossil fuels, and transition gradually toward the "dual control" system of controlling both the amount and intensity of carbon emissions.



## CR Cement's responses and deployment:

Highlighting the unity of nature and human, our development plan makes ecology, environmental protection, safety and intensive utilization of resources as the main targets, stressing continuous improving the environmental management system and deepened energy saving and emission reduction, practicing eco-protection, safeguarding the eco-protection red line, actively coping with climate change, promoting green and low-carbon development of the industry, and comprehensively enhancing the ecological power for building a beautiful China.







## "Carbon Peaking and Carbon Neutrality" Goals Help Build a Beautiful Country

Vast and misty rivers, rolling mountains, quiet and beautiful dwellings... The show "the Green Landscape" is becoming a trend in China, interpreting not only the famous Northern Song painting "Thousand Li Landscape of China" but also the green, low-carbon development concept of the modern time. With the introduction of the "carbon peaking and carbon neutrality" goals as a top-down design, "green mountains are gold mountains" has become a general consensus. CR Cement, powered by its increasing consciousness and initiative to this regard, is leaving a strong mark on the magnificent picture of a "beautiful China".

### Deploying the 3C System Committed to Eco-system Practices

Achieving carbon peaking by 2030 and carbon neutrality by 2060 is a major strategic decision made by the state upon careful consideration. Taking the key carbon reduction technology as the starting point, CR Cement put forward the "3C (Carbon)" energy saving and carbon reduction system, that is, low carbon from the source, carbon reduction in the process, carbon removal at the end, aiming to reduce carbon emissions and contribute CR Cement solutions to the "3060" goal.

#### Low carbon technology from the source

Through alternative raw fuels and clean energy, CR Cement reduced the input of traditional fossil energy in production, broadened the scope of energy utilization, and achieved carbon reduction from the source. Centering on the disposal process of municipal solid waste and alternative biomass fuels, and using multiple industrial solid wastes to replace cement raw materials, we developed a set of rotary furnace equipment with independent intellectual property, which allows decomposition furnace to achieve maximum fuel substitution rate of  $\geq 50\%$ , and reduces 130,000 tons of carbon dioxide emission per year for a single production line. Tianyang and Nanning of Guangxi and Midu of Yunnan production plants used their cement kilns to produce alternative fuels from municipal solid waste and urban sludge, saving 85,000 tons of standard coal per year. Longyan of Fujian and Jinsha of Guizhou and other cement production plants used

multiple industrial solid wastes to replace cement raw materials and minimized coal consumption by reducing heat consumption in the production process, saving 120,000 tons of standard coal per year.



Tianyang Cement uses cement kilns to treat municipal solid waste.

#### Carbon reduction technology in the process

CR Cement adopted new generation low energy consumption integrated innovation technologies and equipment to optimize and upgrade existing production lines, in order to reduce system coal consumption and power consumption, thus achieving carbon reduction in the production process. In terms of energy and power-saving technology, we upgraded our cement grinding and powder selection processes, and integrated advanced energy-saving equipment such as magnetic/air suspension fans to reduce system power consumption. As for low energy consumption cement calcination technology, we renovated the preheating and pre-calcining system to achieve high heat exchange efficiency and low resistance, and applied new generation cooler and nano-thermal insulation materials to achieve precise cement kiln control assisted by digital intelligent control and

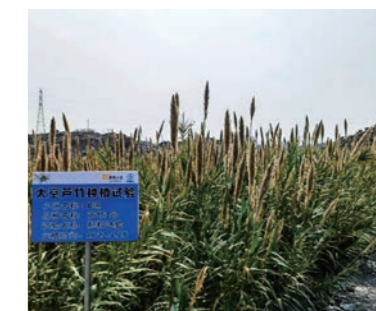
management technologies. CR Cement successively optimized the equipment in Fengkai, Nanning, Guigang, Shangsi, Pingnan and other production plants for the purposes of long-term energy-saving and carbon reduction, helping reduce power consumption by 9.9 million kWh per year and save 20,000 tons of standard coal. As for energy recovery and utilization, we not only used the surplus heat in the production to generate electricity, but also cooperated with China Resources Power in apply new technologies of wind power and PV power generation to realize "zero external power purchase" for clinker production lines.

### Carbon removal at the end technology

CR Cement has launched industrial layout in advance in terms of end-to-end decarbonization technology. It used biological carbon sequestration and carbon dioxide capture, utilization and storage (CCUS) technologies to recycle the carbon dioxide emitted in the production process, so as to make a good technical reserve for the follow-up work of "carbon peaking". In the field of biological carbon sequestration, CR Cement worked with Space Shenzhou Biotechnology Group on joint research, finding that space-bred arundo donax showed strong abilities to absorb and sequester carbon, specifically 14.58 tons of carbon dioxide per mu (1/15 hectare) in a growing season. This plant can be also used as a substitute for fos-

sil energy, saving 7.3 tons of standard coal per mu. The Company immediately carried out adaptive planting experiment in Tianyang Cement to explore its carbon sequestration effect and industrial development possibilities as a sort of biomass energy. As for carbon capture technology, we made targeted equipment R&D and upgrading. We proposed an innovative technology for self-pooling of carbon dioxide with a concentration of more than 90% in cement kilns, and confirmed to build a R&D platform capable of pooling 100,000 tons of carbon dioxide per year in 2023. In terms of carbon dioxide utilization and storage technology, we planned to develop new materials, mainly high carbon fixation concrete

as well as carbon nanotubes and nano-calcium carbonate, through the carbon utilization R&D platform, so as to solve the problems of limited utilization and difficult consumption of captured carbon.



Space-bred arundo donax of Tianyang Cement

### Intensifying Green Product R&D to Lead Low-Carbon Development

CR Cement is well aware that promoting green building materials and developing cement carbon reduction technology products are the key to achieving carbon peaking in the industry. Our R&D team designed the formulation and process of cement preparation, clarified the feasibility of cement preparation in industrial application, and finalized the processes reducing clinker coefficient by  $\geq 10\%$ , reducing carbon emission  $\geq 10\%$ , with physical properties equivalent to ordinary cement, laying a foundation for large-scale application and reduction of carbon emissions. In terms of new type cement grinding aids, we worked with Hunan University, Nanjing University of Technology and China Building Materials Academy on a variety of new type cement grinding aids, which help improve the utilization rate of low-grade industrial wastes and reduce the consumption of clinker, thereby reducing the consumption of raw materials, coal and electricity and promoting the coordinated emission reduction of carbon dioxide. The project "development and application of new type high efficiency cement grinding aids" won the first prize of 2022 Guangxi Science and Technology Progress Award.

Green has become the brightest background for the high-quality development of CR Cement. Firmly practicing the new development and the "green mountains" concepts, we are determined to add charms to the grand picture of beautiful China.





# Environmental Protection · Foster Green Culture

## Perfecting Environmental Management

### Environmental Management System

CR Cement strictly abides by the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Water Pollution, the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Environmental Protection Tax Law of the People's Republic of China and other applicable laws and regulations and industry standards, in order to continuously improve its environmental management system throughout the Company. We attach great importance to environmental expenses, and formulated the eco-protection budget and the fund-use plan. In 2022, the input in environmental protection publicity activities, training courses, online monitoring system upgrading, operation and maintenance totaled RMB507 million. By the end of 2022, the company achieved full coverage of ISO14000 environmental management system certification.

#### Policy systems

The "EHS Management Series" of CR Cement Management Manual was formulated to perfect existing EHS policies and systems, and gave effect to a number of policies, including the Detailed Rules on the Policy for EHS Accountability by Positions (2022 Version), to define environmental management responsibilities and ensure compliance to this regard.

#### Organizational systems

We optimized the EHS functional lines to clarify differentiated management and control requirements at all levels and define that the Headquarters is subject to the "discipline + region" management matrix. EHS organizations at all levels include the EHS Management Committee, the EHS Supervision Department and the EHS Supporting Department to ensure all-level implementation and full coverage of environmental supervision responsibilities.

#### Appraisal systems

We established an excellent operation management evaluation system and set target values to comprehensively evaluate the performance of each basic-level production plant in terms of environmental protection, help them enhance management level and boost the sustainable development of the Company.



Huizhou Cement signs the letter of EHS responsibilities.

### Environment Risk Management

CR Cement continued to improve the level of environmental risk management, normalized the inspection mechanism for environmental compliance, carried out special investigation on safety risks of environmental protection equipment and facilities, identified key issues subject to supervision, and regularly organized basic-level units to identify environmental impact factors, identify and apply laws and regulations, so as to ensure compliance. We issued various policies, guidance interpretations and case studies to guide production plant to identify potential hazards. We also established effective environment risk management mechanism and emergency plans for environment accidents to eliminate risks in a timely manner. In 2022, the Company was found to have zero environment-related violations or penalties.

In addition, CR Cement strictly implemented the Environmental Impact Assessment Law of the People's Republic of China, solicited opinions from stakeholders, and actively communicated with industry experts, regulatory authorities and other organizations on issues such as environmental protection, and well completed environmental impact assessments.

### Environment Warning and Emergency Response

In 2022, in accordance with applicable laws and regulations, the characteristics of the building materials industry and the actual production and management of the company, CR Cement compiled and issued the "Comprehensive Emergency Plan for Unexpected Emergencies (2022 Version)", and required all business divisions and their legal entities and management agencies at all levels to make their own reference to this Plan and ensure their plans are coordinated with those of the governments and competent authorities.



Hongshuihe Cement organizes a training course on environment emergency management.



## Building Green Factories

CR Cement actively promoted green factories and energy saving, clean production and smart manufacturing projects in accordance with the requirements of "intensive plants, harmless raw materials, clean production, waste recycling, and low-carbon energy". It was widely recognized for its remarkable results in safety and environmental protection, energy consumption indicators and information technology. As of the end of 2022, 19 production plants of CR Cement had been included in the registers of national- and/or provincial or autonomous region-level Green Factories.

Moreover, CR Cement launched the Garden Factories campaign in 2021, and issued the Measures for the Evaluation of Garden Factories and its Detailed Rules in 2022. The first batch of Garden Factory production plants reported steady progress based on their plans and annual budgets.



### National-level Green Factories

Tianyang Cement	Nanning Cement
Pingnan Cement	Wuxuan Cement
Heqing Cement	Guigang Cement
Fuchuan Cement	Hongshuihe Cement
Changzhi Cement	Jinsha Cement
Anshun Cement	

### Provincial or Autonomous Region-level Green Factories

Shangsi Cement	Luchuan Cement
Hepu Cement	Longyan Cement
Yanshi Cement	Caoxi Cement
Yongding Cement	Zhangping Cement

## Fostering Green Culture

### Green Office

CR Cement advocates frugality, vigorously promotes OA and ERP office systems and paperless office during its operation. We strengthened the management on office equipment to reduce energy waste, used water-saving appliances to reduce water consumption, and recycled plastic and paper for reuse. We offered commuter buses to employees, and encouraged green commutes such as public transportation, bicycles and walking, in order to increase the standards of green office.

### Green Education

The Company actively launched environmental protection themed activities such as the "World Environment Day", "National Energy-Saving Week" and "National Low Carbon Day" as well as professional training courses to strengthen employees' awareness of energy saving, convey the environmental protection idea to the public, and help create a strong sense of ecological protection.



Midu Cement organizes a plant landscaping activity.



Zhanjiang Cement organizes a used cloth donation.



# Clean · Building Green Homes

## Saving Energy Resources

### Energy Saving

CR Cement has formulated and strictly implemented the Guidelines for EHS Supervision and Management (2022 Version), established a sound energy management system, advanced promotion and application of new technologies, new equipment, new materials and innovation achievements in energy saving and environmental protection, and used digital and intelligent technologies to quantify, evaluate, analyze and optimize resource consumption in the production process of production plants, resulting in continuous improvements.

In 2022, 20 large-scale high-efficiency fans were applied, which can save 34 million kWh and RMB17 million per year. Application of 28 high-efficiency energy-saving air compressors and 45 oil-free screw blowers were advanced, which can save 10.94 million kWh and RMB5.47 million per year. It promoted the iteration and upgrade of firing system by increasing grinding aids of raw materials and coal-saving agents and using alternative fuels to reduce energy consumption.

## Water Resource Consumption

In compliance with its Management Guideline for Prevention and Control of Water Pollution (2021 Version), CR Cement required all production plants to plan the joint water supply and use system in plants according to their water uses, giving priority to reuse water, so as to achieve rational water use and water conservation. It applied to water administrative authorities or river basin management authorities for water intake permits and paid for the right to take water from rivers, lakes or underground. It compiled a complete water pipe network map and water balance map, and established a ledger for water use statistics and analysis.

CR Cement strictly implements the relevant standards such as the "Comprehensive Sewage Discharge Standard and Urban Sewage Recycling - Industrial Water Quality" for wastewater discharge and reuse; collects and disposes the rainwater in the early stage of the plants, and strictly prohibits the sewage from entering the rainwater pipe network, and separates the rain and sewage thoroughly. In areas far away from the production area, such as mines and docks, the Company also collects and disposes domestic sewage, production wastewater and primary rainwater, and discharges or reuse it after reaching the corresponding standards, and separates rain and sewage. It is strictly prohibited to discharge domestic sewage, production wastewater and primary rainwater without treatment.

## Comprehensive Use of Resources

CR Cement adheres to the principle of "saving, intensifying and reducing". By creating a complete solution for solid waste disposal, it built a whole-process resource recycling system. It continuously promoted total resource management, scientific allocation, comprehensive saving and recycling to maximize resource use and minimize environment impact.

### Composite use of waste residues

CR Cement adopts waste-free or reduced-waste technology to comprehensively utilize all non-hazardous wastes such as stripped soil, stones and waste residues to achieve zero discharge of waste residue. For other wastes with reusable value, such as scrap iron and scrap leather belts, manufacturing enterprises contact qualified third-party institutions for recycling and reuse.

During the mining process

In the cement R&D process

CR Cement is dedicated to exploring the application of industrial wastes in cement production. Through optimization of the prescription of raw materials, the project on composite utilization of limestone residue resources was launched to achieve utilization of mining waste resources. By the end of 2022, composite utilization of industrial wastes (including coal gangue, stone residue, de-sulphur gypsum, fly ash and blast furnace slag) reached 18.15 million tons.

## Co-Processing

Backed by its technological strengths and in compliance with the "Pollution Control Standards for Co-Processing of Solid Waste in Cement Kilns", CR Cement comprehensively promoted co-processing projects in the three scopes of municipal solid waste, urban sludge and hazardous industrial waste to create complete solutions to solid waste processing. Compared to traditional landfilling, co-processing of solid wastes by use of cement kilns enables us to substantially save land resources, reduce environmental pollution, and eliminate toxic pollutants such as dioxin by use of heat inside cement kilns, thereby achieving "hazard-free, mass-reducing and recyclable" processing, avoid secondary pollution, improve the living environment for local residents and help urban environment governance.



Hepu Cement puts into operation a municipal solid waste co-processing project.

As of the end of 2022, the Company had 10 co-processing projects. Details are provided below:

Project	Type	Annual disposal capacity (ton)	Status
Binyang, Guangxi	Municipal solid waste	110,000	In operation
Tianyang, Guangxi	Municipal solid waste	180,000	In operation
Fengqing, Yunnan (note 1)	Municipal solid waste	110,000	In operation
Midu, Yunnan	Municipal solid waste	110,000	In operation
Nanning, Guangxi	Urban sludge (note 2)	110,000	In operation
Zhushui, Guangzhou (note 1)	Urban sludge (note 2)	300,000	In operation
Yuebao, Guangzhou (note 1)	Urban sludge (note 2)	560,000	In operation
Changjiang, Hainan	Hazardous industrial waste	30,000	In operation
Shangsi, Guangxi (note 3)	Hazardous industrial waste	100,000	In trial operation
Yanshi, Fujian (note 3)	Hazardous industrial waste	80,000	In operation

Note: 1. Located in the cement production plants of our associates and joint ventures.

2. The Nanning project co-processed wet sludge of 80% moisture content. The Zhushui and Yuebao projects co-processed dry sludge of below 40% moisture content.

3. Co-processing projects jointly developed by CR Cement and environmental protection companies.

In 2022, the Company co-processed a total of:

Municipal solid waste	Urban sludge (80% moisture content)	Hazardous industrial waste
174,117 tons	22,806 tons	30,980 tons

## Residual Heat Utilization

All cement and clinker production plants are equipped with pure low-temperature residual heat recovery generation systems, which recover and convert residual heat from the production process into electrical energy, greatly improving the comprehensive utilization efficiency of energy and having good economic and environmental benefits. In 2022, the Company generated approximately 1,617.3 million kWh of electricity through residual heat recovery.

## Implement Emission Control

It is targeted that, by 2025

All cement production lines are capable to keep their emission concentrations of nitrogen oxides, sulphur dioxide and particulate matters below **100mg/m<sup>3</sup>**, **50mg/m<sup>3</sup>** and **10mg/m<sup>3</sup>** respectively.

### Emission reduction of nitrogen oxides

HeSNCR technology was introduced to several production plants. SNCR project in Nanning of Guangxi and SCR project in Changzhi of Shanxi were completed, laying a solid foundation for reducing nitrogen oxides emission during the Fourteenth Five-year period.

### Emission reduction of sulphur dioxide

As of the end of 2022, CR Cement had completed the construction of 4 sets of wet-process desulphurization systems and 11 sets of composite desulphurization systems to further control sulphur dioxide emission.

## Emission Management

CR Cement improved pollutant discharge management and developed strict control measures for various emissions. It established and improved the emission supervision system, implemented the disclosure of emission information, introduced advanced emission reduction technologies, and ensures that 100% of all cement production plants have obtained permits for pollutant emissions and strictly followed the requirements of pollutant discharge licenses. All cement and clinker production plants are 100% equipped with denitration systems and bag filters to achieve emission levels which are far lower than local and national standards. In addition, the Headquarters has built a platform for environmental pollutant emissions, which timely reminds and urges production plants to verify abnormal data, thus allowing the Headquarters to monitor on forecast pollutant emissions of all production lines in a real-time fashion. In 2022, the Company's intelligent monitoring system realized automatic collection and intelligent reporting of environmental protection data on a minute basis.

## Waste Pollutant Management

In strict compliance with the Emission Standard of Air Pollutants for Cement Industry, CR Cement actively studied ultra-low emissions technology and introduced advanced emission reduction technologies and equipment to effectively improve its waste gas management ability. In 2022, the Company over-fulfilled its pollutant emission reduction targets. The emissions of nitrogen oxides, sulphur dioxide and particulate matters decreased by 6.3%, 28.3% and 39.3% respectively against 2020, and the carbon intensity decreased by 1.2%<sup>1</sup> against 2020. It is targeted that, by 2025, all cement production lines are capable to keep their emission concentrations of nitrogen oxides, sulphur dioxide and particulate matters below 100mg/m<sup>3</sup>, 50mg/m<sup>3</sup> and 10mg/m<sup>3</sup> respectively.

Note: 1. In 2022, due to the decrease in clinker production, the total emissions of nitrogen oxides, sulphur dioxide and particulate matters dropped against 2020. Meanwhile, a majority of production plants used high-sulphur alternative raw materials and high-sulphur coal, as a result, the total sulphur dioxide emission and intensity went up in 2022, despite the lowered energy consumption and carbon emission.

The total emissions of nitrogen oxides, sulphur dioxide and particulate matters from the main discharge outlets of the Company's cement production plants are as below:

Project	2020	2021	2022
Nitrogen oxides (ton)	36,194	30,324	25,947
Sulphur dioxide (ton)	1,646	1,501	1,542
Particulate matters (ton)	1,777	1,381	1,078



Dry fog dust fall at aggregates storage feed opening, Hongshuihe Cement

## Wastes Discharge Management

In strict compliance with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes and the Company's "Management Guideline for Prevention and Control of Water Pollution (2021 Version)", and adhering to the "hazard-free, mass-reducing and recyclable" principle, CR Cement advocated clean production to minimize solid wastes, enhanced prevention and control of environmental pollution by solid wastes, and promoted hazard-free recycling to relieve environmental burden of wastes.



### Regarding hazardous wastes

In line with the "one policy for one factory" principle, the Company formulated detailed management rules to clarify the management scope wastes, developed and filed with local authorities the hazardous wastes management plan, established hazardous wastes management ledger to report wastes' amount, flow, storage and disposal. It adequately recycled the waste oils (such as lubricants) generated in the production process in order to minimize the production of hazardous wastes. Other hazardous wastes such as oil barrels and non-recyclable waste oil are recycled by the original manufacturers or entrusted qualified third-party institutions in strict compliance with the requirements of national laws and regulations. In 2022, hazardous wastes produced amounted to 400 tons, all of which were processed.



### Regarding non-hazardous waste

The Company practices circular economy. Besides purchasing and absorbing large amounts of industrial residues, it takes effective measures to minimize non-hazardous wastes. For example, the dusts collected by bag filters are applied to raw materials, semi-finished products and finished products and plastics and papers are collected from offices to recycle the wastes generated during the production process. In 2022, non-hazardous wastes produced amounted to 77,724 tons, and the processing rate was 83.11%.

## Wastewater Management

CR Cement made the "Management Guideline for Prevention and Control of Water Pollution (2021 Version)", and continued comprehensive waste water management at production plants. Industrial wastewater, domestic wastewater and initial rainwater were treated in line with the disposal principles of classified collection by type, classified treatment by quality and multi-phase recycling. In reference to national first-class emission limits, it also formulated strict procedures and standards for treatment of domestic wastewater. Domestic wastewater was treated with techniques such as pre-treatment and biochemical methods. Industrial wastewater was treated with techniques such as pre-treatment (coagulation-sedimentation) and intensive treatment (sand filtration, membrane processes, etc.), thus eventually achieved separation of rainwater and wastewater in the factory zones. Treated domestic wastewater and industrial wastewater which meet the standards were fully recycled for use, so that achieving zero discharge of wastewater. In 2022, wastewater recycling projects were put into operation in six production plants including Luoding of Guangdong and Shangsi of Guangxi, and the zero wastewater discharge project in Jinsha of Guizhou and the wastewater recycling project in Hepu of Guangxi were launched. Two phases of water control were completed in Pingnan cement mine and one phase completed in Hepu Cement, after which the annual water pumping and discharges dropped 73 million tons and 39.7 million tons respectively.



The zero wastewater discharge project in Luchuan Cement

Following the treatment of Pingnan Cement, the annual reduction of pumping and drainage in the region was **73** million tons and following the treatment of Hepu cement, the annual reduction of pumping and drainage in the region was **39.7** million tons



## Persist in Green Operation

The Company consumed a total of

**11.66** million tons of industrial residue

It purchased

**6.72** million tons of manufactured sand

Accounting for

**81.26%** of total sand consumption

## Green Procurement

CR Cement upholds sustainable development and actively responds to the national call for environmental protection. Its bidding score criteria give weight to suppliers who have passed environmental system management certification, in order to help suppliers raise environment awareness. In 2022, the Company consumed a total of 11.66 million tons of industrial residue. It purchased 6.72 million tons of manufactured sand to replace natural sand (washed-out sand and river sand), accounting for 81.26% of total sand consumption.

## Green Packaging

CR Cement actively promotes low-carbon, environment-friendly and green production as well as green packaging. At the end of March 2022, the Company eliminated seam bottom bags and replaced them with square bottom laminated plastic woven bags. This move effectively solved the dust problem in packing workshops and met increasingly strict state rules on occupational health and environmental protection. As of December 2022, the Company purchased 245 million square bottom laminated plastic woven bags. In addition, the dust filter bags purchased are delivered in recyclable, degradable cardboard cases instead of plastic woven bags.



Square bottom laminated plastic woven bags

## Green Transportation

The company vigorously promoted green transportation, strengthened the management of transport vehicles, and required contracted vehicles to strictly comply with national emission standards and reduce circulation pollution.

## Green Storage

The company actively carried out green storage. It made reasonable planning and scientific layout to select transit ports with wide coverage area and close to demands, so as to save transportation costs. Coal stored in the port are protected with pile baffles from losses and with rain-proof tarpaulin to prevent dust pollution caused by strong wind. In storages, scattered goods are swiftly recovered, and spraying equipment regularly work to minimize dust pollution in the air.

## Paying Attention to Ecological Protection

With the goal of improving ecological environment and scientifically exploiting resources, CR Cement strictly adheres to the principle of "the excavator is responsible for treatment, excavation and treatment side-by-side". It actively carried out the green mine campaign in strict compliance with the Mineral Resources Law of the People's Republic of China, the Environmental Protection Law of the People's Republic of China, the Soil Pollution Prevention and Control Law, the Green Mine Construction Standards for Sand and Gravel Industry, the Green Mine Construction Standards for Cement and Limestone, and other applicable laws, regulations and industry norms. It took all-round measures to prevent and restore vegetation damage, soil erosion and ecological imbalance in the process of mining, so as to minimize the adverse effects on biodiversity and ecological security. 2022 saw an increment of 320,000 m<sup>2</sup> of restored vegetation, and the total restored vegetation area reached 3.16 million m<sup>2</sup>. 25 mines were granted green mines at provincial level or above, of which 10 mines were included into the national list of green mines.

### Before excavation

We made ecological impact assessment mainly on biodiversity, including investigating current situation of local animal and plant resources, mining impact on vegetation and living environment of wildlife, and developed eco-protection and restoration measures covering the entire exploitation process, in order to avoid or mitigate mining impact on eco-system. Early from mining design, we controlled land use and effectively reduced damage to vegetation around the mining area during the mining process.



Mine of Luoding Cement

### During excavation

We took care of eco-protection in strict compliance with the ecological impact assessment report and mining designs. Controlled blasting or non-blasting mining technologies were used in the boundary area to avoid or reduce damage to slope vegetation by rolling stones. Hole-by-hole millisecond blasting technology greatly reduced the impact of seismic wave, shock wave and noise. Dust suppression vehicles were introduced at dust raising points during blasting, shoveling and transportation, so as to keep the mining area and the surrounding environment clean.



Mine of Nanning Cement

# Low Carbon · Leading Green Fashion

## Enhanced Climate Change Analysis

### Climate Change Risk Identification and Responses

Major risks	Policy and legal risks	Market and technical risks	Extreme weather risks	Chronic natural disasters
Details of climate change risks related to CR Cement	With the gradual progress of carbon peaking and carbon neutrality, the state imposes more stringent policies and requirements such as: new production capacities of six key industries, including cement, are prohibited in key areas of air pollution prevention and control; carbon emission trading rules and carbon emission quota prices change over time; higher safety production requirements on non-coal mines; illegal sand mining activities are strictly investigated and punished; ecological constraints on project development increase compliance cost.	By 2025, the proportion of clinker production capacity above energy efficiency benchmark in the cement industry will reach 30%, those below the benchmark will be basically zero, and the comprehensive energy consumption per unit clinker product will be reduced by more than 3%. In the future, carbon emission quota may be gradually reduced and trade prices will gradually rise, which will put forward higher requirements for carbon asset management.	The frequency of extreme weather events such as rainstorm, flood and typhoon increases, which may lead to interruption of operations, or even damage to production and operation facilities, resulting in a decline in the Company's production capacity; and may also lead to secondary disasters, resulting in personal safety, environmental pollution and other incidents, which poses a challenge to the asset safety and production safety of CR Cement.	Rainfall changes and extreme weather fluctuations may lead to an increase in the Company's construction costs, such as an extension of the construction period and damage to equipment; heavy rains and rising sea levels may cause flood damage to factory buildings, equipment and facilities, resulting in asset impairment, increase in maintenance costs, and increase in insurance costs for equipment and personnel; increase or decrease in the average temperature may lead to an increase in the company's operating costs, such as increase in the demand for cooling water for equipment, cooling and heating for office space.
	<ul style="list-style-type: none"> <li>Keep pace with competent authorities to gain knowledge on policies and guidance, identify potential risks, and standardize management to minimize risks;</li> <li>Study, formulate and continuously improve medium-and long-term planning objectives of carbon emissions;</li> <li>Take the lead in smart mines and strengthen safe production and standardized operation of mines and rivers.</li> </ul>	<ul style="list-style-type: none"> <li>Reduce greenhouse gas emissions by upgrading processes and reducing energy consumption, and carry out R&amp;D on alternative clinker, alternative fuels, carbon dioxide capture and low-carbon products to accelerate the transformation of raw materials and fuels and ultra-low emissions;</li> <li>Get ready for the unification of the national cement carbon market in the future;</li> <li>Jointly with China Resources Power and China Resources Learning and Innovation Center, China Resources Institute of Carbon Neutrality was established to carry out scientific R&amp;D planning and investment, strengthen the application of energy storage technology, enhance advanced technology research, and promote the research and application of CCUS technology.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate disaster prevention and control work, investigate potential safety hazards in key areas, prepare materials for disaster prevention and mitigation, formulate contingency plans and organize regular disaster safety drills, and raise staff awareness of prevention and adaptability;</li> <li>Take reasonable measures such as commercial insurance to reduce personal injury and property losses caused by various disasters and accidents;</li> <li>Continue to expand multiple procurement channels, continue to learn the situation of power supply and coal supply in the operation area to ensure supply;</li> <li>Deliveries are made according to the weather conditions. In case of extreme weather, no delivery is made, and the transit warehouse staff are transferred, loading and unloading equipment fixed, and customers informed in advance that transport will be otherwise arrange by the transport company;</li> <li>Assist store customers to store and transfer goods.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage subsidiaries to identify the climate vulnerability of their regions;</li> <li>Optimize energy-saving and environmental protection facilities, improve energy efficiency and water efficiency, and reduce dependence on natural resources;</li> <li>Organize climate change publicity and education for employees.</li> </ul>
Responses				

### Climate Change Opportunities Identification and Strategic Approaches

Climate change opportunities	Strategic approaches
The Chinese government actively promotes green factories and green mines, and gradually raises the environmental protection requirements for the cement industry.	Continue to promote energy saving and emission reduction, improve production and operation efficiency, promote comprehensive utilization of resources, reduce operating costs in the long run, and further consolidate our competitive advantage in the industry.
The Chinese government actively promotes national carbon emission trading market.	Keep pace with the latest national policies, timely carry out carbon asset management, and use market-oriented means to maintain and increase the value of our carbon assets. For details, see "Strengthening Carbon Emission Management" in (III) Low Carbon · Leading Green Fashion.
As the Chinese government promotes green buildings, customers demand for low-carbon cement and green building material products and services will rise.	Plan for R&D on low-carbon cement and high-carbon absorption concrete technology; supply reliable green building materials according to customers' personalized needs; continue to promote the low-carbon certification of cement and clinker products; develop more environment-friendly and energy-saving inorganic engineered stone products.
The Chinese government promotes the development of green buildings, and governments at all levels have launched various policies in favor of prefabricated construction, and encourage the recycling of construction wastes to improve the urban environment.	Promote the development of prefabricated construction projects in an orderly manner, actively promote green building materials, build production lines for autoclaved aerated concrete block panels, and support energy saving and innovation in construction methods in the construction industry. Build a construction waste disposal site in Changjiang of Hainan to help reduce the consumption of natural resources and promote the green development of the industry.




## Strengthening Carbon Emission Management

CR Cement actively responded to climate change, took the lead in identifying climate change risks and opportunities in the industry, and further formulated strategic measures to respond to climate change; it earnestly implemented state decisions and deployments, formulated medium and long-term planning objectives for carbon emissions based on its actual situation, and systematically planned the its carbon peaking, carbon neutrality timetables and roadmaps. Jinsha Cement's "carbon reduction and consumption reduction project series of carbide slag and yellow phosphorus slag ingredients" won the third prize of SASAC "Typical Cases of Carbon Peaking and Carbon Neutrality Actions in 2022". In the future, the Company will assess and review potential business risks and opportunities around climate change issues, and continue to promote carbon emissions trading and carbon asset management. By 2025, the comprehensive energy consumption per unit product of clinker will be reduced by more than 5 kg/t. CI standard coal compared with 2021, and the comprehensive energy consumption per unit product will reach the benchmark level by more than 30%.

In order to achieve the carbon peaking and carbon neutrality goals, the Company took the following approaches to organizational construction, policies and systems and carbon asset management:



Established a carbon emission management leading group headed by CEO to coordinate the carbon emission control work of the Company; determined the EHS Department as the daily management department of carbon emission, organized and coordinated the Strategic Management Department, Operational Management Department, Finance Department and Technological Innovation Department to carry out carbon emission management work from the aspects of strategy, project implementation, carbon asset management and R&D.




Optimized the carbon emission management mode and system, and strengthened the management ability of carbon emission control



Continued to improve the technical ability of employees, and trained professionals through "internal professional research + internal and external professional training".



Released the Guidelines for Carbon Emission Data Management to standardize the filling process and basic data filling rules and improve the policy management system; mastered the carbon emission data of each production plant, improved the quality of carbon emission data through special inspections and other ways, and ensured basic management of carbon emission.



Actively participated in pilot carbon trading markets in Guangdong and Fujian, carried out research on carbon asset management mode, and deeply participated in the construction of the national carbon market in the cement industry, laying a foundation for joining the national carbon market.

### Carbon reduction data

CO<sub>2</sub> emissions (scope I)  
**44,372,400 tons**

(scope II)  
**1,013,800 tons**

Decrease in carbon intensity in 2022: (compared with 2021)  
**1.85%**

Note:  
Scope I includes direct emissions caused by activities under the Company's direct control, including emissions from various fuel combustion, emissions of greenhouse gas such as air conditioning refrigerant, emissions from the manufacturing process, and emissions from the Company's vehicles, etc.  
Scope II includes indirect emissions caused by electricity, heat and steam purchased and used, the production process of which is not directly controlled by the Company but the use of which by the Company causes emissions.

## Develop Clean Energy

Via distributed PV power generation projects, CR Cement deepened energy saving and carbon reduction and continuously improved the level of green and low-carbon development. In 2022, distributed PV power generation projects were put into operation in Fengkai Cement, Luoding Cement and Fuchuan Cement, totaling 28.3 million kWh per year. Projects in Wuxuan Cement and Tianyang Cement were stepping up and are expected to be officially commence operation in 2023. By 2025, the installed capacity of PV power will exceed 150 MW and the annual power generation exceed 150 million kWh.

<b>Target</b>	The installed capacity of PV power will exceed	The annual power generation exceed
By 2025	<b>150<sup>MW</sup></b>	<b>150<sup>million kWh</sup></b>

### Distributed PV power generation project kicks off in CR Cement (Luoding) Co., Ltd. Case study

On May 26, 2022, the commencement of Luoding Cement distributed PV power generation project and the signing of cooperation agreement were held in CR Cement (Luoding) Co., Ltd. The contracted distributed PV power generation project (Phase I) has a capacity of 11.6 MW. Power generated will be used by the company, and surplus electricity will be connected to the grid. After completion, it is estimated that the average annual power generation will be approximately 12 million kWh, saving 4,000 tons of standard coal, and reducing 7,000 tons of carbon dioxide, 30 tons of sulfur dioxide and 30 tons of nitrogen oxides emissions.





# People-oriented Revitalizing to Achieve the Beautiful Dream

## The Report to the 20th CPC National Congress highlights:

We must regard talent as our primary resource, develop a strong workforce for the modernization drive, and fully implement the workforce development strategy. We should respect work, knowledge, talent, and creativity. We will further reform the systems and mechanisms for talent development and ensure we value talented people, nurture them, attract them, and put them to good use.

## CR Cement's responses and deployment:

People-oriented, win-win cooperation. With the human resources strategic planning and talent planning during the 14th Five-Year Plan period as the program, CR Cement regards the maintenance, realization and development of employees' legitimate rights and interests as an important link of its management work, establishes and improves the talent development and promotion mechanism, strives to improve employees' working environment and work safety conditions, cares for employees' life, helps achieve their self-value and promotes growth with employees.

Materiality to stakeholders

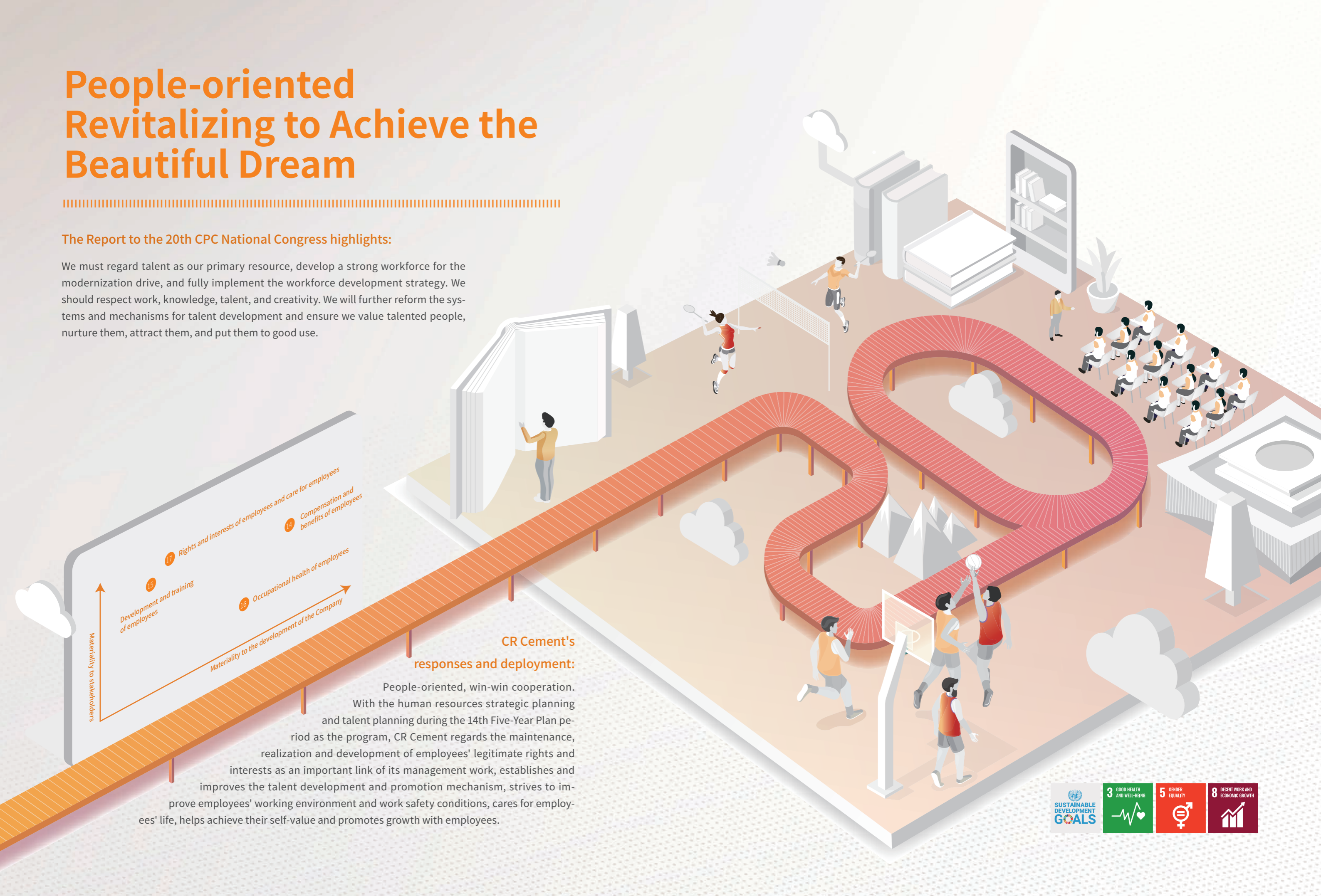
15 Development and training of employees

17 Rights and interests of employees and care for employees

14 Compensation and benefits of employees

16 Occupational health of employees

Materiality to the development of the Company







## Build the Youth Dream from Generation to Generation

“ Youth is the most active and vital force in society. The hopes of a country and the future of a nation lie in the hands of its young generation.

—Speech by General Secretary Xi Jinping at the Ceremony to Mark the Centenary of the May Fourth Movement



In September, in order to match the talent training plan and talent strategic objectives of CR Cement during the 14th Five-Year Plan period, and continuously build a team of "high-quality, young and professional" outstanding young talents, the "Runpeng Training Project", a career guidance plan for outstanding talents of CR Cement, was officially launched. This program, an upgraded version of CR Cement's original three-year training program for college students, aims to establish an overall training system of young talents composed of the future star training camp (1st year), career leadership plan (2nd-3rd year) and career breakthrough plan (4th-5th year), and further improve the company's talent training and reserve work.



The opening ceremony of "Runpeng Training Project", the career guidance program for outstanding young talents of CR Cement

With the Runpeng Project as the carrier, the career guidance program has established a "double mentor" (work mentor and career mentor) mechanism for trainees, which will accompany the trainees to grow in an all-round way during the follow-up training period. Through the training mode of "working with a master", the program will help young employees to quickly complete the identity transformation, improve the enterprise identity, develop structured thinking, and accumulate strong momentum for the high-quality development of CR Cement.



A Relationship Spanning Three Generations

"Instead of focusing on my work, my master always focuses on the little things in my life, which makes an employee like me who has traveled more than 2,000 kilometers to get here feel appreciated." When Li Jianjian just came to Lincang, he often received vocational guidance from Yang Weixiong and life care from Li Yonghong. What's more, Yang Wei-xiong once was the master of Li Yonghong. The passage of time tells their story spanning three generations.



A New Journey of Learning

"One is never too old to learn." Zhou Fulai from Jinjiang Cangyuan in Yunnan Province, always remembered his father's words. He compared the process from classroom learning to field practice to a brand new journey. "Under the inculcation and careful cultivation of Master Wu Guanghua and Tutor Wang Li, I tried to apply the textbook knowledge to work practice step by step, and every time I made great progress and harvest." With the gratitude and the spirit of hard work, Zhou Fulai is committed to carrying forward the spirit of "special passion, innovation, fighting and dedication" of people in the cement industry, and showing the attitude of hard work of young people with practical actions.



Make Hard Work the Defining Feature of Youth

"As a technician, you should be proficient in one skill, know two skills and understand three skills. You are still in the learning stage. Don't aim too high. You must first master a skill, and then learn from other examples." Li Qingfeng's master patiently enlightened him. Li works at Heqing Cement. Due to the gap between book knowledge and actual production, Li Qingfeng felt anxious at the beginning of his entry. His master not only patiently enlightened him, but also made a three-year training plan and the rotation plan for him, so that he could constantly hone himself and improve practical operation ability through participating in projects. In doing so, he could present a colorful youth in the future career life.



A Gift for Growth from the Young to Mature

"Equipment technical management is about everything!" This is from Yang Fei, Liu Yunpeng's master. Liu works with Heqing Cement. When a fault was found in a coal mill hydraulic station, Liu Yunpeng confidently judged that it was caused by the damage of the plunger pump, and after various checks, it was found that the actual cause of the fault was reversed circuit connection. Yang Fei patiently taught Liu, "One must go to understand the actual situation of the scene, instead of only relying on imagination. Most of the technical experience is gradually accumulated from practice. Career choice is only the first step in a career. If you want to succeed, you must be down-to-earth, seek truth from facts, adhere to principles, and never violate scientific principles." After starting work, Yang Fei made a clear training program and plan for Liu Yunpeng, so that he could improve his professional knowledge and skills through practical work.

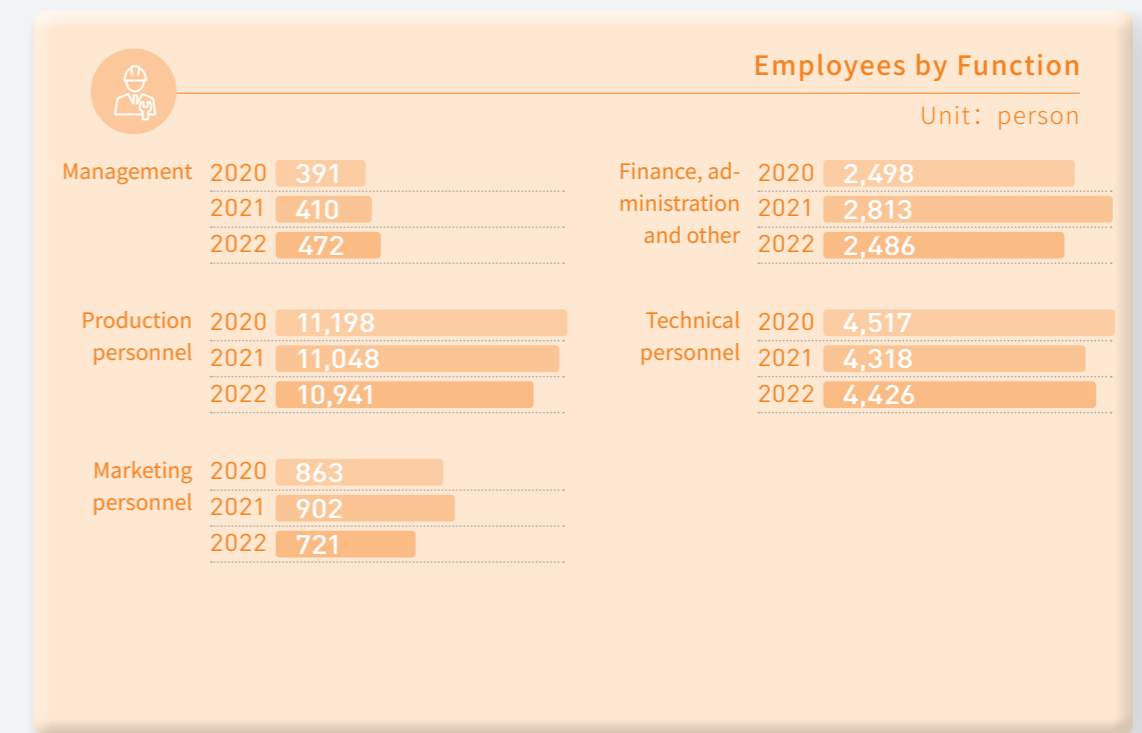
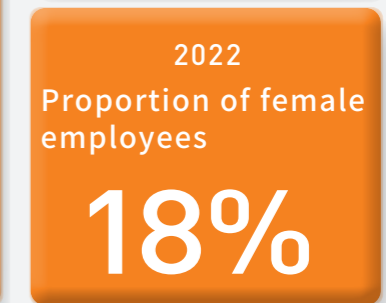
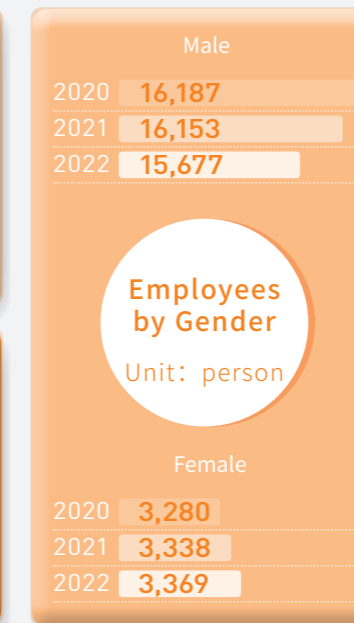
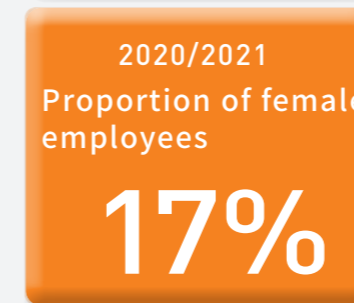
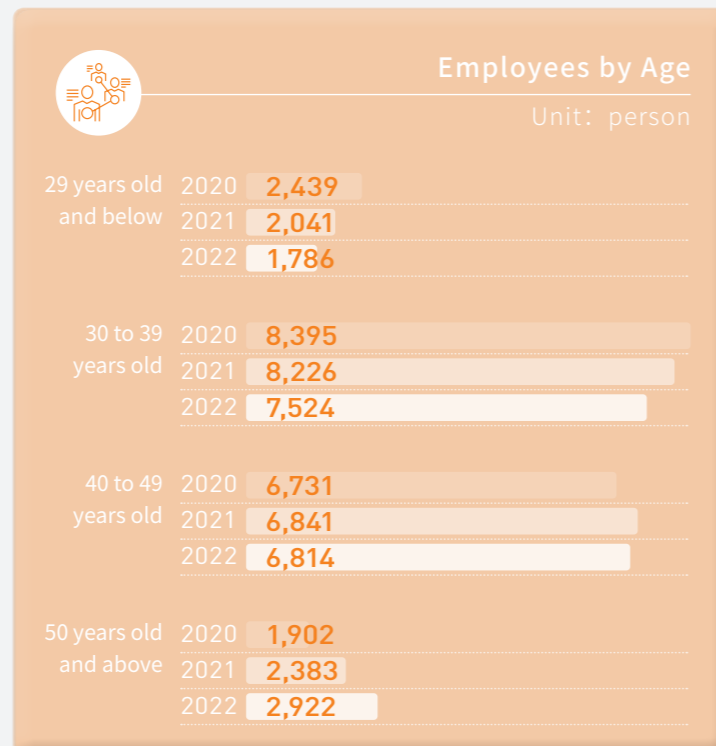
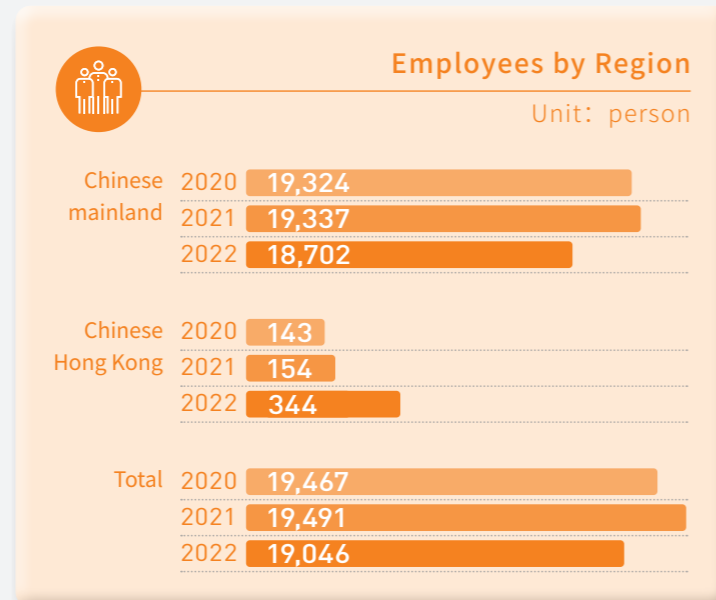
A teacher is one who passes on the truth, imparts knowledge and solves puzzles. The mentors of "Runpeng Training Project" accompany trainees to grow up in an all-round way, imparting skills and experience, conveying care and strength, and carrying forward loyalty and responsibility. Adhering to the original aspiration, trainees are down-to-earth and tireless in learning, leaving the footprint of hard work in CR Cement's history.



# Rights and Interests · Ensure the Protection at Various Levels

## Adhere to the Principles of Employment

CR Cement strictly abides by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors, Provisions on the Special Protection of Juvenile Workers, Provisions on the Prohibition of Using Child Labor and other laws and regulations, adheres to the principle of equal employment, and establishes a fair, just and open selection and recruitment mechanism, provides fair treatment to applicants and employees regardless of the age, gender, region, education background, race, sexual orientation, religious belief, disability, resolutely prohibits the employment of child labor, and strictly prevents forced labor, harassment and abuse. It signs labor contracts with employees according to law, and protects employees' right to rest and vacation according to law, and provides strict management and confidentiality of employee information and privacy through the signing of employee information confidentiality agreement, the addition of management permission control for human resources system process and other ways. Employees must trustfully declare their personal information at the time of entry, and must carry out work in accordance with the relevant regulations of the Company after entry. If they are found to have false documents, false personal information, or false work experience, the Company will deal with them according to the relevant rules and regulations, and in case of serious circumstances or bad impact, they may be subject to accordance with relevant laws and regulations. In terms of personnel flow, we should adhere to the principle that personnel can be demoted as well as promoted and dismissed as well as recruited. According to the development needs, we should legally optimize the talent structure, improve the quality of talent, and meet the needs of talent structure in different development stages.





## Optimize Compensation and Benefits

CR Cement continues to optimize the distribution of total salary, and gives full play to the incentive role of the salary system through additional points in assessment, double incentives, recognition and other ways. According to the Social Insurance Law of the People's Republic of China, Regulations on Paid Annual Leave for Employees, Regulations on Worker's Compensation Insurance and other laws and regulations, CR Cement pays endowment insurance, medical insurance, unemployment insurance, work-related injury insurance, childbirth insurance as well as housing accumulation funds and enterprise annuity for Chinese mainland employees on time and in full and mandatory provident fund for Hong Kong employees, and continues to purchase commercial insurance for employees and their two immediate family members to enhance their ability to withstand risks; adds childcare leave, shortens the waiting time for new employees to enjoy family visit benefits reimbursement, and increases the number of single employees to receive family visit benefits reimbursement; adds the independent authority of business unit remuneration, determines the standard of professional title allowance, middle and night shift allowance and part-time post allowance within certain scope according to the circumstances, and provides benefits for marriage, birthday, childbirth, hospitalization, bereavement of relatives and retirement and departure of post.

## Implement Democratic Management

CR Cement respects employees' freedom of speech, actively listens to their voices, constantly improves consultation and communication mechanisms and channels, and effectively guarantees employees' right to know, right to participate, right to express and right to supervise. CR Cement actively promotes the establishment of the trade union, explore new ideas and methods to strengthen the construction of workers' congress, and strives to ensure unimpeded and diverse channels such as complaint reporting telephone, complaint reporting email and OA forum, so as to effectively guarantee the effective feedback of employees' opinions and suggestions. In October 2022, CR Cement held the first meeting of employee representatives in the year, deliberating and adopting such human resource management systems as "Measures for Talent Management of CR Cement", "Measures for Implementation of Performance Management of All Staff of CR Cement" and "Measures for Salary Management of Staff of CR Cement" to further enhance employees' sense of participation and ownership.



Headquarters meeting of employee representatives



Pingnan Cement meeting of employee representatives



Huizhou Cement sets up an employee fitness room



Jinsha Cement carries out health examination of workers

## Occupational Health Management

CR Cement strictly abides by the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases and the Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution, implements the relevant requirements of the Regulations on Occupational Health Management and the Employee Health Manual of CR Cement, guides and promotes all production plants to actively carry out the management of occupational hazards, and actively promotes the establishment of "healthy enterprises". 16 production plants have passed the municipal "healthy enterprise" evaluation and acceptance, among which Tianyang Cement won the honor of national excellent enterprise for the construction of healthy enterprise; the occupational health project was selected as "Excellent Case of Healthy Enterprise Construction - Enterprise Construction" by National Health Commission of China; occupational disease prevention is implemented, and targeted annual physical examination packages are provided for employees. Heqing Cement, Midu Cement and other production plants have established projects such as "intelligent health station" and "employee healthcare service room" to improve the occupational health protection of employees. In 2022, the Company achieved 100% coverage of ISO45001:2018 occupational health and safety management system.

**16** production plants have passed the municipal "healthy enterprise" evaluation and acceptance

**100%** coverage of ISO45001:2018 occupational health and safety management system

## Development · Accompany Employees to Grow

### Enhance Employee Capabilities

CR Cement implements the talent training plan during the 14th Five-Year Plan period, focuses on the "3+1" talent teams, reviews "1211" talent training plan, straightens out the growth path of various talents, and carries out the special work of talent training step by step. Among them, focusing on key areas, we built the selection mechanism for excellent engineers, established the engineer talent pool, and organized and carried out the first excellent engineer selection, with 109 people entering the pool and 48 people passing the professional evaluation. We launched the Rungeng Project, designed the training program of career guidance plan, selected 48 outstanding young employees, and strengthened the career guidance and follow-up training of young employees born after 1995.

### Training files

Independently developed more than **200** micro courses



Purchased more than **50** courses



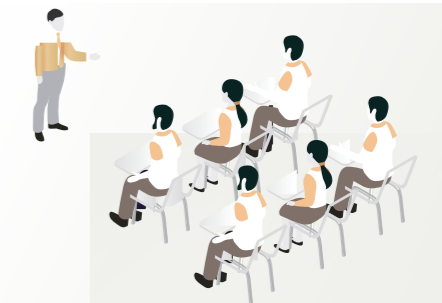
Provided more than **250** new online courses accumulatively



Conducted a total of **25,900** hours of offline training



Approximately **3,030** employees participated in the training



Initiated online professional studies for **110** times



Provided **3,920** online examinations



**18,871** employees participated in the training online



A total online training time of **159,600** hours



The total training time is approximately **185,500** hours



The average training time is approximately **9.5** hours



### Further reading

#### "3+1" talent teams

"3" refers to personnel in operation and management, science and technology, and skills, and "1" refers to Hong Kong talents.

To comprehensively build a 3+1 talent teams, that is, to comprehensively strengthen the operation and management talent team, make efforts to build a team of scientific and technological talents, cultivate and train a skilled talent team, and optimize the Hong Kong talent team.

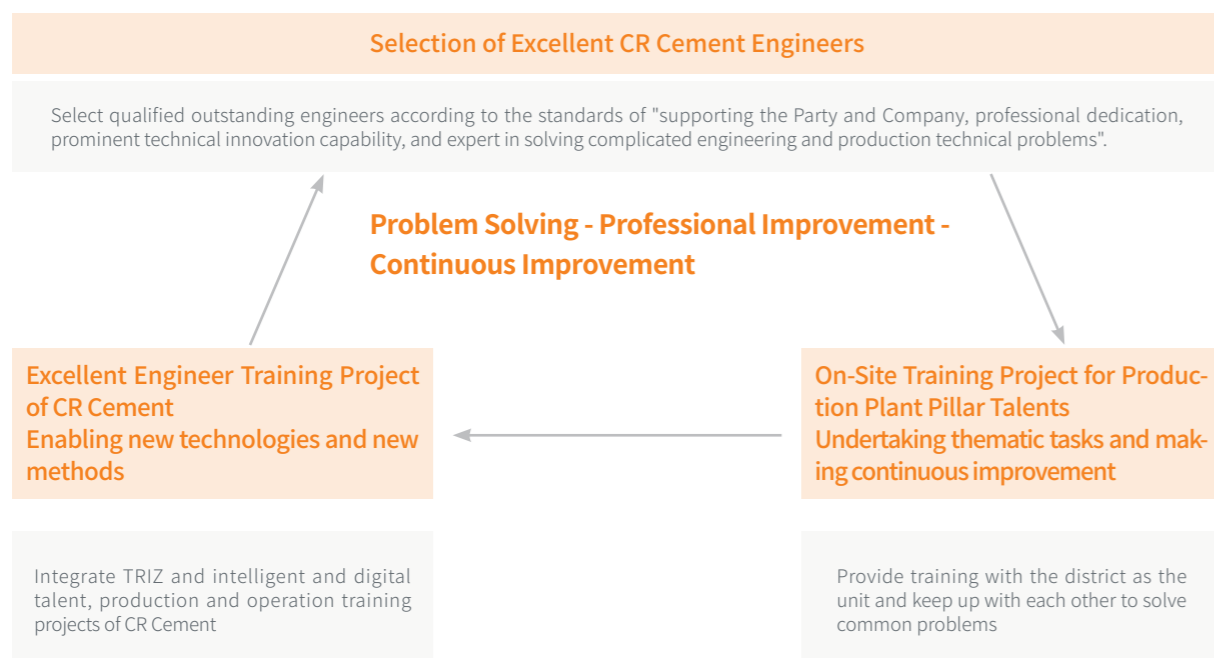
## CR Cement "1211" Talent Training Plan

Training objective	<b>100</b> full-time managers	<b>20</b> industry leading talents	A group of excellent engineers, highly skilled and proficient professionals		
Training plan	<b>Top leader enhancement plan</b> Business and strategic thinking	<b>Leading plan</b> Leading and core talents of CR and cement technology	<b>Excellent engineer training plan (100 persons)</b>	<b>Professional leading plan</b>	<b>Skilled talent training plan</b>
	<b>Production plant reserve training plan</b> Leading elite plan – production plant reserve Young elite plan - reserve cadres	<b>Young backbone plan</b> Youth and backbone technological personnel	<b>Headquarters' leadership—</b> Integrate quality projects such as innovative talents and intelligent and digital talents projects.	Qualified financial personnel Qualified purchasing personnel Qualified auditors Qualified HR personnel Qualified salesmen	Skills competition National technical expert Skilled personnel certification counseling
	<b>Career breakthrough plan</b> Middle-level and reserve cadre		<b>Front line foundation built—</b> Production plant engineer project		
<b>100 outstanding young talents</b>	<b>Career leading plan for young talents</b> Runpeng Project  <b>Future Star Training Camp</b>				

## CR Cement "Runpeng" Project Training Plan

3D quality focus	Firm ideal and conviction	Fostering professional capacity	Cultivating professionalism
	<b>1st Year</b> <b>Centralized training period</b>  Future Star Training Camp Role change  Identify with CR, Change Roles Set an Ambition, Pursue Career Development	<b>2nd-3rd Year</b> <b>Follow-up training period</b>  Career leading plan Thinking development  Stage 1: Courses are designed around "ideal and belief, professional ability and professional spirit", with the core goal of promoting young employees to enhance enterprise identity and develop structured thinking.  Stage 2: Carry out thematic tasks and practice interpersonal relationship training around posts	<b>4th-5th year</b> <b>Career development period</b>  Career breakthrough plan Capacity building  Stage 1: Conduct empowerment at the leadership stage around "ideal and belief, professional ability, and professional spirit"  Stage 2: Learn to master the method of action learning
<b>Five-year growth companionship</b>			

## CR Cement Excellent Engineer Training Path



The South China Seventh Camp of "Future Star" New Employee Training Camp



Build a team of lecturers and promote corporate culture

Case study 

From May 18 to 20, 2022, the CR Cement Corporate Culture Professional Training 2022 and the First Phase of Cultural Lecturer Training was successfully held in the Xiaoxiangwan Campus of China Resources Learning and Innovation Center in Huizhou. The training was conducted through four thematic lectures: "China Resources History and Culture", "Corporate Culture Development and Sharing", "Development Path of CR Cement", and "Lecturer's Teaching Skills". These lectures vividly told participants about the development process of China Resources and CR Cement, carried out the inheritance and development of corporate culture, and improved lecturer's teaching skills and methods. While deepening the development of corporate culture, this training has certified and established the first corporate lecturer team, injecting strong impetus into the further promotion and implementation of corporate culture concept system during the 14th Five-Year Plan period.



2022 CR Cement Fifth Session of High-Level Training



Ji Youhong, Chairman of CR Cement, delivers a speech at the Fifth Session of High-level Training.



Shangsi Cement holds training courses for middle and senior technical managers




Zhangping Cement holds the Mentor Greeting Ceremony of the Runkun Program

## Unimpede Development Channels

CR Cement revised the talent management system of the middle-level and grass-roots staff, and added new management requirements, to further enrich the talent evaluation methods and unimpede channels; continued to implement the key tasks of the "Three-year Action Plan for the Reform of State-owned Enterprises", and do a good job in the building of cadres echelons around "cultivating younger officials", to provide guarantee for the "14th Five-Year Plan" strategy and organizational transformation and development; in line of the needs of organizational optimization, realized the two-level management of "chief and deputy" of organizations at all levels, and carried out the assistant level reform step by step in the order of production plant, business division/region, and department/office of CR Cement; strengthened the training of high-quality officials, and launched the second phase of the leading elite and young elite programs, with 82 participants and 152 trainees in total. A reserve talent pool of outstanding young officials has been established, with 215 people in the pool, accounting for 65% of the officials and exceeding the annual target by 50%. By the end of 2022, the Company has promoted 56 cadres and organized the job rotation for 22 cadres.

CR Cement holds 2021 annual commendation conference

Case study 

On July 11, 2022, CR Cement held the 2021 Annual Commendation Conference in Guangzhou Learning and Innovation Center. With the theme of "Better Future Together", the commendation conference was divided into three chapters of "promoting development", "opening a new situation" and "helping growth". It commended 81 advanced groups and 142 outstanding individuals with 17 awards including outstanding individuals, EHS, sales and innovative achievements, and encouraged all staff of CR Cement to learn from advanced models and continue to carry forward the spirit of "hard work and dedication", so as to create cohesion for "building another CR Cement".



### Comments from a stakeholder



As an employee of CR Cement, I am grateful to the Company, which keeps me growing, gives me a platform to show self-value, and helps me find a new coordinate of life.

—Pan Jinling, an employee of CR Cement





## Care · Improve Happiness

### Launch Staff Activities

CR Cement adheres to the people-oriented concept, dedicates itself to optimizing the working environment and organizational atmosphere of employees, and actively carries out the brand promotion of "My Story with Runfeng", employee birthday parties, festival activities, reading month activities, sports activities, etc., to enrich employees' spare time and effectively improve their happiness and satisfaction.



Yangchun Cement holds friendly basketball match under the theme of "Jointly Celebrate CPC Founding Day to Welcome the 20th CPC National Congress"



Nanning Cement carries out the "Reading for Fun" online reading sharing collection activity

## Care for Employees' Life

CR Cement continues to care for its employees. According to the Law of the People's Republic of China on the Protection of Women's Rights and Interests, the Special Provisions on the Labor Protection of Female Employees and other laws and regulations, the Company strictly implements provisions on the maternity and breastfeeding leave for female employees, and organizes various forms of expert lectures and recreational activities to care for the physical and mental health of female employees. We ensure that female employees have equal compensation and welfare levels and career development opportunities, improve their happiness and sense of gain. The "Labor Union Medical Kit", antigen detection kits, N95 masks and other emergency supplies were provided to ensure the health of employees. In 2022, the "Gratitude Fund" of CR Cement raised a total donation of RMB1.506 million from the Company and its employees to help 31 patients, workers and their immediate family members in need, and granted the relief money of RMB1.501 million.



Lianjiang Cement carries out the "Delivering Coolness to Maintenance Personnel" activity



Jinjiang Cement carries out the fun sports activity

### CR Cement holds the second "Runpin Cup" badminton competition

#### Case study

On December 17, the second "Runpin Cup" badminton competition of CR Cement was successfully held. The competition adopted the mode of "main area + sub-match area". 16 teams and 147 athletes from the holding headquarters and various business units started the competition on the same day in Dongguan, Longyan and Heqing respectively. With the theme of "Runpin Accompanies You", the event aims to implement the requirements of "Healthy China Action" put forward by the 20th CPC National Congress, strengthen the brand publicity of "Runpin", strengthen the health of employees, promote the exchanges and cooperation between the holding departments, business divisions and regions, and stimulate the cadres and employees' entrepreneurial spirit.



The second "Runpin Cup" badminton competition

### Comments from a stakeholder



Thanks for the leadership's care. We always feel the warmth from the headquarters! We will work harder to repay the Company and the organization with better performance.

— Jiang Xuguang, an employee of CR Cement in Hong Kong





# Joining Hands with Partners and Gathering Cohesive Force to Promote Mutual Progress and Win-Win Results

## The report to the 20th CPC National Congress points out:

We will refine the basic policies underpinning the market economy, such as those for property rights protection, admission to market access, fair competition and social credit, in order to improve the business environment. We will consolidate our leading position in industries where we excel, work faster to shore up weaknesses in sectors vital to China's safety development, and improve our capacity for securing the supply of strategic resources. We will promote the integrated and clustered development of strategic emerging industries and cultivate a batch of new growth engines such as new-generation information technology, artificial intelligence, biotechnology, new energy, new materials, high-end equipment, and green environmental protection. We will optimize the positioning and layout of national research institutes, advanced-level research universities and leading high-tech enterprises, so as to boost the overall performance of China's innovation system.

- 22 Supply chain management
- 23 Integrous and compliant procurement
- 24 Facilitation of fair competition
- 25 Strategic cooperation and resource sharing
- 26 Communications and development in the industry

Materiality to stakeholders

**CR Cement's responses and deployment:**

CR Cement adheres to the development concept of mutual benefit and win-win cooperation, strengthens strategic coordination and cooperation between central and local enterprises, and builds a close partnership relation; continues to optimize supply chain management, integrates the concept of sustainable development into a compliant, green and responsible procurement system, and fosters a healthy business environment; gives full play to the leading role of enterprises, takes the initiative to participate in and roll out industry exchanges, and drive the industry for entering a new journey of high-quality development at a faster and steadier pace.







## Co-processing, the Solution to the Garbage Siege

Binyang County, Guangxi faces the Hongshui River in the north and home to the Qingshui River, was originally surrounded by mountains and rivers, with beautiful scenery. However, with the development of economic population, the garbage that cannot be disposed of in time was increasingly piling up, with buzzing flies buzzing and threatening odor. Millions of residents were deeply troubled, arising the Binyang Government's high attention. In order to effectively solve the "pressing concerns" of the residents, Binyang Government signed a domestic waste disposal agreement with CR Cement. Relying on the cement production line of Hongshuihe Cement, a co-processing project with a daily processing capacity of 300 tons of municipal solid waste was built.

At the beginning of the cooperation between the parties, it did not go as smoothly as expected. Instead, it was doubted by local residents. Does burning garbage produce a toxic odor? Will it pollute our water sources? In the face of many doubts, the Binyang Government and CR Cement invited the villagers to visit the project site and explained the operation principle of the project in a way that is easy to

# Government and Enterprise Cooperation Restores "Clear Water and Blue Sky"

In recent years, the urbanization process in China is accelerating, and the consequent garbage production is becoming an important factor affecting ecological environment, which brings great environmental protection pressure to governments at all levels. CR Cement actively responds to the national call, takes co-processing as the starting point, and works with local governments to jointly solve the dilemma of "garbage siege", and firmly embarks on a path of high-quality sustainable development with balanced economy, society and environment.



Panoramic view of Binyang Project in Guangxi

understand. This relieved the concerns of the villagers and successfully won strong support from neighboring villagers.

The Co-Processing Project for Municipal Solid Waste by Cement Kilns is to incinerate domestic waste at high temperature in the cement kiln to completely decompose garbage odor and prevent spillover. The waste residue after co-processing is used as the raw fuel for cement production, and the leachate can be reused as it is up to standard after undergoing "biochemical + membrane advanced treatment". The project co-processed 110,000 tons

of domestic waste annually, saving 0.75 hectares of land for dumping waste annually, and reducing methane gas emissions by 8.76 million m<sup>3</sup>, equivalent to 131,000 tons of carbon dioxide emissions. Under the deep cooperation between the Binyang Government and CR Cement, the domestic garbage around the county has been reduced and "consumed completely", boosting recycling, completely solving the "garbage siege" dilemma of Binyang County, and creating a beautiful urban and rural living environment for local residents.

## Recycling, a Magnificent Transformation of Construction Waste

If the successful experience of Binyang in Guangxi is regarded as the "first victory" of CR Cement, then the exploration of CR Cement opens up new ideas. Through the co-processing model of "cement kiln+construction waste", the construction waste was "recycled by returning to kiln", so that "construction waste" will no longer be garbage, and assist local governments to achieve circular economic models such as turning waste into treasure and turning pollutant into fertilizer.

With the construction of free trade zones and free trade ports in Hainan Province, the provincial government attaches more importance to the disposal of construction waste. In January 2021, the Changjiang County government and Changjiang Cement signed the Franchise Agreement for the Franchise Project of Changjiang Li Autonomous County for the Resourceful Utilization of Construction Waste. Under the strong support and promotion of the superiors and the government, the project officially commenced operation on December 26, 2021.

On the large screen in the central control room of Changjiang Construction Waste Disposal site, the disposal process of construction waste is displayed in real time. Different from the front-end classi-



fication of domestic waste, construction waste directly "transforms" into concrete aggregates, powder, residue, solid waste and other renewable resources after separation, three-level crushing, screening and other steps. Slag and solid waste as raw materials is recycled in the cement kiln; through the concrete mixing system, concrete aggregates are used to produce recycled concrete for engineering construction. "In the whole system, scrap iron and scrap bricks, including slag and light components, are completely recycled," said Zhou Jiangang, Assistant GM of Runfeng Environmental Technology (Changjiang) Co., Ltd.

"Here, construction waste is no longer our concern, but a productive material that creates value. As long as the construction waste arrives, we can dispose of it on the same day, fully meeting the requirements of the whole Changjiang region's construction waste disposal."

Lei Fengsheng, GM of Runfeng Environmental Technology (Changjiang) Co., Ltd., who operates the Changjiang Construction Waste Disposal Site, said that the Changjiang Construction Waste Disposal Site makes construction waste into building materials of different specifications, and the production process is completely enclosed. The whole sewage disposal system also meets the standards, achieving zero discharge and zero pollution.

In the future, CR Cement will continue to adhere to the principle of joint negotiation, joint construction and joint progress together, and deepen cooperation with local governments, to make new breakthroughs in the field of co-processing and make new and greater contributions to high-quality urban development.



Watch the Construction Waste Disposal Process on a Large Screen



# Cooperation · Contribute to Common Development

## Enterprise Cooperation

CR Cement takes the initiative to build a mutually beneficial partnership and actively carries out cooperation and exchanges with outstanding enterprises. In 2022, the Company signed strategic cooperation agreements with numerous leading enterprises in the industry, such as ZTE, Guangdong Borrego, China State Construction Engineering (Hong Kong) Limited, Sany Heavy Industry, China Metallurgical Geology Bureau, Guangzhou Municipal Industry Co., Ltd., Shandong Hefeng, and Baowu Environmental Resources Technology, to carry out in-depth cooperation in the fields of intelligent manufacturing, engineered stones, new materials, and environmental protection and co-processing to promote resources consolidation and achieve win-win development.



CR Cement signs a strategic cooperation agreement with the China Metallurgical Geology Bureau.



CR Cement and China State Construction Engineering (Hong Kong) Limited sign a strategic cooperation agreement.



CR Cement and Shandong Hefeng Group sign an equity cooperation agreement.



CR Cement and Sany Heavy Industry sign a strategic cooperation agreement.



CR Cement and Guangzhou Municipal Industry Co., Ltd. sign a strategic cooperation framework agreement.

### CR Cement and ZTE jointly explore the new scene of 5G

Case study

On March 31, 2022, the signing ceremony of the strategic cooperation agreement between CR Cement and ZTE and the unveiling ceremony of the "5G+ Smart Building Materials" Joint Innovation Laboratory were successfully held at the Shenzhen headquarters of CR Cement. By consolidating resources advantages in their respective fields, the parties will jointly develop 5G modules and terminals based on the building materials industry, realize mass production of lightweight 5G modules and large-scale deployment of industrial 5G terminals, and carry out extensive cooperation in industrial 5G application and other fields.



## Government and Enterprise Cooperation

CR Cement adheres to the principle of joint contribution and shared benefits. Relying on brand value and resources advantages, CR Cement continues to explore new ways, new modes and new mechanisms of government-enterprise cooperation. With the construction of green building materials industrial parks as the starting point, we will promote the development of local industrial chains and create a strong engine for high-quality local economic development. In 2022, we paid friendly visits to and conducted exchanges with local governments of Zhaoqing City, Nanning City and Chuzhou City, received guidance from the Department of Ecology and Environment of Guangdong Province upon their visit, and worked hard to create a new situation of mutual benefit and win-win results. Shenzhen Runfeng New Material Technology Company Limited and Shenzhen Housing and Construction Bureau jointly promote the application of high-performance inorganic products, completed the acceptance of "Research on Key Technologies of Performance Improvement of Cement-Based Engineered Stone", a scientific research project in Shenzhen engineering construction field, in November 2022, and promoted Runpin inorganic engineered stone at the Shenzhen Construction Engineering New Technology Promotion Conference.



CR Cement entered into investment cooperation agreement on new materials industrial park project with Xuyi County

## Industry-academia-research Cooperation

CR Cement actively works with key tertiary institutions and leading enterprises, to promote joint construction of high-quality platform and high-level talent collection, laying a solid foundation for the deep integration of industry, academia and research, corporate technological innovation and breakthroughs in key technologies of projects. In 2022, the Company established Southeast University-CR Cement Joint Research and Development Center, CAST-CR Cement Joint Research and Development Laboratory, and CR Chem-MAT-CR Cement-CR Land Innovation Consortium. In addition, the Company cooperated with Shenzhen University to develop the recognition algorithm of engineered stone prescriptions, and the research project on the preheater CFD simulation technology in cooperation with Wuhan University of Technology has been basically completed.



The Signing Ceremony of Strategic Cooperation Agreement between CR Cement and CAST and the Unveiling Ceremony of the Joint Laboratory (Joint Laboratory of Scientific and Technological Innovation and Industry Incubation)



## Exchanges · Promote Industry Progress

CR Cement actively participates in industry exchanges and seminars to promote industry innovation technologies; takes the lead to fully support and cooperate with the work of industry associations; actively participates in the formulation of industry standards, to lead the standardized and sound development of the industry. In 2022, the Company, together with Oriental Yuhong and other enterprises, drafted the group standard of China Building Materials Federation - "Waterproof and Sound Insulation Coating for Building Floor".



CR Cement visits China Cement Association



CR Cement participates in drafting the National Vocational Skill Standard for Artificial Stone Production and Processing Workers

## Supply Chain · Implement Sunshine Procurement

### Ensure Fair Competition

CR Cement insists on management on the basis of policies, and has developed sound management mechanism in the procurement field, and comprehensively revised and updated 13 procurement management policies, including the Procurement Management Policy of China Resources Cement Holdings Limited (2022 Edition) and the Supplier Management Measures of China Resources Cement Holdings Limited (2022 Edition). It has also optimized the procurement compliance supervision mechanism, and strengthened the inspection and assessment of process in key areas and key phases, to ensure fair competition among suppliers and optimize the business environment. In 2022, the Company conducted a total of 975 sampling checks on panel list projects at headquarters, business divisions, regions and production plants, and put forward more than 150 management suggestions.

#### Advocate open procurement

The procurement management policy is guided by "open procurement" management, to continuously improve the transparency of the Company's procurement. In 2022, the Company's open procurement amount was approximately RMB29 billion, with an open procurement rate of 92.5%.

#### Optimize the informationized procurement system

In July 2022, CR Shouzheng Electronic Tendering and Procurement Platform was fully launched for the procurement business, ahead of schedule target at the end of the year, to strengthen the digital supervision of the procurement tendering process, promote the transformation and upgrading of its self-setup SRM system to digital and smart intelligence, strengthen the supervision of front-end source searching and contract performance process, and enhance the standardization and transparency of the whole procurement process.

#### Strengthen the study of procurement and tendering laws and corporate procurement management policy

The Company promoted the compliance and fairness of procurement plan formulation by propagating the common limitations and behaviors of excluding potential bidders in bidding documents. It organized a series of training, studies and exchange activities on procurement and tendering laws and corporate procurement management policies. In 2022, the Company conducted 24 training sessions in total, covering 1,249 procurement personnel, effectively improving the professional competence and compliance awareness of the procurement team.

In 2022, the Company conducted a total of **975** sampling checks on panel list projects at headquarters, business divisions, regions and production plants

Put forward more than **150** management suggestions

The Company's open procurement amount was approximately **RMB29** billion

With an open procurement rate of **92.5%**

The Company conducted **24** training sessions in total

Covering **1,249** procurement personnel

### CR Cement visits China Building Materials Federation

#### Case study

On February 14, 2022, CR Cement paid a visit to China Building Materials Federation. Focusing on the "carbon peaking and carbon neutrality" goals, CR Cement introduced its work in the research and development of new cements, energy-saving and low-carbon transformation of equipment, intelligent manufacturing, new energy application, carbon capture and other aspects as well as its future development direction and goals from the three aspects of "carbon reduction, carbon capture and sequestration". The two sides exchanged views on industry energy conservation and emission reduction, scientific and technological innovation, intelligent manufacturing, green and low-carbon development, and had in-depth communication on the next step of bilateral cooperation, striving to build industry benchmarks and jointly help the safe and high-quality development of the building materials industry.



Tianyang Cement organizes supplier representatives to conduct integrity discussion and sign the Sunshine Declaration.



## Advocate Integrity Management

CR Cement practices integrious cooperation with suppliers and requires all suppliers to sign the Sunshine Declaration as an annex to procurement contract. It also strengthens the supervision of key phases in key areas, actively carries out probity alert education for partners, and strengthens a strong institutional defense line against corruption and moral degeneration; it compiled the Negative

List of CR Cement Procurement Business, to regulate the conducts of all purchasing parties, ensure lawful and compliant procurement behaviors, and prevent and control procurement risks. In 2022, the Company held a supplier integrity building conference with more than 1,300 participants, including suppliers and purchasers, to build a clean and integrious development atmosphere.

## Optimize Supplier Management

The Company strictly implements the principles of supplier development and management, and realizes the full life-cycle platform management by building a unified supplier relationship management system. In 2022, there were 2,090 new qualified suppliers, and 3,742 suppliers were evaluated.

By the end of 2022, the Company had 12,665 suppliers, of which there were 7,578 in South China, accounting for 59.8%; 1,922 in East China, accounting for 15.2%; 1,323 in North China, accounting for 10.4%, and 1,842 in other regions, accounting for 14.5%.



Implement the "admission first, then cooperation" mechanism, unify admission standards, and select suppliers according to the same standards;

Implement dynamic evaluation mechanism and carry out comprehensive performance evaluation regularly to help improve performance;

Strengthen the handling of suppliers who violate the rules, implement the "joint punishment" mechanism, conduct unified centralized and shared management. Once a supplier is included in the blacklist, it will be completely banned from cooperation with CR Cement within 3 years;

The survival of the fittest mechanism is implemented in the tiered management of suppliers. There are four tiers: excellent, passed, to be rectified and to be eliminated. The Company timely feeds back problems to be rectified to relevant suppliers and provides corresponding assistance, and checks the rectification results within a time limit, and removes the unqualified suppliers from the qualified supplier base;

By setting pre-assessment standards on qualification, supply chain environmental and social risks are prevented in advance; by specifying environmental protection and safety management requirements, suppliers are encouraged to improve their own qualifications, jointly fulfill their social responsibilities and increase the use of environmentally friendly products and services.

## Promote Supplier Growth

The Company is committed to creating a transparent, dynamic and traceable supply chain that continues to drive supplier growth. By promoting direct supply at the source and cooperating directly with construction machinery manufacturers, the manufacturers manage agents, unify service standards,

coordinate product supply, avoid counterfeit and shoddy parts, and improve the service ability of agents. Training activities are organized for suppliers from time to time to convey the concepts of environmental protection, safety, health and other social responsibilities to suppliers.

### Strengthen supplier integrity and jointly build a firm defense line Case study

On September 27, CR Cement held the 2022 Supplier Integrity Construction Conference, with more than 1,300 participants in attendance, including all procurement staff and representatives of suppliers. Chairman Ji Youhong highlights that suppliers are important external resources and an important source of enterprise cost control and risk control. We should strictly abide by the law, enhance the awareness and determination of anti-corruption, do not go through the minefield, do not step on the red line, consciously resist commercial bribery and unfair competition behavior, in order to achieve more tacit and more effective cooperation in longer term, and promote the continuous progress of social and cultural-ethical civilization.



## Maintain Stable Supply Chain

The Company gives full play to the collaborative advantages of the whole industrial chain, actively responds to the uncertain risks such as the increased prices of raw materials, and bravely shoulder the corporate responsibility as the "industrial chain chief". The Company always strives to maintain normal operation, and effectively encourages the upstream and downstream enterprises of "two chains" (supply chain

and demand chain) to resume work and production. The Company plays the role of bridge between suppliers and production plants, and is dedicated to provide excellent service guarantee. We strengthen market research and industry benchmarking, flexibly respond to market shocks, and secure the healthy and stable development of supply chains.



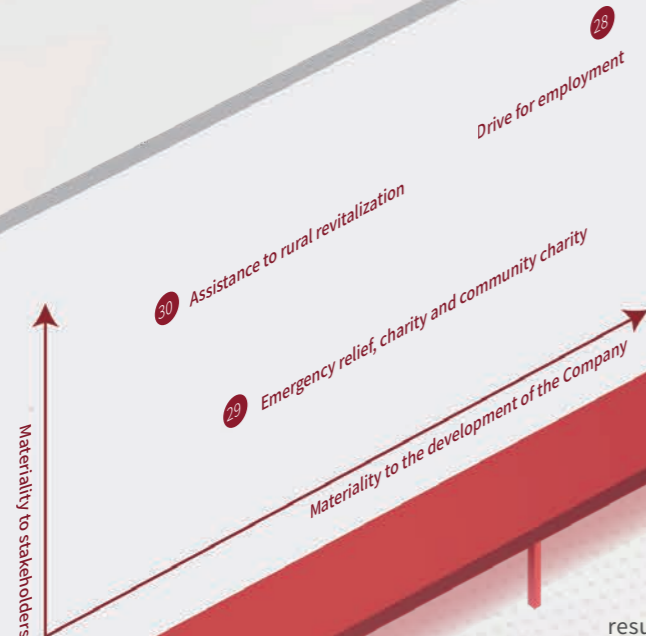
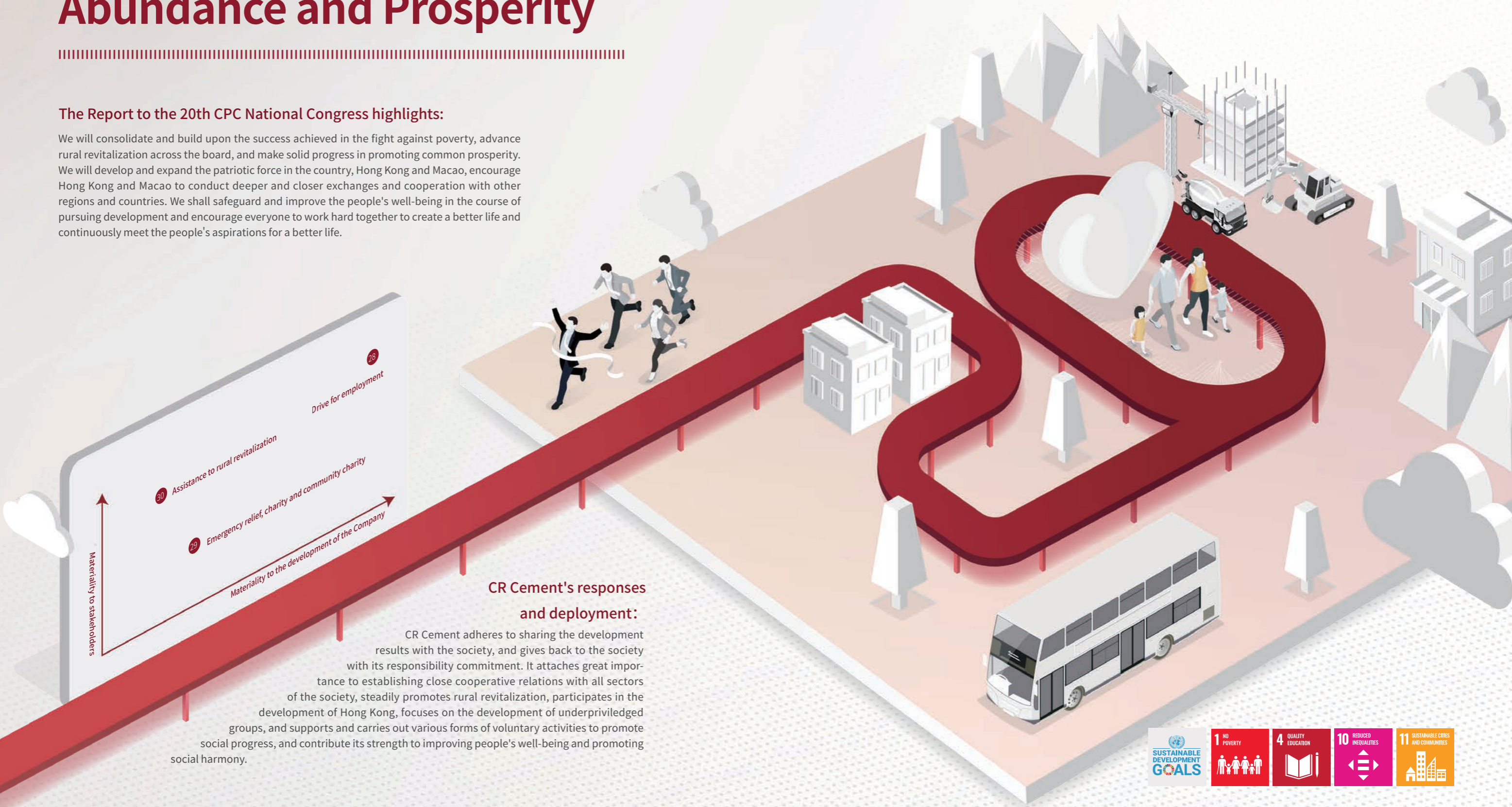
Huizhou Cement's Safety and Environmental Protection Department carries out contractor personnel safety training



# Irrigating the Original Heart with Care and Love for Abundance and Prosperity

## The Report to the 20th CPC National Congress highlights:

We will consolidate and build upon the success achieved in the fight against poverty, advance rural revitalization across the board, and make solid progress in promoting common prosperity. We will develop and expand the patriotic force in the country, Hong Kong and Macao, encourage Hong Kong and Macao to conduct deeper and closer exchanges and cooperation with other regions and countries. We shall safeguard and improve the people's well-being in the course of pursuing development and encourage everyone to work hard together to create a better life and continuously meet the people's aspirations for a better life.



## CR Cement's responses and deployment:

CR Cement adheres to sharing the development results with the society, and gives back to the society with its responsibility commitment. It attaches great importance to establishing close cooperative relations with all sectors of the society, steadily promotes rural revitalization, participates in the development of Hong Kong, focuses on the development of underprivileged groups, and supports and carries out various forms of voluntary activities to promote social progress, and contribute its strength to improving people's well-being and promoting social harmony.







## Blessed with Great Love, the Orchid Tree Becomes Lusher

Since 1986, when CR invested in the first batching plant in Hong Kong - Redland Concrete Ltd., CR Cement has established an inseparable connection with Hong Kong. CR Cement and Hong Kong compatriots have embraced and helped each other, constantly turning love into a trickle and making the Orchid Tree lush.

### Bound by Blood, CR Cement Shows the Character of the SOE by Assisting in the Construction of Fangcang Hospitals

In 2022, after the commencement of construction of Fangcang hospitals in Hong Kong, the stable supply of building materials has become an important factor affecting the construction progress of the hospitals. As an SOE in Hong Kong, CR Cement actively responds to the urgent demand of building materials supply assurance from CSCEC, mobilizes all its resources in Hong Kong and the Chinese mainland, organizes special working teams to discuss the guarantee supply plan, and quickly solves the difficult problems of personnel arrangement, raw materials supply, cargo transportation, night shift supply, etc.



Production of precast concrete components for Penny's Bay Fangcang Hospital

On February 24, the first truck of concrete entered the construction site of the Fangcang hospital at Kai Tak Cruise Terminal. This special supply only took 3 days from the confirmation of supply to the completion of delivery! During the critical period of the construction, the Company overcame numerous difficulties and fully guaranteed the supply, highlighting the essence of SOEs.

In mid-March, CSCEC, the contractor of the Fangcang hospital in Penny's Bay, sent another procurement request to CR Cement to deliver more than 6,000 precast concrete components within a month. CR Cement immediately organized several subordinate units, including Hong Kong Regional Business Division and Zhanjiang Runyang Prefabricated Construction, mobilized production forces, worked overtime to produce high-quality precast concrete components that met Hong Kong market standards, and quickly completed 15 related material certification, customs clearance and acceptance work. Finally, the first batch of 863 precast concrete components arrived at the construction site of the Fangcang hospital in Penny's Bay of Hong Kong on April 16, one day ahead of schedule.



Construction site of the Fangcang hospital at Kai Tak Cruise Terminal

From the start of supply on February 24 to the project completion on June 17, CR Cement supplied 50,800 m<sup>3</sup> of concrete and more than 6,000 precast concrete parts. The Yuen Long Tam Mei, Kai Tak Cruise Terminal and Penny's Bay Fangcang hospitals that the Company participated in the supply together provide nearly 20,000 beds, providing a strong guarantee for the health and safety of Hong Kong residents and contributing to the early completion and operation of the projects.

On June 21, China Resources Cement was awarded the title of "Outstanding Contribution Supplier" by China State Construction Engineering (Hong Kong) Limited, which witnessed the deep friendship between China Resources Cement and Hong Kong compatriots.



CR Cement is awarded the title of "Outstanding Contribution Supplier" by CSCECHK

### In the Same Family, Materials Donation Shows More Profound Friendship

General Secretary Xi Jinping always has high expectations and deep concern for the youth of Hong Kong and has repeatedly stressed the need to care, support and help Hong Kong youths grow up healthily. CR Cement has been developing in Hong Kong for many years and has always paid close attention to the young people in Hong Kong. Upon learning that many poor families of children could not afford the Internet fees required for daily online teaching at home, on February 16, 2022, CR Cement voluntarily donated Internet data cards worth HK\$40,000 to Kit Sam Lam Bing Yim Secondary School in Wong Tai Sin District, Hong Kong, to help the needy students of the school to overcome the difficulties temporarily.



Donate Internet data cards to Kit Sam Lam Bing Yim Secondary School

We are closely linked to our compatriots in Hong Kong. On the new starting point and new journey, CR Cement will be full of deep concern for Hong Kong, always support Hong Kong's development, helps to improve the people's livelihood, enjoys the blossom of the Orchid Tree with Hong Kong compatriots, and looks forward to a bright future together.





## Strategy · Serve the Overall Situation of China

### Support Rural Revitalization

CR Cement has thoroughly implemented the national decision and deployment on the effective connection between the achievements of poverty alleviation and rural revitalization, made continuous scientific planning, and innovated the ways of assistance, helping local agriculture by "purchase instead of donation" and "buying instead of helping". We have actively implemented the talent assistance project "Five-Year Specific Assistance Plan for the Development of Haiyuan County", organized the Company's senior manage-

ment to provide "one-to-one" help for 20 impoverished university students in Haiyuan County, and subsidized with funds of RMB20,000. We have developed local suppliers, introduced a total of 19 coal suppliers in the vicinity of the production plants in Guizhou, Guangdong and Fujian throughout the year, and finally reached cooperation with 16 suppliers, which effectively increased local tax revenue and improved local employment, contributing to promoting rural revitalization.



Nanning Cement helps rural environmental improvement in a volunteer service activity



Shangsi Cement donates 2,100 tons of cement to Shangsi County Government to support rural revitalization



Caoxi Cement is the paired-up assistance business unit of Gutian CR Hope Town. In order to effectively promote the integrated development of the town, help the revitalization of rural talents, and realize the livable ecology of the town, Chi Liya from Caoxi Cement was appointed as the first rotating mayor of the town (the picture shows the field visit).

### Serve Hong Kong's Development

CR Cement seriously and thoroughly studied the spirit of President Xi Jinping's address at the Celebration Meeting for the 25th Anniversary of Hong Kong's Return to the Motherland and the Inaugural Ceremony of the 6th-term HKSAR Government, conducted intensive study of the HKSAR Government's policy address, and seized development opportunities in the Northern Metropolis and Lantau Tomorrow Vision. We made study and assessment in advance and found the correct position, formulated strategic layout, planned concrete production lines, cement silos and logistics distribution channels, which have expanded business capacity in Hong Kong, accelerated the implementation of the development strategy of "reshaping Hong Kong business", and

participated in the economic development of Hong Kong with the awareness of our status as a member of Hong Kong and greater determination and perseverance. We actively put forward suggestions on the development of Hong Kong's building materials industry and the development and employment of Hong Kong's youth, and participated in exchange activities such as the 2022 Policy Address consultation sessions, the Construction Industry Council Luncheon, and the "Construction Innovation Expo 2022", earnestly fulfilling the mission and responsibility of the defender of Hong Kong's prosperity and stability, and playing an active role in spurring the progress of the industry and promoting regional development.

#### CR Cement celebrates the 25th anniversary of Hong Kong's return to the motherland

#### Case study

In order to celebrate the 25th anniversary of the return of Hong Kong to the motherland, CR Cement actively carried out a series of China and Hong Kong patriotic education activities, such as basketball friendly competition, Cantonese recitation competition for staff and their families, photography exhibition for the Company's history, and naming Hong Kong Bus, to arouse the awareness of its Hong Kong staff and Hong Kong people on the motherland and Hong Kong history, and strengthen the sense of cultural identity and belonging.



CR Cement names the bus to celebrate the 25th anniversary of Hong Kong's return to the motherland.



CR Cement Social Club held the Sponsored Publication and Donation Activity of National Security Education Picture Book for Hong Kong Kindergartens, which is of positive significance for promoting innovation in the content and form of education.



## Prevention and Control · Strengthen the Defense Line for Health

CR Cement adheres to the principle of putting life above everything else, thoroughly implements the decision-making and deployment of national, provincial and municipal emergency prevention and control, and highlights the management and control of overseas units and border-related enterprises, strictly implements the disinfection of factory and office areas, implements full disinfection of materials and documents, and increases the frequency of disinfection in high-risk places. The subordinate units actively organized employees to go to the key prevention and control areas to fully support the emergency prevention and control work. Nearly RMB130,000 of emergency supplies were donated to the People's Government of Luohu District, Shenzhen, to ensure the stable supply of construction products and safeguard people's safety and health.

Nearly RMB130,000 of emergency supplies were donated to the People's Government of Luohu District, Shenzhen



Young volunteers of CR Cement help with emergency prevention and control in a community



CR Cement Labor Union orders emergency medicine for each employee in Shenzhen headquarters

## Charity · Practice Community Work

CR Cement actively participates in charitable and public-interest initiatives by using its "Gratitude" Fund platform. It has formulated the "Constitution of Gratitude Fund of China Resources Cement Holdings Limited" and "Enforcement Regulations for Charitable Community Activities of China Resources Cement Holdings Limited", which clearly stipulates the principles and scope of public welfare activities. We vigorously promote the spirit of volunteerism, pay attention to vulnerable groups, organize various volunteer activities, and actively carry out charitable and public interest activities such as blood donation and material donation. In 2022, CR Cement donated approximately HK\$5.92 million in cash and other forms.

CR Cement donated approximately HK\$5.92 million in cash and other forms.



Yongding Cement carries out charitable spring festival activity



Fangchenggang Cement carries out the "Support for the Olympic Winter Games 2022" volunteer service activity

### CR Cement carries out the "Run with Runxin to Show Vitality" cloud run

Case Study

CR Cement continues to promote the brand community business with social value and sustainability. Since 2020, it has held the charitable cloud run of "Run with Runxin to Show Vitality" for three consecutive years at headquarters level. In 2022, 24.08 million steps were completed through offline and online statistics, successfully exchanging for RMB50,000 of charitable funds for study subsidies, and the fund was donated to 13 schools including Hongglang Primary School run by Muzi Town School District, together with printers, computers, schoolbags and other materials donated by regional distributors.



CR Cement launches the third "Run with Runxin to Show Vitality" cloud run



# Sustainable Development Management



## Statement from the Board of Directors

The Company has always assimilated social responsibility into corporate operations and rooted the same in its businesses. We review corporate social responsibility from the strategic perspective, and pay attention to the directions and targets for responsibility fulfillment in the long term. We persistently advance the launch of social responsibility from the point of view of stakeholders such as shareholders, employees, customers, partners and the community including consolidating the safety management of production plants, responding to the "dual carbon" strategy, strengthening environmental protection management, improving measures for energy-saving and emission reduction, implementing health management and promoting co-processing projects to foster the mutual high-quality development of enterprises and the society.

The Board of Directors of the Company is the highest responsible and decision-making body for ESG matters. It is fully responsible for the Company's ESG strategy and reporting. Its functions include monitoring ESG related matters that may affect the Company's business or operations, shareholders and other stakeholders. In order to actively fulfill corporate social responsibility and launch the firm implementation of relevant works on responsibility practice, on 18 March 2022, the Board revised the Terms of Reference for the Risk and Compliance Committee to add its powers and duties for ESG risk management. The Committee shall be responsible for studying, developing, amending and reviewing the primary management systems, policies and practices on risk management of the Company, as well as making recommendations to the Board and monitoring their implementation.

The Company attaches great importance to the potential significant impacts of ESG risks. Based on the external socio-economic macro-environment and its development strategy, the Company regularly carries out materiality assessment and reports the same to the Board of Directors for review. The Board of Directors discusses and determines the Company's ESG risks and opportunities, takes the management and improvement of material issues as the ESG work focus and integrates the same into the Company's overall strategy, and supervises the issues management and results performance. The Board of Directors establishes an ESG target management mechanism, regularly reviews the progress of the targets, and incorporates ESG indicators into the annual performance appraisal system of the senior management, subsidiaries and branches. The Corporate Culture and Social Responsibility Steering Committee, under the CEO's Meetings, is responsible for monitoring the commitment and performance of key ESG issues and reporting to the Board of Directors to ensure the integration of ESG philosophy and corporate strategy.

This Report discloses in detail the progress and results of the 2022 ESG work of CR Cement. The Board of Directors and all the directors of the Company guarantee that the contents of this Report are free from any false records, misleading statements or material omissions, and assume several and joint liability for the authenticity, accuracy and completeness of the contents.





## Governance Mechanism

### Sustainable Development Strategy

CR Cement upholds the corporate mission of "providing high-quality products and services and systematic solutions to the public, promoting green development, and leading digital transformation, thereby building an everlasting business". We adhere to innovation-driven development and follow the "entrepreneurial spirit" and "innovative spirit" to continuously promote social responsibility and ESG work as well high-quality and sustainable development, and help the transformation and upgrading of China's cement industry, strive to achieve the beautiful vision of "becoming a respected world-class building materials company".

### Sustainable Development Policy

Based on the *Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards)*, *Environmental, Social and Governance Reporting Guide and Guidance on Climate Disclosures* of HKEX, *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0)*, *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises of Chinese Academy of Social Sciences (CASS-ESG 5.0)*, *Guidance on Social Responsibility of Cement Enterprise*, *Guide for Corporate Social Responsibility Reporting of Cement Enterprise*, and *Social Responsibility Evaluation Index System of Cement Enterprise of China Cement Association*, and *China Resources Group Management Measures for Social Responsibility*, CR Cement formulated the *Social Responsibility Management Measures of China Resources Cement Holdings Limited*, and issued notices concerning the *Responsibilities and Members of the Corporate Culture and Social Responsibility Steering Committee of China Resources Cement Holdings Limited*, and *Responsibilities of Sustainability Reporting Committee of China Resources Cement Holdings Limited* to clarify the main responsibilities, enhance the awareness of social responsibility and ESG concept, improve the sustainable development management system, strengthen the Company's information disclosure, and promote the Company's sustainable development to move forward in a systematic and standardized direction.

### Sustainable Development Capability

CR Cement actively participates in activities such as internal and external social responsibility training and ESG professional platform communication to get insight of the latest requirements and development trends of social responsibility and ESG work domestically and internationally, and enhance the reporting staff's study of social responsibility and ESG work theory, so as to accurately understand and grasp the reporting standards and methods. In 2022, the Company participated in the formulation of group standards for environmental, social and corporate governance (ESG) reporting guide for building materials enterprises. We actively participated in social responsibility evaluation activities, to further benchmark against excellent enterprises in this regard, understand the current situation, identify deficiencies, make clear the future direction of work, and steadily improve the corporate sustainable development with high standards and strict requirements.

# Communications with Stakeholders

CR Cement actively pays close attention to the aspirations and expectations of stakeholders and continues to explore effective ways of communications with stakeholders, discloses its performance, relevant dynamic information in a timely, accurate and robust manner, and timely disseminates its sustainable development concept and practice of responsibility fulfillment through information release, information submission, special reports, shareholders' meeting, visit and inspection, charitable activities, open days, employee activities, the Company's official website, WeChat official public account and other channels or forms, to enhance stakeholders' understanding and support of the Company. We actively take reasonable opinions and suggestions from internal and external stakeholders, to continuously optimize the Company's operation and management of enterprises, and enhance the Company's comprehensive competitiveness.

Categories of Stakeholders	Government and regulatory agencies	Shareholders and investors	Clients	Employees	Suppliers and partners	Community	Media
Aspirations and Expectations	<ul style="list-style-type: none"> <li>Legal and compliant operation</li> <li>Production safety</li> <li>Occupational health</li> <li>Environmental protection</li> <li>Regional economic development</li> <li>Employment tax</li> </ul>	<ul style="list-style-type: none"> <li>Corporate value</li> <li>Enhance quality and efficiency</li> <li>Standardize corporate governance</li> <li>Sustainable development</li> <li>Risk management and control</li> <li>Compliance information disclosure</li> <li>Protection of the rights and interests of shareholders</li> </ul>	<ul style="list-style-type: none"> <li>Product quality</li> <li>Client service</li> <li>Client rights and interests</li> <li>Innovative development</li> </ul>	<ul style="list-style-type: none"> <li>Employees' rights and interests</li> <li>Compensation and benefits</li> <li>Democratic management</li> <li>Training and development</li> <li>Care for employees</li> <li>Health and safety</li> </ul>	<ul style="list-style-type: none"> <li>Timely performance</li> <li>Fair trade</li> <li>Honesty and integrity</li> <li>Equality and mutual benefit</li> <li>Win-win cooperation</li> <li>Industrial progress and transformation and upgrade</li> </ul>	<ul style="list-style-type: none"> <li>Ecological protection</li> <li>Community development</li> <li>Public interest and charity</li> <li>Local employment and economic development</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with the law</li> <li>Information disclosure</li> <li>Operating performance</li> <li>Sustainable development</li> </ul>
Communications and Responses	<ul style="list-style-type: none"> <li>Strictly abide by national laws and regulations as well as policies</li> <li>Strengthen energy conservation and pollution reduction, and low-carbon development</li> <li>Ensure production safety and strengthen occupational health protection</li> <li>Strengthen cooperation between the SOEs and local enterprises to provide employment opportunities</li> <li>Pay all taxes and fees timely and in full</li> <li>Actively respond to the call of the government, and timely disclose corporate information</li> </ul>	<ul style="list-style-type: none"> <li>Improve corporate management level, performance and asset value</li> <li>Improve quality and efficiency, and enhance the comprehensive corporate competitiveness</li> <li>Standardize the construction of the board of directors and enhance the scientific and efficient governance system</li> <li>Focus on environmental and social impacts, and improve information disclosure and communications</li> <li>Improve the ability to prevent and handle major risks</li> <li>Establish a compliance management system, improve the compliance review mechanism, and carry out compliance training</li> <li>Strengthen investor relations management and information disclosure and protect the legitimate rights and interests of all shareholders</li> </ul>	<ul style="list-style-type: none"> <li>All-round guarantee of product quality</li> <li>Establish and improve customer service system, improve customer feedback and complaint handling mechanism, and carry out customer satisfaction survey</li> <li>Strengthen the construction of customer management system to protect the legitimate rights, interests and information safety of customers</li> <li>Promote product and technological innovation</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to the principle of equal employment and protect the legitimate rights and interests of employees</li> <li>Hold the meetings of employee representatives and establish employee communication platform</li> <li>Develop a competitive compensation and benefits system and improve various benefit packages</li> <li>Carry out employee training and appraisal activities, and improve the incentive and promotion mechanism</li> <li>Carry out employee activities and balance their work and life</li> <li>Pay attention to occupational health and mental health, and care for employees in need</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen supplier and purchase order management, and attach importance to contract performance</li> <li>Carry out regular honesty education and carry out sunshine procurement</li> <li>Strengthen exchanges and cooperation and build cooperation mechanisms and platforms based on equality and mutual benefit</li> <li>Carry out regular meetings, mutual visits and exchanges</li> <li>Participate in industry standard formulation and technical research</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen management of production safety, green production and green office, improve the efficiency of comprehensive utilization of energy and resources, and develop a circular economy</li> <li>Build green mines and green factories, and promote co-processing projects</li> <li>Actively participate in joint community construction</li> <li>Actively participate in rural revitalization, community charity and voluntary activities</li> <li>Support local education and provide employment</li> </ul>	<ul style="list-style-type: none"> <li>Timely and accurate disclosure of corporate information</li> <li>Accept the oversight of the media, smoothen the external publication channels, actively communicate with the media, and make timely responses</li> </ul>



# Identification and Management of Substantive Issues

## Identification of Substantive Issues

Based on the original list of substantive issues, CR Cement has identified and reviewed the substantive issues of this year in multiple dimensions based on national policies, company development, standard guidelines, and peer benchmarking and other aspects, to continuously improve the management model of substantive issues. In 2022, the Company identified a total of 30 substantive issues in six areas of responsibility.



### Policy trend analysis

Closely follow the national macro policy requirements, conduct in-depth study of national, provincial and municipal policies and regulations, analyze the sustainable development trend of the building materials and cement industry based on initiatives and requirements of the building materials and cement industry.



### Development plan of the Company

According to CR Cement's strategic development plan and annual target setting, identify substantive issues of great significance to the company's strategic goals.



### Analysis of disclosure standards

Analyze Appendix 27 Environmental, Social and Governance Reporting Guide of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (HKEX ESG Guide) and HKEX Guidance on Climate Disclosures, Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards), Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) and Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises of Chinese Academy of Social Sciences (CASS-ESG 5.0), Guidance on Social Responsibility of Cement Enterprise, Guide for Corporate Social Responsibility Reporting of Cement Enterprise and Social Responsibility Evaluation Index System of Cement Enterprise of China Cement Association and other standards to grasp the latest management standards and information disclosure requirements of sustainable development issues.

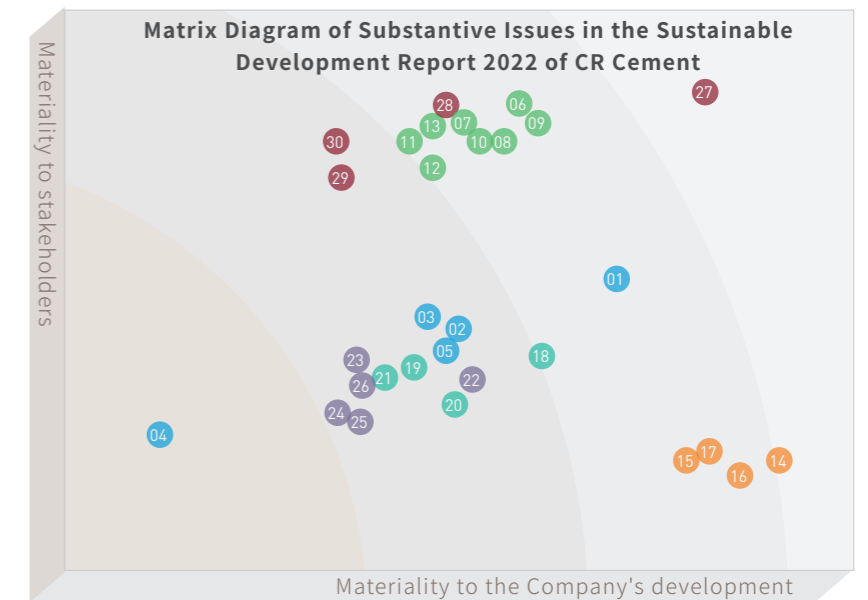


### Peer benchmarking analysis

Benchmark with excellent sustainability reports of domestic and international peers, to identify and determine substantive issues of concern to the building materials and cement industry and means of responding to stakeholders.

## Priority Ranking of Substantive Issues

In 2022, CR Cement prepared survey questionnaire of substantive issues, which were sent through emails, peer-to-peer invitations and official WeChat public account to extensively understand the degree of concerns of internal and external stakeholders on each substantive issue. The Company collected a total of 2,665 valid questionnaires. Based on the survey results, we assessed the priority of substantive issues from the two dimensions of "materiality to the Company's development" and "materiality to stakeholders", and prepared the materiality assessment matrix. Upon the review and recommendation by the Board, the senior management and external consultants on the substantive issues and their prioritization results, the core substantive issues closely related to sustainable development of the Company which highly concerned stakeholders were confirmed as the key disclosure contents in the report.



- |                                 |  |                                |   |
|---------------------------------|--|--------------------------------|---|
| Economic responsibilities       | <ul style="list-style-type: none"> <li>01. Management efficiency, operational results and corporate value</li> <li>02. Anti-corruption and risk management</li> <li>03. Innovative R&amp;D and digital transformation</li> <li>04. Safeguarding the rights and interests of shareholders and investors</li> <li>05. Deepening reform and high-quality development</li> </ul>   | Responsibilities to Employees  | <ul style="list-style-type: none"> <li>14. Compensation and benefits of employees</li> <li>15. Development and training of employees</li> <li>16. Occupational health of employees</li> <li>17. Rights and interests of employees and care for employees</li> </ul>   |
| Responsibilities to Environment | <ul style="list-style-type: none"> <li>06. Environmental governance and compliance</li> <li>07. Energy and resources management</li> <li>08. Environmental technology and clean energy</li> <li>09. Discharge of pollutants</li> <li>10. Waste disposal and composite utilization</li> <li>11. Response to climate change and low-carbon development</li> <li>12. Environmental restoration and green mine construction</li> <li>13. Green building materials and green packaging</li> </ul> | Responsibilities to Customers  | <ul style="list-style-type: none"> <li>18. Product and service quality management</li> <li>19. Product innovation and smart marketing</li> <li>20. Rights, interests and satisfaction of customers</li> <li>21. Protection of intellectual property rights and transformation of achievements in scientific research into practical applications</li> </ul> |
| Responsibilities to Environment |  | Responsibilities to Partners   | <ul style="list-style-type: none"> <li>22. Integrous and compliant procurement</li> <li>23. Supply chain management</li> <li>24. Strategic cooperation and resources sharing</li> <li>25. Communications and development in the industry</li> <li>26. Facilitation of fair competition</li> </ul>   |
| Responsibilities to Environment |  | Responsibilities to the Public | <ul style="list-style-type: none"> <li>27. Production safety</li> <li>28. Drive for employment</li> <li>29. Emergency relief and community charity</li> <li>30. Assistance to rural revitalization</li> </ul>   |



## Honours and Recognition

↑ **"Top 3 in the Building Materials Industry in Terms of China's Corporate Social Responsibility Development Index 2022"** issued by the research group of Blue Book of Corporate Social Responsibility (2022) of the Chinese Academy of Social Sciences.

↑ **"Responsible Product Prize"** of 2022 Responsibility Golden Bull Award.

↑ Selected into the **"SOEs ESG · Pioneer 50 Index"** and **"SOEs ESG · Governance Pioneer 50 Index"** of 426 listed companies held by SOEs in 2022.

↑ Won the **"2022 Hong Kong Stock Best ESG Award"** by Sina Finance

## Future Prospects

We will make further progress in the future based on our existing achievements. 2023 is the year that marks the beginning of the full implementation of the guiding principles laid out at the 20th CPC National Congress and a crucial year for the implementation of the 14th Five-Year Plan. Looking forward, we will focus on the annual management theme "systematic reshaping, high-quality development", maintain strategic focus, adhere to long-term development, build consensus on development, respond to the demands of all stakeholders with high quality and efficiency, and build a higher quality, more sustainable and better future.

### ● Always adhere to in-depth operation and become a pioneer in high quality development

We will continue to improve corporate governance, strengthen social responsibility and ESG management, promote comprehensive and deeper reform, enhance core competitiveness through scientific and technological innovation, build a modern industrial model through business innovation, improve quality, reduce cost and increase efficiency through management innovation, and promote win-win outcomes for stakeholders through service innovation.

### ● Always uphold ecological conservation as a priority and become a pioneer in the low-carbon transformation

We will continue to incorporate carbon peaking and carbon neutrality into the overall development, and integrate the concept of green development into our values and the whole process of production and operation management. We will improve the environmental management system, continue to explore the research and development of environmental protection technologies, actively carry out green production and green services, participate in the environmental protection industry, and coordinate carbon emission management and ecological environmental protection. We will unswervingly promote green transformation and safe carbon reduction, and make green become the unique character of high-quality development.

### ● Always preserve our character and become the contributor of the harmony of all things

We will continue to practice the spirit of practical work, protect the rights and interests of employees, help staff development, and integrate the concept of responsibility into the procurement and supplier management system. We will strive to expand cooperation space, improve cooperation level, enrich cooperation content, actively carry out volunteer service activities, help build a harmonious community and fulfill our responsibilities as a corporate citizen with practical actions, to fulfil our mission and show greater achievements.



# Appendix

## Key Performance Indicators

Statistical Indicator	Unit	2020	2021	2022
Total assets	HK\$ million	68,533	79,149	80,614
Net assets	HK\$ million	50,024	55,641	50,840
Return on total assets	%	18.8	14.3	3.3
Return on net assets	%	19.6	14.6	3.5
Turnover	HK\$ million	40,087	43,963	32,219
Profit before taxation	HK\$ million	11,893	10,291	2,282
Profit for the year	HK\$ million	9,030	7,725	1,863
Profits attributable to owners of the Company	HK\$ million	8,960	7,767	1,936
Equity attributable to owners of the Company	HK\$ million	49,627	54,856	49,233
Earnings before interest and taxation	HK\$ million	12,167	10,523	2,632
Ratio of profit to costs	%	40.0	29.3	7.4
Cost of sales	HK\$ million	24,451	29,840	27,300
Selling and distribution expenses	HK\$ million	1,796	2,064	545
General and administrative expenses	HK\$ million	3,193	2,989	2,814
Finance costs	HK\$ million	274	232	350
Ratio of value conservation and value appreciation of state-owned capital	%	120.3	114.8	103.2
Comprehensive strength ranking of listed Chinese cement companies	-	3	3	4
Number of commenced or concluded corruption lawsuits	-	0	0	0
Total R&D investment	RMB million	41	336	320
Expenditure on industry-academia-research cooperation	RMB '10,000	139	693	5,515
Number of R&D employees	-	40	53	76
Number of international, national or industrial standards contributed	-	2	0	0
Number of new patent licenses	-	42	37	54
Number of patents and patent applications	-	269	360	490
Significant innovation awards	-	0	0	1
Passing rate of product quality	%	100	100	100

Statistical Indicator	Unit	2020	2021	2022
Percentage of total product sold or shipped that is recalled for safety and health reasons	%	0	0	0
Customer satisfaction	%	96.5	97.8	97.6
Handling rate of customers' complaints	%	100	100	100
Number of product and service complaints	-	65	58	54
Number of product and packaging complaints	-	21	12	10
Contract compliance rate	%	91	90	91
Number of strategic cooperation agreements executed	-	9	21	14
Total number of suppliers	-	11,524	10,975	12,665
Number of suppliers reviewed	-	—	—	12,665
Number of suppliers whose cooperation has been suspended due to non-compliance	-	—	—	17
Number of potential suppliers rejected for non-compliance	-	—	—	48
Number of suppliers attending training	-	—	—	746
Total number of employees	-	19,467	19,491	19,046
Number of male employees	-	16,187	16,153	15,677
Number of female employees	-	3,280	3,338	3,369
Proportion of male employees	%	83	83	82
Proportion of female employees	%	17	17	18
Number of employees aged 29 and below	-	2,439	2,041	1,786
Number of employees aged 30 to 39	-	8,395	8,226	7,524
Number of employees aged 40 to 49	-	6,731	6,841	6,814
Number of employees aged 50 and above	-	1,902	2,383	2,922
Number of ethnic employees	-	4,110	4,035	3,734
Number of employees in Mainland China	-	19,324	19,337	18,702
Number of employees in Hong Kong, China	-	143	154	344
Number of employees with disabilities	-	42	39	50
Proportion of female managerial staff	%	11	12	13
Execution rate of employment contracts	%	100	100	100
Social insurance coverage rate	%	100	100	100
Body check coverage rate	%	100	100	100
Number of employees attending health body check	-	19,467	19,491	19,046
Number of occupational disease occurrences	-	1	0	2

Statistical Indicator	Unit	2020	2021	2022
Average number of days of paid annual leave per employee	day	13.9	13.8	13.6
Total investment in staff training	RMB '10,000	654	825	1,192
Average investment in training per employee	RMB	336	423	626
Average training duration per employee	hour	14.5	10.7	9.5
Average training duration for male employees	hour	14.5	10.0	9.8
Average training duration for female employees	hour	14.6	14.0	10.6
Average training duration for the management	hour	40.2	24.7	14.2
Average training duration for finance, administrative and other staff	hour	18.5	17.4	11.3
Average training duration for production staff	hour	7.4	5.6	8.3
Average training duration for technical staff	hour	28.3	17.7	13.2
Average training duration for sale and marketing staff	hour	11.6	10.4	6.6
Staff training coverage rate	%	100	100	100
Training coverage of male employees	%	100	100	100
Training coverage rate of female employees	%	100	100	100
Training coverage rate of the management	%	100	100	100
Training coverage rate of finance, administrative and other staff	%	100	100	100
Training coverage rate of production staff	%	100	100	100
Training coverage rate of technical staff	%	100	100	100
Training coverage rate of sales and marketing staff	%	100	100	100
Employee attrition rate	%	3.0	2.9	2.8
Employee turnover rate	%	5.8	7.0	11.7
Male employee turnover rate	%	5.6	6.8	2.9
Female employee turnover rate	%	6.8	7.8	3.1
Turnover rate of employees aged 29 and below	%	12.7	14	12.8
Turnover rate of employees aged 30 to 39	%	4.6	6.1	2.6
Turnover rate of employees aged 40 to 49	%	3.4	5.0	1.0
Turnover rate of employees aged 50 and above	%	11.2	9.7	1.3
Turnover rate of employees in Mainland Chinese	%	5.7	6.8	2.7
Turnover rate of employees in Hong Kong, China	%	17.3	20.1	14.0

Statistical Indicator	Unit	2020	2021	2022
Investment in production safety	RMB million	152	210	227
Number of specialized safety management personnel	-	200	198	217
Number of licensed safety management personnel	-	1,943	1,254	1,316
Number of registered safety engineers	-	66	78	81
Number of participants in safety training	-	257,902	277,607	271,508
Duration of safety training	'0,000 hours	41.6	46.0	40.7
Safety training coverage rate	%	100	100	100
Number of safety emergency drills	-	1,228	1,333	1,711
Number of participants in emergency drills	-	18,665	19,455	24,721
Number of staff injured at work	-	13	11	14
Number of incidents of general and above levels	-	1	0	1
Fatalities	-	1	0	1
Fatality rate	‰	0.05	0	0.05
Number of days lost due to work injury	day	-	-	6,711
Number of new recruitments	-	789	763	2,148
Taxation	HK\$ million	2,864	2,566	420
Proportion of local procurement	%	62	61	62
Charitable donations	HK\$ million	9.4	6.4	5.9
Total investment in environmental protection	RMB million	441	508	507
Investment in technological upgrade in energy-saving and emission reduction	RMB million	123	147	159
Clean energy usage	kWh	-	-	6,264,603
Consolidated energy consumption	'000 tons of standard coal	7,917	7,190	5,976
Consolidated energy consumption per RMB10,000 output	tons of standard coal per RMB10,000	2.60	2.09	2.40
Consolidated energy consumption per RMB10,000 value addition	tons of standard coal per RMB10,000	5.58	5.27	9.43
Annual energy consumption reduction	tons of standard coal	79,955.87	35,410.47	247,399.80
Electricity consumption	million kWh	6,518	6,017	5,184
Electricity consumption of cement and clinker	million kWh	6,489	5,980	5,156
Electricity consumption of concrete	million kWh	29	37	28
Electricity consumption per ton of cement	kWh	72.2	72.5	71.3



Statistical Indicator	Unit	2020	2021	2022
Electricity consumption per m <sup>3</sup> of concrete	kWh	2.2	2.6	2.8
Coal consumption	'000 tons	9,943	8,918	7,797
Unit coal consumption per ton of clinker	kg	141.3	141.4	138.7
Standard coal consumption per ton of clinker	kg	104.4	103.8	99.5
Water consumption	'000 tons	31,392	30,254	25,281
Water consumption per unit product of cement and clinker	kg per ton of cement produced	346.7	355.8	370.0
Proportion of cement sold in bag	%	33.2	28.9	27.7
Consumption of packaging materials	ton	60,276	50,170	36,000
Consumption intensity of packaging materials	kg per ton of cement packed in bags	2.08	2.19	1.98
Emission of greenhouse gases	'000 tons of carbon dioxide equivalent	59,605	53,404	45,386
Emission intensity of greenhouse gases	tons of carbon dioxide equivalent per ton of clinker produced	0.85	0.85	0.83
Direct emission of greenhouse gases	'0,000 tons	5,824.70	5,220.30	4,437.24
Indirect emission of greenhouse gases	'0,000 tons	135.80	120.10	101.38
Emission of nitrogen oxides	ton	36,194	30,324	25,947
Emission intensity of nitrogen oxides	kg per ton of clinker produced	0.51	0.48	0.47
Average emission concentration of nitrogen oxides	mg/m <sup>3</sup>	221	208	199
Emission of sulphur dioxide	ton	1,646	1,501	1,542
Emission intensity of sulphur dioxide	kg per ton of clinker produced	0.02	0.02	0.03
Average emission concentration of sulphur dioxide	mg/m <sup>3</sup>	10	10	10
Emission of particulate matters	ton	1,777	1,381	1,078
Emission intensity of particulate matters	kg per ton of clinker produced	0.03	0.02	0.02
Average emission concentration of particulate matters	mg/m <sup>3</sup>	9	6	6
Carbon emission reduction	'0,000 tons	-	-	801.80
Wastewater discharge	'0,000 tons	0	0	0
Recycled water consumption	'0,000 tons	-	-	61,409
Non-hazardous waste produced	ton	-	-	77,723.96
Emission intensity of non-hazardous waste	kg per ton of clinker produced	-	-	1.38
Hazardous waste discharge	ton	440	545	347

Statistical Indicator	Unit	2020	2021	2022
Emission intensity of hazardous waste	kg per ton of clinker produced	-	-	0.0062
Waste recycling rate	%	-	-	83.12
Industrial waste utilized	'000 tons	21,010	20,490	18,149
Hazardous industrial waste co-processed	ton	6,100	19,600	30,980
Municipal solid waste co-processed	ton	183,100	207,700	174,117
Urban sludge co-processed (80% moisture content)	ton	52,800	44,800	22,806

## Notes

The scope of statistics of coal consumption includes cement production plants owned by subsidiaries of CR Cement. "Standard for Planning Statistical Management of China Resources Cement Holdings Limited (2022 Edition)" were formulated, and statistical methods of energy consumption data and conversion methods of carbon dioxide equivalent are all implemented in accordance with "The Norm of Energy Consumption Per Unit Product of Cement (GB16780-2021)" and "Test and Calculation Methods of Electricity Efficiency of Cement Production (GBT27977-2011)".

The scope of statistics of emissions of greenhouse gases includes the major discharge outlets of cement production plants owned by subsidiaries of CR Cement. Direct emission of greenhouse gases mainly includes fuel combustion and industrial production processes. Indirect emission of greenhouse gases mainly includes net purchase of electricity. The standards and methods of data calculation are referenced by the "Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Cement Enterprises" issued by the National Development and Reform Commission of China and the "Supplement Data Sheet for Greenhouse Gas Emissions for Cement Enterprises" issued by the Ministry of Ecology and Environment of China. The EHS Department at headquarters collects and consolidates relevant annual data.

The scope of statistics of electricity consumption includes cement production plants, independent cement grinding stations and onshore concrete batching plants owned by subsidiaries of CR Cement. Each production plant counts the electricity purchased externally for production on a monthly basis according to electricity bills, which is collected and consolidated in the Company's own data management system.

The scope of statistics of the number of employees changed in 2021. Relevant data does not include interns which are not replacement hires (i.e., employees who will not be employed or accounted for as headcount after the end of the internship).

The scopes of statistics of emissions of nitrogen oxides, sulphur dioxide and particulate matters include the major discharge outlets of cement production plants owned by subsidiaries of CR Cement. The standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions of pollutants were the "Specifications and Test Procedures for Continuous Emission Monitoring System for SO<sub>2</sub>, NO<sub>x</sub> and Particulate Matter in Flue Gas Emitted from Stationary (HJ76-2017)". A continuous emission monitoring system (CEMS) is installed at each production plant, and the monitoring data is transmitted to the governmental department of environmental protection in a real time manner. The governmental department of environmental protection will review and accept completion of the validity of data from the CEMS equipment, and compare and monitor the accuracy of the system every quarter. Real-time emissions of pollutants in flue gas are monitored through the system. Pollutants emissions are calculated, collected and consolidated into the Company's own data management system. In 2021, the Company had improved the calculation method of overall pollutant emission concentrations, and restated the data in 2020 accordingly.

## Reference Table of Indicators

Topic	Sub-topic	Chinese Corporate Social Responsibility Report Preparation Guide CASS-ESG5.0	Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards)	Environmental, Social and Governance Reporting Guide (HKEX ESG Guide)
Foreword		P1.1/P1.2/P1.3	102-3/102-45/102-46/102-49/102-50/102-52/102-53/102-54	
A Letter to Stakeholders		P2.1/P2.2	102-14/102-15	
About CR Cement	Company Profile	P4.1/P4.2/P4.3	102-1/102-2/102-4/102-6/102-7/102-16	
	Organizational Structure	P4.1	102-18	
	CR Cement in 2022	P4.4		
Building an Everlasting Top-class Enterprise	Operation · Consolidate the Base of Governance	G1.1/G1.2/G1.3/G1.4/G1.5/G1.6/G1.7/G1.8/G1.9/G1.10/G1.11	102-17/102-24/102-30/205-1/205-2/205-3/206-1/419-1	B7/B7.2/B7.3
	Innovation · Empower Transformation	V2.1/V2.2/V2.3/V2.4	404-2	B6.3
	Safety · Guarantee Operational Stability	S3.4/S3.5/S3.6/S3.7/S3.8/S3.9/S3.10/S3.11/S3.12	403-1/403-2	B8/B8.1/B8.2
Striving for Perfection and Shaping the Brand to Create Better Value	Product · Continue to Upgrade	S4.1	102-2/102-6	B6
	Quality · Adhere to First-class Standards	S4.2/S4.4	417-2	B6/B6.4
	Service · Upgrade Customer Experience	S4.3/S4.5/S4.6/S4.7/S4.8	416-1/416-2/418-1	B6.2/B6.5
Respecting Nature with Deep Engagement in Ecological Protection	Environmental Protection · Foster Green Culture	E1.1/E1.2/E1.3/E1.4/E1.5/E1.6/E1.7/E2.14/E2.15	302-1/302-3/302-4/305-7	A1/A2.4/A2.1/A2.2
	Clean · Building Green Homes	E2.6/E2.7/E2.9/E2.11/E2.12/E2.13/E3.1/E3.2/E3.3/E3.4/E3.5/E3.6/E3.7/E3.8/E3.10/E4.1/E4.2/E4.3/V4.4/V4.5	301-1/301-2/301-3/302-4/306-2	A1/A1.3/A1.5/A1.6/A2/A2.3/A2.5/B5.3/B5.4
	Low Carbon · Leading Green Fashion	E2.1/E2.4/E2.5/E5.1/E5.2/E5.3/E5.4/E5.5/E5.6/E5.7/V4.1/V4.2/V4.3	304-2/304-3	A1/A1.2/A1.3/A3/A3.1/A4/A4.1

Topic	Sub-topic	Chinese Corporate Social Responsibility Report Preparation Guide CASS-ESG5.0	Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards)	Environmental, Social and Governance Reporting Guide (HKEX ESG Guide)
People-oriented, Revitalizing to Achieve the Beautiful Dream	Rights and Interests · Ensure the Protection at Various Levels	S1.1/S1.2/S1.4/S1.5/S1.6/S1.7/S1.8/S1.9/S3.1/S3.3	401-1/401-3/403-2/403-4/405-1/406-1/408-1/409-1	B1/B1.1/B2.1/B2.2/B2.3/B4/B4.1
	Development · Accompany Employees to Grow	S2.1/S2.2/S2.3/S2.4	401-1/404-2/404-3	B3
	Care · Improve Happiness	S1.10/S1.11	403-1	B2
Joining Hands with Partners and Gathering Cohesive Force to Promote Mutual Progress and Win-Win Results	Cooperation · Contribute to Common Development	V2.5/V2.6/V2.8	203-1	B5
	Exchanges · Promote Industry Progress	V2.7	102-12/102-13	B5
	Supply Chain · Implement Sunshine Procurement	S5.1/S5.2/S5.3/S5.4/S5.5/S5.6/S5.7	102-16/103-1/103-2/204-1/206-1/308-1/308-2/414-1/414-2	B5/B5.1/B5.2/B5.3/B5.4
Irrigating the Original Heart with Care and Love for Abundance and Prosperity	Strategy · Serve the Overall Situation of China	V1.1/V1.2/V1.3/V1.4/V3.1/V3.2/V3.3	413-1/413-2/203-1	B8/B8.1/B8.2
	Prevention and Control · Strengthen the Defense Line for Health	S3.1/V1.3/V3.4	413-1/413-2	B8/B8.1/B8.2
	Practice Community Work	V3.5/V3.6/V3.7	413-1/413-2	B8/B8.1/B8.2
Sustainable Development Management	Statement from the Board of Directors	G2.1/G2.2/G2.3/G2.4	102-18/102-26/102-27/102-29	
	Governance Structure and Corresponding Responsibilities	G3.1/G3.8	102-18/102-19/102-20/102-26/102-30	
	Governance Mechanism	G3.2/G3.3/G3.4	102-27/102-28/102-29	
	Communications with Stakeholders	G3.6	102-21/102-33/102-40/102-42/102-43/102-44	
	Identification and Management of Substantive Issues	G3.5	102-29/102-34/102-47/103-1	
	Honours and Recognition	G3.11		
Future Prospects		A1		
Appendix	Key Performance Indicators	A2	302-1/302-3/305-1/305-2/305-4/305-7	A1.1/A1.2/A1.3/A1.4/A2.1/A2.2/B1.1/B1.2/B2.1/B2.2/B3.1/B3.2/B6.1/B7.1/B8.2
	Index	A4	102-55	
	Rating Report	A3		
	Organizational Institutions	G3.1		
	Feedback	A5		



## Rating Report

### Rating Report of 2022 Sustainability Report of China Resources Cement Holdings Limited

Commissioned by China Resources Cement Holdings Limited, the Chinese Expert Committee on CSR Report Rating selected experts to form a rating team to rate the 2022 Sustainability Report of China Resources Cement Holdings Limited (hereinafter referred to as the "Report").

#### I. Rating Basis

The Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) of Chinese Academy of Social Sciences and Rating Standards for Corporate Social Responsibility Reports of Chinese Enterprises (2020) of China Expert Committee on CSR Report Rating.

#### II. Rating Process

1. The Rating Team reviewed and confirmed the Confirmation Letter of Process Materials of Corporate Social Responsibility Report and relevant supporting materials submitted by the preparation team of the Report;
2. The Rating Team evaluated on the preparation process and contents disclosed in the Report, and drafted the rating report;
3. The Vice Chairman of China Expert Committee on CSR Report Rating, the Leader of the Rating Team and the Expert of the Rating Team jointly reviewed and signed off the rating report.

#### III. Rating Results Process (★★★★★)

The Chairman of the Board of the Company serves as the President of the Steering Committee of Corporate Culture and Social Responsibility, supervising the overall direction and responsible for the final review of the Report. With a clear positioning in its functional value, the Report is positioned as an important tool for disclosing information regarding responsibility fulfilment, improving social responsibility management, strengthening communications with stakeholders and highlighting corporate brand image. Substantive issues were identified based on national macro policies, international and domestic social responsibility standards, industry benchmarking analysis, the Company's major strategies and surveys on stakeholders. The Report will be released by organizing a special conference, and will be available in electronic and printed formats, in Chinese and English versions, in video form, in simplified version, in long diagram version and other forms of presentations, with excellent performance on process.

#### Substantiveness (★★★★★)

The Report has systematically disclosed key issues facing the industry such as product quality management, product innovation, occupational health management, production

safety, R&D and application of environmental protection technologies and equipment, saving of energy resources, management of hazardous waste, reduction of "three wastes" emissions, and green mines, which are in full and detailed description, with excellent performance on substantiveness.

#### Completeness (★★★★★)

The main contents of the Report systematically discloses 91.55% of the core indicators in the industry from the perspectives of "Building an Everlasting Top-class Enterprise", "Shaping the Brand to Create Better Value", "Deep Engagement in Ecological Protection", "Revitalizing to Achieve the Beautiful Dream", "Gathering Cohesive Force to Promote Mutual Progress and Win-Win Results" and "Irrigating the Original Heart for Abundance and Prosperity", with excellent performance on completeness.

#### Balance (★★★★★)

The Report discloses negative data such as "staff turnover rate", "number of occupational disease occurrences", "number of incidents of general and above levels" and "fatality rate", and briefly describes cases of improving the rapid curing strength of cement pipe piles and solving customers' problems, with excellent performance on balance.

#### Comparability (★★★★★)

The Report discloses the comparative data of 137 key indicators for 3 consecutive years, such as "total assets", "turnover", "number of new patent licenses", "charitable donations", "investment in technological upgrade in energy-saving and emission reduction" and "electricity consumption per ton of cement". Horizontal comparisons such as "fourth place in 2021 in the 'Comprehensive Strength Rankings of Listed Chinese Cement Companies' by the China Cement Association" were carried out, with excellent performance on comparability.

#### Readability (★★★★★)

Based on stakeholder theory, the Report systematically demonstrates the concept, practice and effectiveness of fulfilling responsibilities to stakeholders such as the government, shareholders, customers, the environment, employees, partners and the society with a clear framework structure and highlighted key issues. The section "CR Cement in 2022" in the Report showcases the key practice of the Company's annual performance, responds to the expectations of stakeholders, and demonstrates the Company's leadership in responsibility. The cover design highlights the characteristics of the industry in which the Company is engaged in, integrates the main

business elements, closely echoes the concept of corporate responsibility, and improves the recognition of the Report. The excellent responsibility management practices of the Company are displayed by embedding QR codes, which strengthens the dissemination and communication of the Report. Six stories on responsibility are shared to explain the performance from the perspective of stakeholders, which has excellent performance on readability.

#### Innovation (★★★★☆)

The Report actively and emphatically responds to the United Nations Sustainable Development Goals and the contents of the 20th CPC National Congress, presents the annual performance of the Company and the highlights practices on key issues, illustrating the Report's progress with the times and the Company's leadership in corporate responsibility. The Social Responsibility Report Preparation Committee was adjusted and upgraded to the Sustainability Report Preparation Committee, and the Social Responsibility Report and ESG Report are merged and upgraded to the Sustainability

Report, so as to enhance the systemization of sustainable development work and lead performance in innovation.

#### Overall Rating (★★★★★)

According to the evaluation of the Rating Team, the 2022 Sustainability Report of China Resources Cement Holdings Limited is awarded a "Five Star" as an excellent corporate social responsibility report.



The Sustainability Report of China Resources Cement Holdings Limited has been awarded a five-star rating for five consecutive years

#### IV. Suggestions for Improvement

Strengthen the systematization of social responsibility management and further enhance the innovation of the Report.

Vice Chairman of China Expert Committee on CSR Report Rating

Leader of the Rating Team

Expert of the Rating

Date of issue: April 20, 2023



Scan the code to view the enterprise rating file

## Rating Report

### Rating Report of 2022 Sustainability Report of China Resources Cement Holdings Limited

Commissioned by China Resources Cement Holdings Limited, the Chinese Expert Committee on CSR Report Rating selected experts to form a rating team to rate the 2022 *Sustainability Report of China Resources Cement Holdings Limited* (hereinafter referred to as the "Report").

#### I. Rating Basis

The *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 5.0)* of Chinese Academy of Social Sciences and *Rating Standards for Corporate ESG Reports of Chinese Enterprises (2023)* of China Expert Committee on CSR Report Rating.

#### II. Rating process

1. The Rating Team reviewed and confirmed the *Confirmation Letter of Process and Accessibility Evaluation Materials of Corporate ESG Reports* and relevant supporting materials submitted by the preparation team of the *Report*;
2. The Rating Team evaluated on the preparation process and contents disclosed in the *Report*, and drafted the rating report;
3. The Vice Chairman of China Expert Committee on CSR Report Rating, the Leader of the Rating Team and the Expert of the Rating Team jointly reviewed and signed off the rating report.

#### III. Rating Results

##### Process (★★★★☆)

The Company establishes the report preparation team led by the Party and Mass Work Department to coordinate and specifically organize report preparation. The Board of Directors controls the contents and overall direction of the *Report*, and is responsible for the final review of the *Report*. All information and data included in the *Report* are objective and true upon confirmation by the Board. The *Report* is positioned as an important tool for compliant disclosure of information on responsibility fulfillment, regulating corporate governance, responding to aspirations of the capital market, strengthening communications with stakeholders and improving brand image, with definite functional value positioning. Substantive issues are identified according to national macro policies, domestic and international ESG standards, development strategies of the Company, and stakeholder surveys, with excellent performance on process.

##### Substantiveness (★★★★★)

The *Report* has systematically disclosed key issues facing the industry such as product quality management, product innovation, health and safety of employees, R&D and application of environmental protection technologies and equipment, saving of energy resources, management of hazardous waste,

reduction of "three wastes" emissions, and sustainable supply chain, which are in full and detailed description, with excellent performance on substantiveness.

##### Completeness (★★★★☆)

The main contents of the *Report* systematically discloses 89.55% of the core indicators in the industry from the perspectives of "Building an Everlasting Top-class Enterprise", "Shaping the Brand to Create Better Value", "Deep Engagement in Ecological Protection", "Revitalizing to Achieve the Beautiful Dream", "Gathering Cohesive Force to Promote Mutual Progress and Win-Win Results" and "Irrigating the Original Heart for Abundance and Prosperity", with leading performance on completeness.

##### Balance (★★★★★)

The *Report* discloses negative data such as "staff turnover rate", "number of occupational disease occurrences", "number of incidents of general and above levels" and "fatality rate", and briefly describes cases of improving the rapid curing strength of cement pipe piles and solving customers' problems, with excellent performance on balance.

##### Comparability (★★★★★)

The *Report* discloses the comparative data of 137 key indicators for 3 consecutive years, such as "total assets", "turnover", "number of new patents authorizations", "charitable donations", "investment in technological upgrade in energy-saving and emission reduction" and "electricity consumption per ton of cement". It has highlighted the use of the consistent disclosure statistical methods and explained the statistical methods of core indicators such as "greenhouse gas (CO<sub>2</sub>) emission". Horizontal comparisons such as "fourth place in 2021 in the 'Comprehensive Strength Rankings of Listed Chinese Cement Companies' by the China Cement Association" were carried out, with excellent performance on comparability.

##### Readability (★★★★★)

Based on stakeholder theory, the *Report* systematically demonstrates the concept, practice and effectiveness of fulfilling responsibilities to stakeholders such as the government, shareholders, customers, the environment, employees, partners and the society with a clear framework structure and highlighted key issues. The section "CR Cement in 2022" in the *Report* showcases the key practice of the Company's annual performance, responds to the expectations of stakeholders, and demonstrates the Company's leadership in responsibility. The cover design highlights the characteristics of the industry in which the Company is engaged in, integrates the main

business elements, closely echoes the concept of corporate responsibility, and improves the recognition of the *Report*. The excellent responsibility management practices of the Company are displayed by embedding QR codes, which strengthens the dissemination and communication of the *Report*. Six stories on responsibility are shared to explain the performance from the perspective of stakeholders, which has excellent performance on readability.

##### Accessibility (★★★★★)

The *Report*, released on the same day as the *Annual Report*, is the first sustainability report prepared and issued by CR Cement. It will be published on the Company's official website and the Stock Exchange's website, and promoted through social channels such as official WeChat. The *Report* can be obtained through online search and download, by post, etc. and there will be an offline ceremony for issue of the *Report*, which has excellent performance on accessibility.

##### Overall Rating (★★★★★)

According to the evaluation of the Rating Team, the 2022 *Sustainability Report of China Resources Cement Holdings Limited* is awarded a "Five Star" as an excellent ESG report.



The 2022 Sustainability Report of China Resources Cement Holdings Limited has been awarded the first five-star rating

#### IV. Suggestions for improvement

Strengthen the systematization of social responsibility management:

1. Strengthen the depth of participation of internal and external stakeholders to further enhance the process management of the *Report*;
2. Disclose more industrial core indicators to further enhance the innovation of the *Report*.

Vice Chairman of China Expert Committee on CSR Report Rating

Leader of the Rating Team

Expert of the Rating Team

Date of issue: April 20, 2023



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## Organization Institutions

### Corporate Culture and Social Responsibility Steering Committee:

Director: Ji Youhong

Deputy Director: Jing Shiqing

Excutive Deputy Director: Li Baojun

Members: Huang Ting, Zheng Qinghong, Tan Ying, Li Chuanji, Cai Xiang, Li Wei, Wang Yue, Yin Yue

### Office of Corporate Culture and Social Responsibility Steering Committee:

Director: Shi Mingze

Members: Fu Li, Lu Xiangli, Sun Xue

### Preparation Committee on Sustainability Report:

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Deputy Editors: Fu Li, Sun Xue, Xing Tao, Fung Ka Yee

Members: Huang Dinglong, Ji Xuehui, Zhao Chunwei, Qu Tinghao, Tan Xin, Tan Xinyu, Mayang Mingxi, Pu Chenchen, Wan Mei, Zheng Miaomiao, Liang Chunyan, Zeng Jinxia, Li Xiuwen, Wei Shanshan, Ma Yan, Shi Qing, Chen Yongtai, Shi Jilan, Zhou Wei, Ma Yi, Zhu Lin, Lin Zongliang, Gan Weilan

## Feedback



Dear readers:

Thank you very much for taking your precious time to read the 2022 Sustainability Report of China Resources Cement Holdings Limited. This Report is the first sustainability report. In order to continuously improve the level of report preparation and enhance the capacity of accountability, we are in special need of your comments and suggestions. Please help to complete the relevant questions in the feedback form and return the same to us in the following ways:

Your comments on the report: (Please tick "√" accordingly)

1. Please evaluate the extent to which the report reflects the material economic, social and environmental impacts of CR Cement  Very good  Good  Average  Poor  Do not understand

2. Please evaluate on the responses to and disclosure of issues which concern stakeholders in this report  Very good  Good  Average  Poor  Do not understand

3. Please evaluate the clarity, accuracy and completeness of the information, indicators and data disclosed in the report  Very good  Good  Average  Poor  Do not understand

4. Please comment on the readability of the contents of the report  Very good  Good  Average  Poor  Do not understand

5. Please provide your overall rating of the 2022 Sustainability Report of China Resources Cement Holdings Limited  Very good  Good  Average  Poor  Do not understand

6. Which parts of this report are you most satisfied with?

7. What deficiencies do you find in the report?

8. What other suggestions do you have for our future publications of the corporate sustainability reports?

Your information: Name: \_\_\_\_\_ Company: \_\_\_\_\_  
Job Title: \_\_\_\_\_ Telephone: \_\_\_\_\_  
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