

To Become a Well-respected World-class  
Building Material Technology Company

CR Bldg Materials Tech  
Sustainability Report

2023

# Foreword



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Historical Reports

This is the first sustainability report publicly released by China Resources Cement Holdings Limited after officially changing its name to China Resources Building Materials Technology Holdings Limited ("CR Bldg Materials Tech"). Previously, the Company has published 10 sustainability reports and corporate social responsibility reports. This report follows the principles of materiality, quantitative, balance and consistency. It provides detailed descriptions of CR Bldg Materials Tech's highlighted performance in 2023 regarding sustainability management, economic responsibility, employee responsibility, customer responsibility, environmental responsibility, partner responsibility and public responsibility.



## Reporting Period

The reporting period covered in this report is from January 1, 2023 to December 31, 2023. Any content beyond this period is specified accordingly.

## Terminology

For ease of expression, "CR Bldg Materials Tech", "CR Cement", "the Company" and "we" mentioned in this report all refer to "China Resources Building Materials Technology Holdings Limited and its subsidiaries" collectively.

## Data Description

All data in this report are sourced from CR Bldg Materials Tech's official documents and statistical reports. The 2021 and 2022 consolidated financial statements were audited by Ernst & Young, while the 2023 consolidated financial statement was audited by KPMG. The Company undertakes that there are no misrepresentations, misleading statements or material omissions in this report.

## Preparation Procedures

This report was prepared with reference to the abovementioned reference standards through industry benchmarking, questionnaire surveys, information collection, information review, report preparation and management review to ensure the completeness, authenticity and balance of the contents in this report.

## Accessing to the Report

Electronic versions, in both Chinese and English (in case of any discrepancies, the Chinese version shall prevail), are available for download from the Company's official website.

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## Basis of Reference

Global Reporting Initiative (GRI) 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/T 36001-2015  
Appendix C2 Environmental, Social and Governance Reporting Guide of the Rules Governing the Listing of Securities on 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-CSR 4.0) of Chinese Academy of Social Sciences  
Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 5.0) of Chinese Academy of Social Sciences  
Reference Index System for ESG Reports of Central Enterprises Controlled Listed Companies  
Corporate Guidance on Social Responsibility of Cement Enterprises and Guide for Corporate Social Responsibility Reporting of Cement Enterprises of China Cement Association  
Social Responsibility Evaluation Index System of Cement Enterprises  
Guidelines for ESG Reports of Building Materials Enterprises  
China Resources Group Management Measures for Social Responsibility  
China Resources Group "1+N" Social Responsibility Index System Management Handbook

## Reporting Principles

**Materiality:** By conducting a material issue assessment, the impacts of sustainability-related issues on different stakeholders are identified, thus CR Bldg Materials Tech's material sustainability topics are determined and reported with key responses and disclosures are provided for topics with higher materiality.

**Quantitative:** Where feasible, key performance indicators ("KPIs") for sustainable development are presented in a measurable manner along with consecutive three-year vertical comparisons. The KPIs data in this report are sourced from statistics of relevant departments, and the calculation methods of quantitative KPI are disclosed in this report.

**Balance:** This report objectively reflects facts by disclosing both positive and negative indicators to present CR Bldg Materials Tech's performance in sustainable development. Meanwhile, the Board of Directors is responsible for reviewing this report to ensure that both the positive and negative indicators truly reflect the sustainable development status of the Company.

**Consistency:** Unless otherwise specified, this report adopts consistent statistical and disclosure methods as previous reports to ensure the sustainable development-related data of this reporting period are comparable to the historical data and future data. Any changes to indicator calculation methodologies will be noted and explained in the report.

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# A Letter to Stakeholders

## Dear Stakeholders,

As times change and new chapters unfold, on the occasion of the 20th anniversary of CR Cement's establishment, we have officially changed our name to "CR Bldg Materials Tech". Guided by the goal of seizing "first-mover advantage in technological innovation" to "capture advantages and lead the future", we are writing a new chapter of the story around our new positioning as a "building materials company with technological prowess". The CR Bldg Materials Tech 2023 Sustainability Report meets you with this new name as scheduled.

2023 was the opening year for comprehensively implementing the guiding principles of the 20th National Congress. We persisted in making the study and implementation of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era the prominent theme and sustained main line for the year's work. Closely centered on the annual management theme of "systematic reshaping for high-quality development", we pushed forward with the mid-term review of the 14th Five-Year Plan strategy, accelerated transformation and innovation, and continued exploring new paths for high-quality development. Guided by the "four reshapings", we conducted action learning and research discussions, focused on tackling the "ten battles that must be won", and clarified the development direction for the second half of the 14th Five-Year Plan period as "waging and winning five major campaigns, solidly pushing forward nine measures, underpinned by five guarantees" focusing on reflection and review issues.

In 2023, we proactively broke new ground and innovated in the face of accelerated new rounds of scientific and technological revolution and industrial transformation. Focused on the critical task of business transformation, we strengthened entrepreneurship and innovation mechanisms, cultivated strategic emerging industries, and actively planned the development direction for new materials businesses. We sped up promoting the high-end, intelligent and green development of traditional manufacturing, practicing the goal of "becoming a vanguard of digital transformation

among central enterprises". Our Tianyang Cement was recognized as the world's first "Lighthouse Factory" in the building materials industry, using cutting-edge technologies to catalyze new industries, models and momentum. We established the CR Bldg Materials Tech (International) Center for Technology and Innovation, set up a new materials division, and unveiled the "Runlan Laboratory" to promote integration and synergy among R&D institutions, harnessing platform strength to drive for diversified business innovation. We proactively held technology forums and competitions to facilitate academic and technological exchanges as well as talent exchanges inside and outside of the Company, inspiring each other to jointly enhance technological innovation capabilities and form new productive forces.

In 2023, we pursued stability while making progress, and stabilized through advancement. Facing continued market demand contraction and increasingly severe industry challenges, we focused on developing the "4+1" businesses, accelerated commissions of aggregate projects under construction, and implemented integrated management models for industrial parks to regain cost competitiveness through integration advantages. We continuously consolidated the "Runfeng" and "Runpin" brand strategies, built core competitiveness for "Runfeng" by providing high-quality products and a diverse product portfolio, positioned "product + service" as the core of the "Runpin" brand, and vigorously established outstanding brands leading the development trend of the industry. We insisted on a customer

orientation, launched construction of a "grand marketing system" to meet customer needs for multi-category products and one-stop purchasing, provided reliable assurance and high-quality after-sales services to customers, and strove to build a marketing system featuring "resource sharing, efficient management, coordinated development and win-win cooperation" through sincere efforts to win trust.

In 2023, we pursued energy conservation, emission reduction and green development. Faced with the arduous decarbonization tasks for the industry under the "Emissions Peaking and Carbon Neutrality" policies, we adhered to an environmentally-friendly development model and deepened the "3C" energy conservation and emission reduction system. We pioneered the reconfigurable heat exchange equipment and technology with series-parallel coupled preheaters, increased the utilization rate of alternative fuels, and successfully space-mutagenized selected bamboo test-tube seedlings which returned on the Shenzhou-16 manned spaceflight mission. We continuously enhanced the "green base color" of mines and built "green models" for factories. We initiated the Hainan Changjiang R&D platform project for fly ash and hazardous waste disposal and carbon neutrality, actively explored the resourceization of fly ash co-disposal in household solid waste incineration, and the industrialization of cement kiln carbon capture, storage and utilization. We proactively participated in research related to including the cement industry in the national carbon market, resolutely implemented the four-year "energy conservation and emission reduction" action plan, significantly reduced the comprehensive energy consumption of multiple production lines, and strove to achieve the task targets set by the National Development and Reform Commission and other four ministries by 2025.

In 2023, we kept pace with the times and shared with society and employees. We actively responded to the expectations of society and employees in the course of corporate development, bearing responsibilities in our hearts, on our shoulders and in our actions to address the concerns and difficulties of stakeholders. We resolutely safeguarded the legitimate rights and interests of employees, protected their occupational health, and established standardized, orderly, mutually beneficial and harmonious labor relations. We increased efforts in talent cultivation, deepened the

construction of the "3+1" talent teams, implemented the "1211" talent strategy goals, invigorating our talent team building efforts. We nurtured charities and public welfare, persisted in benefiting the people, and continued to hold branded public welfare activities such as charity cloud runs, sowed hope through action, facilitated dreams with care, and made contributions to building a harmonious society of common prosperity.

Built upon the foundation of goodness, gathering strength to be reborn anew. Standing at this new historical starting point, we will firmly uphold our ideals and convictions, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, following the implementation path of "four reshapings", we will comprehensively implement the new development philosophy, accelerate our charge into new fields and open up new growth tracks. We will overcome obstacles through perseverance and bravely take the lead amidst intense competition. Perseverance will bring success, and determination will ensure achievement. The journey of development has begun, and we shall venture forth to broader horizons, and strive to realize the great aspiration of "becoming a world-class, globally respected building materials technology enterprise"!



# A Glimpse of CR Bldg Materials Tech

## Company Overview

**China Resources Building Materials Technology Holdings Limited (hereinafter referred to as CR Bldg Materials Tech) is a Hong Kong-listed company (stock code: 1313.HK) Under the state-owned China Resources Group.**

The Company's business focuses on basic building materials, structural building materials, functional building materials, and new materials. It is a cement, clinker, and concrete producer with considerable scale and competitiveness in South China. **CR Bldg Materials Tech ranked fifth in the "2023 Listed Chinese Cement Companies Comprehensive Strength Ranking" by the China Cement Association.**

It has been included in **11 indexes**: Hang Seng Composite Index, Hang Seng Hong Kong China-Affiliated Corporations Index, Hang Seng China High Dividend Yield Index, Hang Seng Composite Industry Index (Properties and Construction), Hang Seng Composite MidCap Index, Hang Seng Composite LargeCap & MidCap Index, Hang Seng 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, and Hang Seng Stock Connect Greater Bay Area Composite Index.



## Strategic Objectives

2023 is a critical year for the mid-term review of the "14th Five-Year Plan" strategy. Reviewing the progress of strategic objectives and key initiatives in the first half of the "14th Five-Year Plan", and considering the significant changes in the external environment, the Company has revised and formed CR Bldg Materials Tech's new "14th Five-Year Plan" strategy, redefining the meanings of "building materials" and "technology". Its business portfolio focuses on the four main businesses of cement, aggregates, concrete, and engineered stone, as well as new materials businesses. The Company aims to consolidate and enhance its industry position, accelerate the upgrading of traditional industries, transform towards new materials businesses, achieve practical results, and build a world-class building materials technology enterprise:

### Extend the chain

Develop non-cement building materials businesses such as aggregates and engineered stone along the cement and concrete industry chain, and construct a building materials ecosystem

### Strengthen the chain

Continuously promote the integrated development of cement, aggregates, and commercial concrete businesses, create new competitive advantages and solidify industry position

### Nurture the chain

Focus on high-end new materials, meet the needs of major national strategies, and cultivate a "second growth curve"

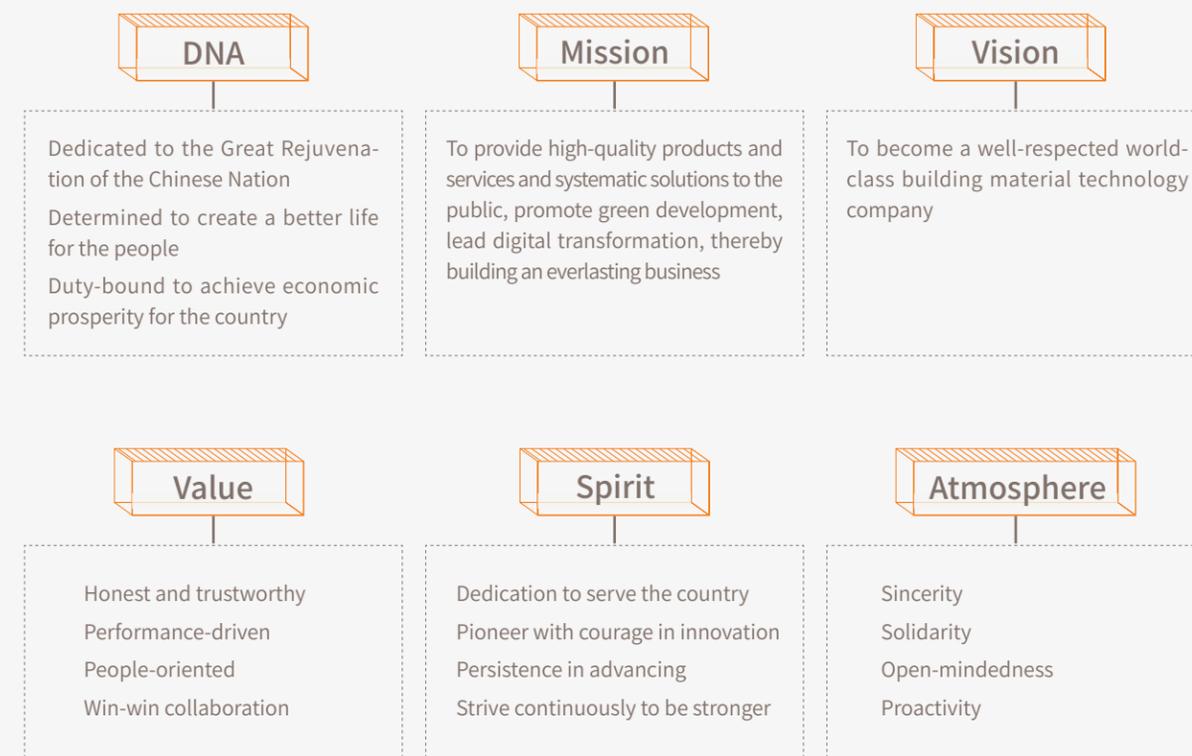
### Supplement the chain

Increase R&D investment, and empower the high-end, intelligent, and green development of traditional businesses through technological innovation

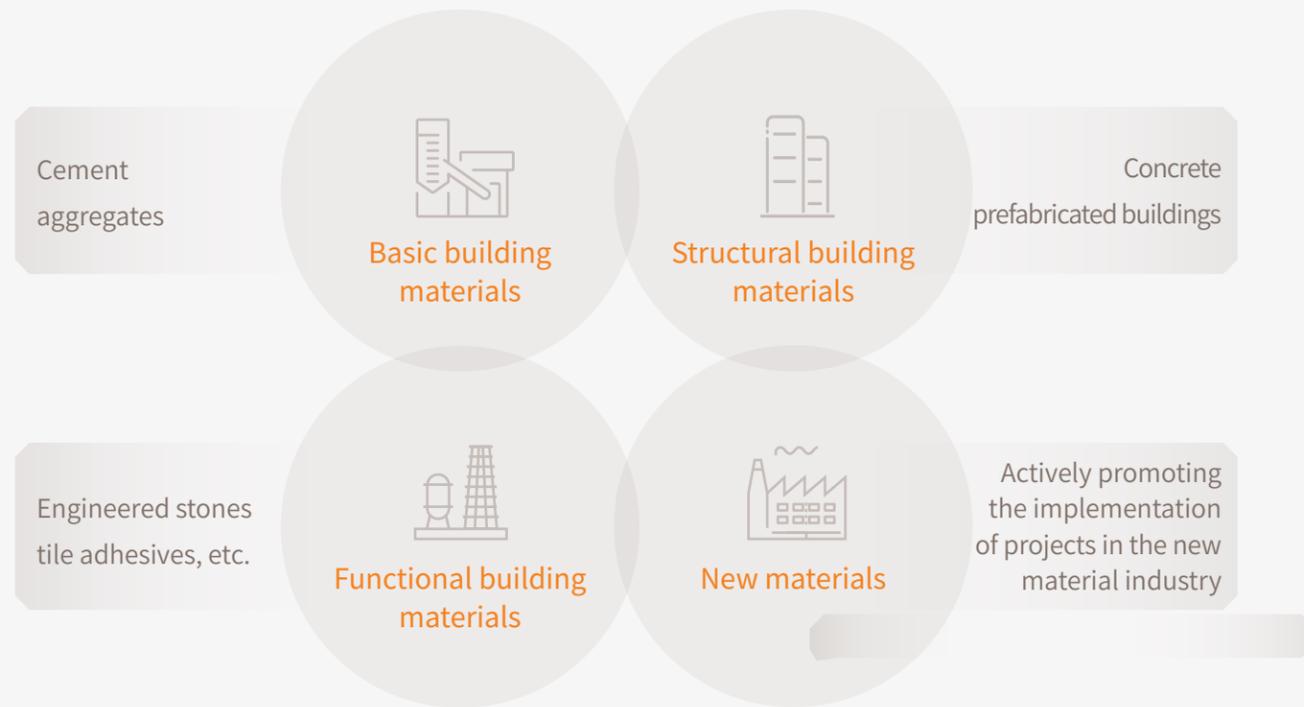
## Corporate Culture



### Corporate Culture System of CR Bldg Materials Tech during the "Fourteenth Five-Year Plan" Period



## Business Areas



Annual production capacity of cement: **113 million tons**, including **101** self-owned cement grinding lines, with an annual capacity of **90.2 million tons**.

Annual production capacity of concrete: **42.3 million m<sup>3</sup>**, including **63** self-owned concrete batching plants, with an annual capacity of **38.4 million m<sup>3</sup>**.

Annual production capacity of aggregates: **161 million tons** (including under-construction and planned).

Annual production capacity of prefabricated buildings: **1.4 million m<sup>3</sup>** (including under-construction and planned).

Annual production capacity of clinker: **75.3 million tons**, including **49** self-owned clinker production lines with an annual capacity of **63.3 million tons**.

Annual production capacity of engineered stones: **26.1 million m<sup>2</sup>**.

## Business Distribution

CR Bldg Materials Tech is a sizable and competitive cement, clinker, and concrete producer in South China. The Company's business covers the excavation of limestone, as well as the production, sales, and distribution of cement, clinker, and concrete. The Company's products are primarily used for infrastructure construction projects such as railways, highways, subways, bridges, airports, ports, dams, hydropower plants, and nuclear power plants, as well as for the construction of high-rise buildings and the promotion of urban and rural development. The products are distributed mainly in Guangdong, Guangxi, Fujian, Hainan, Yunnan, Guizhou, Shanxi, and Hunan, leveraging a comprehensive logistics network of waterways, railways, and highways.

Locations and capacities of production facilities are as follows:

Province/autonomous region/special administrative region	Cement		Clinker		Concrete	
	Number of production lines (no.)	Production capacity (million tons)	Number of production lines (no.)	Production capacity (million tons)	Number of mixing plants (no.)	Production capacity million cubic meters
Guangdong	32	27.7	12	15.5	20	12.8
Guangxi	35	34.8	19	27.9	28	17.6
Fujian	14	10.1	6	7.0	1	0.6
Hainan	5	4.4	3	2.9	5	2.7
Yunnan	7	5.1	4	4.2	1	0.6
Guizhou	4	4.0	2	2.8	1	0.8
Shanxi	2	2.0	1	1.5	1	0.6
Hunan	2	2.1	2	1.5	0	0
Zhejiang	0	0	0	0	2	1.1
Hong Kong	0	0	0	0	4	1.6
<b>Total</b>	<b>101</b>	<b>90.2</b>	<b>49</b>	<b>63.3</b>	<b>63</b>	<b>38.4</b>

## Product Brands



### Scope of Application

Basic building materials and structural building materials (Cement, aggregates, concrete, prefabricated components)



- "Runfeng" sub-brand
- Cement for high-end decoration



### Scope of Application

Functional building materials (engineered stones, tile adhesives)

# Project Cases

## Southern China (including Hong Kong)

- Hong Kong-Zhuhai-Macao Bridge, Shenzhen-Zhongshan Corridor, Shenzhen Airport, Yantian Port in Shenzhen, MIXC Shenzhen, China Resources Building (Spring Bamboo), Guangzhou-Shenzhen Expressway, Guangzhou-Shenzhen Riverside Expressway, Canton Tower (Slim Waist), Guangzhou International Finance Center (Guangzhou West Tower), Shiziyang Channel, Guangzhou Metro, Shenzhen Metro, Foshan Metro, Ganzhou-Shenzhen Railway, Guangzhou-Shantou High-Speed Railway, Shantou-Shanwei Railway, Guangzhou-Huadu Tianguai Intercity Railway, Zhanjiang High-Speed Railway, Zhuhai-Zhaoqing Railway, Taipingling Nuclear Power Plant in Guangdong, Lufeng Nuclear Power Plant in Guangdong, Zhongshan Science Park, Nansha-Zhuhai-Zhongshan Intercity Railway, Grain and General Purpose Wharf Silos in Nansha Port Area of Guangzhou Port, Northern Industrial Park of Zhaoqing High-Tech Zone, Pingshan Yanzi Lake International Convention and Exhibition Center in Shenzhen, DJI Sky City in Shenzhen, Ping'an Hospital in Longhua District in Shenzhen, Shenzhen Pengcheng Laboratory, Futian Mass Cultural Center in Shenzhen, Chinese University of Hong Kong in Shenzhen, etc.;
- Hong Kong International Airport, Hong Kong International Finance Center, Hong Kong Tsing Ma Bridge, Ting Kau Bridge, Hong Kong Palace Museum, etc.;
- Pinglu Canal, Cangrong Xunjiang Bridge, Qinzhou Longmen Bridge, MIXC Nanning, Xijiang Shipping Hub in Guangxi, Qingzhou-Beihai Expressway, Bailongtan Hydropower Plant, Nanning-Guangzhou High-Speed Railway, Guiyang-Nanning High-Speed Railway, Nanning-Chongzuo Railway, Dateng Gorge Water Conservancy Hub Project, Nanning Metro, Guilin Longmen Bridge, Hezhou-Bama Expressway, Cangwu-Zhaoping Expressway, Hengqin-Qinzhou Expressway, etc.;
- Wenchang Satellite Launch Base in Hainan, Hainan Island Ring Expressway, Changjiang Nuclear Power Plant in Hainan, Wenchang-Lingao Expressway in Hainan, etc.

## Eastern China Region

- Changle Airport Phase II in Fuzhou, Xiamen Cross-Strait Financial Center, Zhangzhou-Yongan Expressway, Yuzhou University Town in Xiamen, Xingguo-Quanzhou Railway, Zhangzhou Nuclear Power Plant in Fujian, Xiapu Nuclear Power Plant in Fujian, Fuzhou-Xiamen High-speed Railway, AXENT Hotel Xiamen, etc.;
- Jiaxing Railway Station in Zhejiang, San'ao Nuclear Power Plant in Zhejiang, Danyang Youwell Life Medical Industrial Park in Jiangsu, etc.

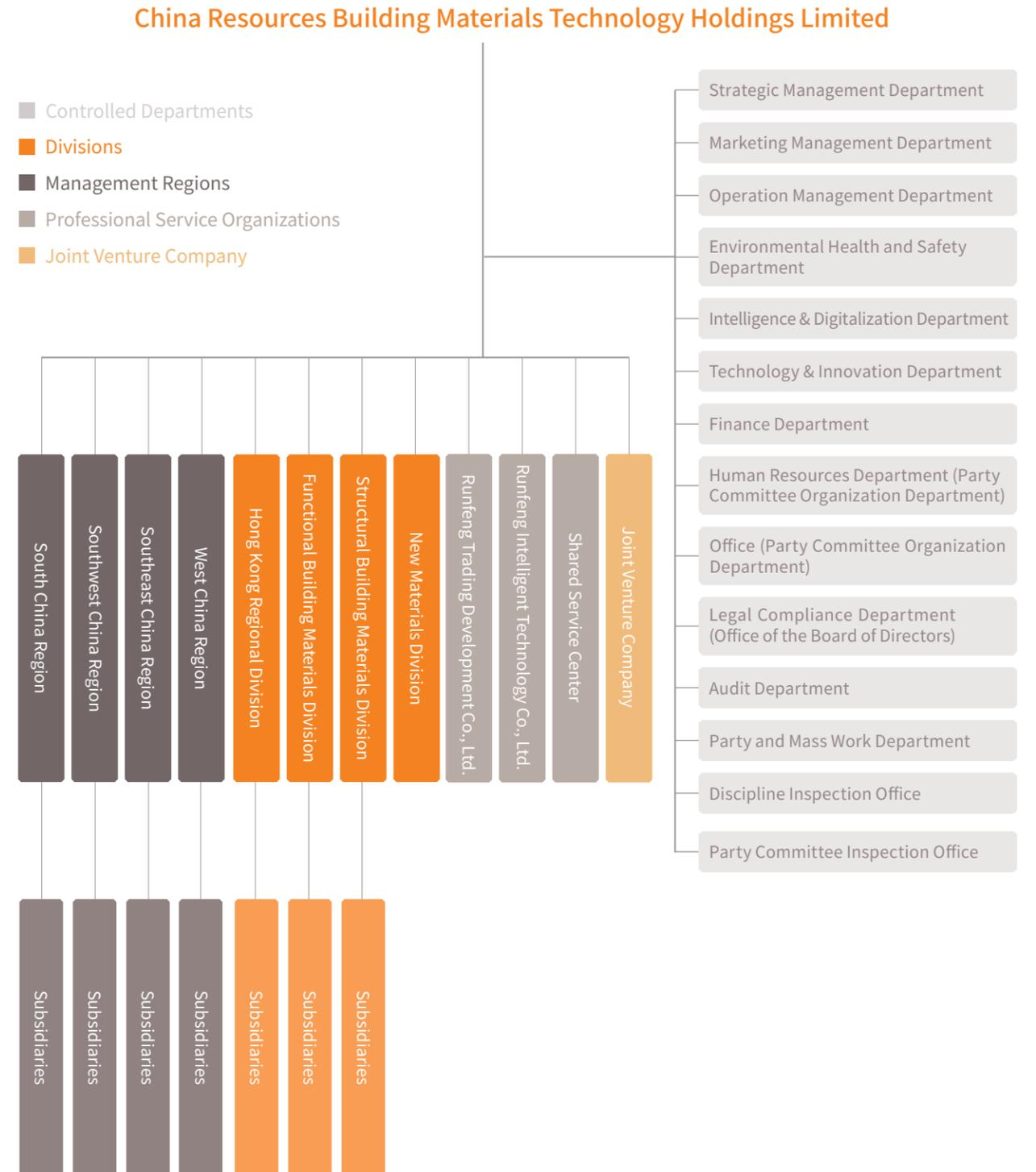
## Northern China and Northwestern China Region

- Xi'an International Convention and Exhibition Center (Xi'an Three Centers), Xi'an Jiaotong University-Innovation Port;
- Qingdao Wanda Yingci Hospital, Taiyuan-Jiaozuo Railway in Shanxi, etc.;
- Nanjiang Hope Town, Party School of the Central Committee of the Communist Party of China (National Academy of Governance).

## Southwestern China Region

- Ya'an-Nyingchi section and Xinshi-Jinyang section of Sichuan-Tibet Railway, Rumei Hydropower Plant in Tibet, Yebatan Hydropower Plant in Tibet, Tuoba Hydropower Plant in Yunnan, Xulong Hydropower Plant in Yunnan, Lawa Hydropower Plant in Sichuan, etc.;
- Yuxi-Mohan section of Kunming-Vientiane Railway, Central Yunnan Water Diversion Project, Lijiang-Shangri-La Railway, Guangtong-Dali Railway, Lincang Airport, Shangri-La-Lijiang Expressway, Chuxiong-Daili Expressway, Nanning-Jingdong Expressway, Heqing-Shangguan Expressway, Lincang-Qingshuihe Railway, etc.;
- Jiayan Reservoir in Guizhou, Maotai Airport in Guizhou, Jiangjin-Xishui-Gulin Expressway, Renhuai-Zunyi Expressway, Guiyang-Jinsha Expressway, etc.;
- Chengdu Icon-Cloud.

# Organizational Structure



# Milestones in 2023

On January 30

CR Bldg Materials Tech (International) Center for Technology and Innovation was officially unveiled at the Hong Kong Science & Technology Park. This is the first overseas technology and innovation center established by CR Bldg Materials Tech, and its functional positioning is a cutting-edge technological research and development platform, an international technology exchange platform, and an international talent introduction platform.



CR Bldg Materials Tech (International) Center for Technology and Innovation officially unveiled in Hong Kong

On March 17

Anshun Cement's project with an annual production of 1 million m<sup>3</sup> of concrete and 2 million tons of aggregates was completed and put into production. This is the first aggregates concrete project invested by CR Bldg Materials Tech in Guizhou, using advanced equipment and technology to produce high-quality aggregates and concrete products. Many indicators such as environmental protection and energy consumption have reached the domestic leading level.



Completion and production commencement of Anshun Cement's project with an annual production capacity of 1 million m<sup>3</sup> of concrete and 2 million tons of aggregates

On May 6

The project of Shenzhen Runfeng New Materials Technology Company Limited, a subsidiary, was awarded the Gold Award in the 6th "Huabiao Cup" for High-Quality Stone Decoration Engineering Awards for the Xi'an International Convention and Exhibition Center project. This marks the first time an engineered stone enterprise has received the prestigious "Huabiao Cup" accolade.



"Runpin" inorganic engineered stone project was awarded Gold Award at the 6th "Huabiao Cup"

In June

The "Research and Development and Application of Key Technology for Large-scale Co-processing of Dry Municipal Sludge in Cement Kilns" project by Yuebao Cement was granted a scientific and technological achievement appraisal certificate by the China Building Materials Federation. The project outcomes were recognized as having reached an internationally advanced level overall, with the "multi-point servo feeding of sludge" and "stratified combustion control" technologies both acknowledged as being at the forefront of international standards.

On June 13

The China Media Group (CMG) Finance Program Center and the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council jointly held the "China ESG (Corporate Social Responsibility) Release" event in Beijing. CR Bldg Materials Tech ranked 13th on the "China Listed Companies ESG Pioneer 100" list for its long-term responsible operation and performance of responsibilities, with ESG performance at the five-star level.



Ranked 13th on the "China Listed Companies ESG Pioneer 100" List



Yuebao Cement Dry Municipal Sludge Co-processing Project passed scientific and technological achievement appraisal

On October 5 and 6

The special reflection meeting for the mid-term review of the "14th Five-Year Plan" was held, focusing on the strategic goals and operational quality of the first half of the "14th Five-Year Plan". The meeting addressed 18 profound issues and produced outcomes from the mid-term review.



The special reflection meeting for "14th Five-Year Plan" mid-term review was convened

On October 31

The selected bamboo reed test tube seedlings, jointly cultivated with Aerospace Shenzhou Biotech Group and successfully mutated through space exposure, returned to earth aboard the Shenzhou-16 manned spacecraft. This advancement further propelled the basic technological research and development related to the optimization of bamboo reed as a biomass fuel crop.



Selected astronautically-bred bamboo reed materials returned to earth aboard Shenzhou-16 manned spacecraft

On December 8

The 20th anniversary celebration of China Resources Cement and the Company's renaming ceremony were held in Shenzhen, marking the start of a new journey to build a world-class building materials technology enterprise. This renaming is not only an important measure to implement President Xi Jinping's important instructions on promoting new industrialization, but also a major milestone in practicing the deployment of developing new industries and accelerating the construction of a technology-intensive building materials enterprise.



20th anniversary celebration of China Resources Cement and the renaming ceremony



The world's first "Lighthouse Factory" in the building materials industry was launched at CR Bldg Materials Tech

On December 10

The long belt conveyor west line and port storage of Zhaoqing Runxin New Materials successfully ran with aggregates, and the first batch of aggregates were smoothly loaded from the port storage and transported out of the plant, marking the official completion of the entire Dapaikuang aggregates production line system and the successful commissioning of the whole conveying system.



Completion of the entire Dapaikuang aggregates production line system and successful commissioning of the whole conveying system

On December 14

The World Economic Forum (WEF) announced a new batch of members of the Global Lighthouse Network, and the world's first "Lighthouse Factory" in the building materials industry, also the first "Lighthouse Factory" of a central enterprise in the Greater Bay Area, was successfully launched at CR Bldg Materials Tech. At the same time, CR Bldg Materials Tech's relevant digital construction was selected as one of the six leading cases in the Global Lighthouse Network Annual White Paper.

# 01

## Polishing business philosophy in its prime

### Substantive topics

- Legal compliance and risk management
- Anti-corruption and integrity promotion
- Management efficacy, operational performance, and corporate value
- Investor relations and business ethics
- Reforms deepening and high-quality development

CR Bldg Materials Tech has always upheld the concept of sustainable development, continuously strengthened its responsibility management, maintained active communication with various stakeholders, and worked together to promote the sustainable development of the economy, environment, and society. It places corporate governance as a top priority, constantly improves its governance system, solidly promotes integrity and compliance, risk control, and an efficient supervision system, and continuously deepens reforms and innovations in important areas to consolidate its governance foundation. Through practical actions, it strengthens investor relations maintenance and creates optimal value for shareholders.

United Nations Sustainable Development Goals (SDGs)



Responsibility  
column

# Twenty years of hard work makes it possible for us to embrace a new life today



On December 8, 2023, the Company held the 20th anniversary celebration of China Resources Cement and the Company's renaming ceremony in Shenzhen. It was officially renamed "China Resources Building Materials Technology Holdings Limited", comprehensively embarking on the journey to become a world-class building materials technology enterprise. As described by Mr. Ji Youhong, Chairman of the Board of Directors, "We have changed our name to CR Bldg Materials Tech to redefine the Company's positioning, enhance our core competitiveness, strengthen our core functions in this ever-changing era, and seize the opportunity of our 20th anniversary to embark on a new journey".

**Stakeholder Testimonials**

CR Bldg Materials Tech has served as a representative and model of the high-quality development of the building material industry in China. In the past two decades, they have provided their unique wisdom and excellent practices in terms of accelerating industrial transformation and upgrading, promoting green and low-carbon transition and advancing digital development for the industry moving forward.

—Yan Xiaofeng, President of China Building Materials Federation

Looking back, over the past twenty years of endeavors and forging ahead, "China Resources Cement" has transformed magnificently from a small grinding station to become a sizable and competitive cement, clinker, and concrete producer in South China, and successfully ranked 5th in the "Listed Chinese Cement Companies Comprehensive Strength Ranking" by the China Cement Association.

At the vibrant age of twenty, we do not forget the eventful two decades. With a new image as "CR Bldg Materials Tech", we set off again, seeking changes in driving forces and long-term strategies. With the grand vision of "becoming a world-class and respected building materials technology enterprise", we forge ahead tirelessly toward the vast ocean of stars.



Scan the QR code to watch the corporate video of CR Bldg Materials Tech

# Braving the turbulent tides, sailing with billowing sails

## Originating from the Hongshui River, "cementing" its presence on the Hong Kong Stock Exchange

Tracing back to the 1980s, accompanied by the rapid development of Hong Kong's real estate industry and the surging demand for concrete, China Resources Group jointly established its first batching plant, Redland Concrete, with a Hong Kong company. To ensure a stable supply of cement for the batching plant, the Group decided to build a cement plant with an annual production capacity of 1 million tons in Dongguan, namely Dongguan China Resources Cement Co., Ltd., marking the foray into the cement industry. However, a year before the plant's completion, the Asian financial crisis erupted, plunging the entire industry into a slump. After construction, the newly built plant faced a market dampened by the financial crisis, which rendered its state-of-the-art and advanced production lines somewhat "a sword without a battlefield". Furthermore, the complex shareholder structure of the Dongguan Cement Plant posed challenges. Although China Resources was the major shareholder, it did not participate in the Company's operations and management. The low decision-making efficiency became even more apparent in the volatile market environment. Beset by internal and external troubles, Dongguan Cement Plant suffered consecutive losses of 100 million yuan in its first two years, and became a "non-performing asset".

By the end of 1999, to turn the situation around, China Resources negotiated with the shareholders and obtained the management

rights of Dongguan Cement Plant. Through a series of reform measures, the Company managed to stem the tide, and significantly increased its market share and brand influence. However, Dongguan Cement Plant, which only had grinding capabilities at that time, was still constrained by the lack of clinker supply. In 2001, to break through the clinker bottleneck, China Resources ventured upstream along the Xijiang River and successfully acquired Guangxi Hongshuihe Cement Co., Ltd., which met its requirements. This marked the first time the Company extended its value chain to clinker and limestone mining. Seizing the opportunity, the Company rapidly expanded its scale. From then on, the Hongshui River became the "place where the dream began" for the people of CR Bldg Materials Tech.

In 2003, under the overall strategic layout of "group diversification and professional profit centers", China Resources integrated the cement, concrete, and prefabricated components businesses of CR Machinery and Minmetals and CR Enterprise to officially establish China Resources Cement Holdings Limited and was listed on the Main Board of the Stock Exchange of Hong Kong Limited in July of the same year, ringing the opening bell for the building materials technology industry. Afterward, the Company continuously expanded its footprint through new construction and acquisitions, and established a presence in South China.

2001 | Acquisition of Hongshuihe Cement in 2001

2003 | Went public on the Main Board of the Stock Exchange of Hong Kong Limited in 2003



## Making wise choices and striding into future

The continuous investments and construction put immense financial pressure on the Company. Its already low net profit was slashed by 85% in 2005. The irrational capital structure further constrained China Resources Group to further assist, whose shareholding was near the limit, and this left the Company helpless as its debt ratio had soared to 72.6%. After careful consideration, the Company was forced to delist in 2006, leaving the critical question of whether the cement industry could survive unanswered for the CR Bldg Materials Tech team. Facing unprecedented pressure, the then General Manager Zhou Junqing, along with the Group's leadership, conducted on-site inspections along the Xijiang. The resource and logistics advantages of the Company's layout along the river, as well as the team's demonstrated confidence and determination, won the Group's approval. After a two-day work meeting in Nanning, the Group gave a resolute answer: "Significant capital injection will be provided, and development support will be offered after completing the privatization reform". It was the CR Bldg Materials Tech team's resilient attitude of "always being on the road" that secured a three-year timeframe for the Company to return to the capital market.

From 2007 to 2009, with an inherent tenacity and ferocity, the CR Bldg Materials Tech team went all out to win markets, customers, and projects. They established cement or concrete bases in multiple cities and counties, including Zhaoqing, Zhanjiang, Jiangmen, Foshan, Shantou,

Shangsi, Nanning, and Tianyang. Whether it was securing the Nanning project with "a feathery letter", successfully opening the door to the Guangxi market, or envisioning the "seizure" of the Fengkai project with "a straight line" to ensure the "two-points-one-line" strategy would not be cut off, or leveling mountains and filling gullies to build an unprecedented 40-kilometer belt conveyor, these efforts encapsulated the three years of struggle for the CR Bldg Materials Tech team.

During these three years, the team faced immense pressure head-on, with an unwavering will as solid as a rock, they fought for a 28% market share in Guangxi and a 20% market share in Guangdong, achieved a string of remarkable results, and forged a powerful driving force for CR Bldg Materials Tech to forge ahead through thorns and brambles. In October 2009, the Company announced its official return to the capital market. Its initial public offering received an enthusiastic response, with the international placement and Hong Kong public offering portions both being significantly oversubscribed. The Company successfully raised HK\$6.5 billion at an issue price representing a 25.4 times price-to-earnings ratio. By the end of 2009, the Company's total assets had reached RMB21.3 billion, 3.5 times that of 2006, and its net profit was RMB890 million, 11 times that of 2006. With their extraordinary courage and precise judgment, the building materials technology team fought a glorious battle, laying a solid foundation for future development.

2005 | Nanning work conference in 2005



2009 | Listed on the Main Board of the Stock Exchange of Hong Kong Limited in 2009



In July 2012 | Guangdong regional customer appreciation event in July 2012



## Facing crises and weathering storms

From the "two points and one line" to the "along rivers and coastal areas" and then to the new "3+2" strategy in 2009, the Company gradually transformed from pursuing industry leadership in a single strategic region to pursuing industry leadership in multiple strategic regions. At that time, national industrial policies had strictly limited the construction of new cement projects and encouraged enterprises to increase industry consolidation through mergers and acquisitions. Therefore, the Company shifted its priority from new construction to mergers & acquisitions. Within just ten years, the company gained control over quality limestone resources in regions such as Guangdong, Guangxi, Fujian, Hainan, Shanxi, Yunnan, and Guizhou.

Behind these remarkable achievements lie untold hardships and challenges. The path forward would not be without further obstacles, and the CR Bldg Materials Tech team remained in a constant state of "battle readiness." In the first half of 2012, the industry was facing severe overcapacity in the aftermath of the 2008 economic crisis, and the Company's profitability declined by nearly 70% year-over-year. Within just over a month, the Company organized three consecutive strategic seminars to analyze problems, unify thoughts, and developed countermeasures. By accelerating channel construction, the Company was able to turn the tide by the end of the year, and achieved a 9.1% increase in operating revenue for the full year. In 2015, the cement

industry experienced its first demand decline in more than twenty years, leading to a sharp decrease in industry profitability. The Company's annual profit declined by nearly 76% compared to 2014. Facing yet another severe test, the Company resolutely maintained its strategic determination and proposed a new approach of building three core capabilities in its 13th Five-Year Plan. Efforts were made to stabilize system cost advantages, innovate and transform to implement industry peak-shifting, and rationally view market optimization and adjustment. Since then, the Company's performance has continued to rise.

These crises reminded the CR Bldg Materials Tech team that the more difficult the times, the more they must remain true to their original aspirations and stand united. Only by internally forming a united front, exerting force in the same direction and toward the same target, could they emerge from the trough more quickly and turn crisis into opportunity. History has repeatedly proven the uncompromising will and optimistic attitude of the CR Bldg Materials Tech team, as well as our "entrepreneurial spirit" of fearlessness, perseverance, pragmatism, and determination to succeed, and our "innovative spirit" of never being satisfied, proactively seeking change, daring to be the first, and boldly setting new standards.

## Transformation brings new life amidst changing circumstances

Over the past twenty years of hardships and efforts, the CR Bldg Materials Tech team has been adept at recognizing opportunities amidst change, transforming each trough into a breakthrough and harnessing every wave as momentum for setting sail once again. From a single focus on cement, clinker, and concrete businesses, the Company has evolved into a comprehensive building materials enterprise. The CR Bldg Materials Tech team has consistently sought innovation and change, continually pioneered new business models, and persistently deepened its "three core capabilities" to enhance the Company's overall operational quality and efficiency.

The Company has continuously introduced innovative products, with the construction of national mega-projects such as the Hong Kong-Zhuhai-Macao Bridge, Hainan Aerospace City, and the Sichuan-Tibet Railway reflecting the Company's solid "core strength". By delving into the paths of "synergy" and "carbon reduction", projects such as the Guangxi Binyang Household Waste Co-processing Project, the Guangdong Guangzhou Zhushui and Yuebao Cement

Drying Municipal Sludge Co-disposal Project, and the Hainan Changjian Hazardous Waste and Construction Waste Co-processing Project have established a new economic model that harmonizes resource utilization and ecological environmental development. Adhering to the path of digitalization and intelligent manufacturing, pilot projects have been launched at the Tianyang, Fengkai, and Nanning bases. The Company's Tianyang Cement has successfully been recognized as the world's first "Lighthouse Factory" in the building materials industry, becoming a leader in intelligent manufacturing and digitalization for the sector. By actively revitalizing existing businesses, the Company has established multiple integrated industrial parks, using concrete to drive cement and aggregates sales and leveraging the cost advantages of integration to seize the initiative in regional competition. Over the past twenty years, the Company's innovative development has flowed like a turbulent stream, winding its way through the mountains and continuously gathering the momentum to forge ahead bravely.

Heqing Cement as a national-level green mine



Completion and production commencement of Anshun Cement's project with an annual production capacity of 1 million m<sup>3</sup> of concrete and 2 million tons of aggregates



A panoramic view of Tianyang Cement "Lighthouse Factory."



Held the celebration of the 20th anniversary of the establishment of China Resources Cement and the Company renaming ceremony



*In 2023, amidst the pressures of an economic downturn and seismic changes in the industry landscape, major enterprises were struggling for survival and facing varying degrees of development challenges. The ups and downs of the past have taught the CR Bldg Materials Tech team that opportunities often lie hidden beneath crises and changing circumstances. The Company has begun to focus on the "peaking emissions and carbon emission" goals and the new energy materials sector, and sounded the call to advance toward becoming a "technology-intensive building materials enterprise". In 2023, embarking on a new journey and proactively seeking change, the CR Bldg Materials Tech team upheld their craftsmanship amidst new endeavors and seized the future in new circumstances. With the "entrepreneurial spirit", "innovative spirit" and "four distinguishing spirits", the CR Bldg Materials Tech team has forever preserved its spirit of "forging ahead", its drive for "innovation", and its pragmatic work style. Concentrating on the annual management theme of "strengthening foundations, capturing upgrades, promoting transformation through technological innovation", the Company made every effort to stabilize its traditional business base, accelerate the pace of high-end, intelligent, and green transformation, and strove to achieve breakthroughs and break new ground in the new materials business. The boundless future of China Resources Bldg Materials Tech is yet to be created.*

Supplied approximately 1.3 million tons of cement (out of the project's total cement usage of 1.98 million tons) for the Hong Kong-Zhuhai-Macao Bridge project



# Paying tribute to two decades of splendor, co-creating an epoch

Over the past twenty years of arduous yet extraordinary journey, employees have accumulated profound insights and heartwarming stories. Time may not have left its mark on the hurried journey, but the experiences of sharing the Company's breath and destiny, advancing and retreating together, and growing side by side have been etched into their memories. The CR Bldg Materials Tech team has paid tribute to their prime with their own creations, celebrating this anniversary.



(Works by employees of Hongshuihe Cement)



(Works by employees from Nanning Region of the Structural Building Materials Division)



(Works by employees of Redland Concrete)



(Works by employees from the Western Xijiang Region of the Structural Building Materials Division)



(Works by employees from Fengkai Cement)



(Works by employees from Guigang Cement)

## Perseverance in the bitter cold

In December 2022, an inspection team led by Chairman Ji Youhong and Chief Executive Officer Jing Shiqing braved temperatures of -13°C and blinding snowstorms, drove all the way to the remote mountains of a certain region in Xinjiang to conduct on-site inspections of a long-awaited new materials project, and sought opportunities for transformation.



## Perseverance in the scorching heat

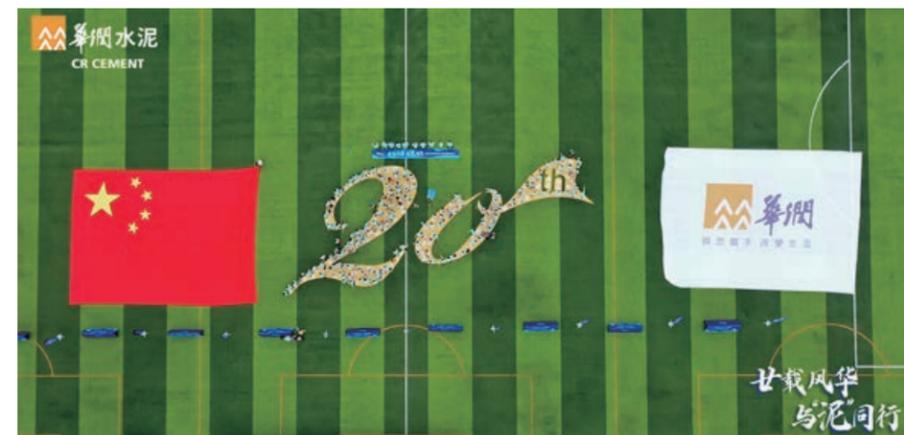
Despite facing the high temperatures of 400 °C on the surface of the cement kilns and sweltering weather conditions, despite wearing heat-resistant suits that obstructed airflow, the CR Bldg Materials Tech team did not complain. Their unwavering dedication over the past decade has enabled them to handle any challenge in their roles, and to swiftly resolve various production-related issues.



### The vast land of China is nourished by rain and dew

- China Resources, a name imbued with a deep crimson hue, is like aged vintage wine from an ancient alleyway. With amber glow that reflects the passage of time, it intoxicates the years and the earthen seal on the vessel. Suddenly, that slightly inebriated earthen seal somersaults, falling into the vessel and dissolving into the wine. Emerging anew, donning a blue robe, it lets out a resounding cry: I am now reborn as China Resources, named Cement, with the courtesy name Runfeng. From then on, wielding a sword across the lands, drinking from the rivers, traversing the realms for twenty years, ranking among the five peerless masters, I have composed an ode of iron-blooded devotion.

- works by employees from the Strategic Development Department of the South China Region.



Scan the QR code to watch the Eternal Light and Shadows (20th Anniversary Video Series)

# Sustainable Development Management

## Statement from the Board of Directors

CR Bldg Materials Tech has integrated the concept of sustainable development into its corporate operations and management. From a strategic perspective, the Company reviews its social responsibilities, and emphasizes the long-term, directional, and goal-oriented nature of its fulfillment of responsibilities. Taking the perspectives of stakeholders such as shareholders, customers, employees, partners, and communities into account, the Company actively participates in ESG practices, including responding to the "emissions peaking and carbon neutrality" strategy, strengthening environmental management, improving energy conservation and emission reduction measures, promoting co-processing projects, implementing occupational health management, and reinforcing supply chain responsibility. These efforts drive the Company towards higher quality, greater efficiency, and more sustainable development.

The Company's Board of Directors is the highest responsible and decision-making body for ESG matters, bearing full responsibility for the Company's ESG strategy and reporting. Its functions include overseeing ESG-related work that may affect the Company's business or operations, shareholders, and other stakeholders. The Board of Directors attaches great importance on the risks and opportunities brought about by ESG matters. In December 2023, the Risk and Compliance Committee under the Board revised its terms of reference to improve its ESG management responsibilities, including new responsibilities of reviewing the strategic planning, policies, implementation and reports in relation to the Company's sustainable development and ESG matters, guiding and supervising on ESG risks and opportunities with material impact on the Company's business, and guiding the senior management to adopt appropriate measures, supervising the Company on the commitment and performance on key issues such as tackling climate change, environmental protection and compliance management, further strengthening the Board of Directors' guidance and management of the Company's sustainable development.

The Company attaches importance to the potential significant impact of ESG risks. Based on the external socio-economic macro environment and the Company's development strategy,

it regularly conducts assessments of important ESG issues and reports them to the Board of Directors for review. The Board of Directors discusses and determines the Company's ESG risks and opportunities and regards the management and improvement of important issues as the key ESG task, incorporates them into the Company's overall strategy, and supervises issue management and performance. At the same time, in compliance with Listing Rules, the Company has formulated ESG management goals and mechanisms. It has also quantified certain important ESG management goals and broken them down into the individual annual and term operating performance pledges of the senior management and the annual performance evaluation system for the heads of subsidiaries. Each year, the Remuneration and Appraisal Committee under the Board of Directors and the Company's senior management conduct operating performance appraisals accordingly, and review and make recommendations to the Board of Directors on remuneration allocation proposals with reference to the corporate goals and objectives set by the Board of Directors. Additionally, the Risk and Compliance Committee of the Board of Directors regularly reviews the progress of ESG management goals and proposes improvement measures for the next step of ESG work. The Corporate Culture and Social Responsibility Guidance Committee under the Chief Executive Officer's Office is responsible for supervising the commitments and performance of key ESG issues and reporting to the Board of Directors. It promotes the integration of ESG concepts into corporate operations and management, and helps CR Bldg Materials Tech enhance its sustainable development capabilities.

This report comprehensively discloses the progress and effectiveness of China Resources Bldg Materials Tech's ESG work in 2023. The Company's Board of Directors and all Directors guarantee that there are no misrepresentations, misleading statements, or material omissions in this report, and they bear individual and joint responsibility for the truthfulness, accuracy, and completeness of its content.

## Governance Structure and Corresponding Responsibilities



Sustainable Development Management Leadership Structure (as at the date of this report)

## Risk and Compliance Committee of the Board

- Review the Company's compliance with the Corporate Governance Code of the Listing Rules, review the Corporate Governance Report in the Company's annual report and the disclosures in the Environmental, Social and Governance Report, investigate non-compliance issues, and make recommendations on rectifications to the Board of Directors;
- Discuss the risk management and internal control systems with the management to ensure that the management has fulfilled its duty to have effective systems, and such discussion should include: (1) the adequacy of resources, staff qualifications and experience, training programs and budgets relating to the Company's Environmental, Social, and Governance performance and reporting; (2) the changes, since the last annual review, in the nature and extent of significant risks (including ESG risks), and the Company's ability to respond to changes in its business and the external environment;
- Review the Company's Environmental, Social and Governance Report and its scope of disclosure;
- Review the strategic plans, policies and implementation regulations in relation to the Company's sustainable development and ESG matters;
- Guide and supervise on the ESG risks and opportunities with material impact on the Company's business, and to guide the senior management to adopt appropriate measures in response to the ESG risks and opportunities;
- Supervise the commitment and performance on key issues such as tackling climate change, environmental protection, and compliance management.

## Corporate Culture and Social Responsibility Guidance Committee

- Review the annual plans, important systems, etc. related to corporate culture and social responsibility;
- Arrange and deploy corporate social responsibility work, lead and promote the Company's social responsibility strategic planning;
- Review the Company's social responsibility brand practices and communication plans.

## Corporate Culture and Social Responsibility Guidance Committee Office

- Formulate corporate culture and social responsibility systems based on the Company's development strategy, promote system implementation and system construction;
- Implement China Resources Building Materials Technology Holdings Limited's requirements for corporate culture and social responsibility work;
- Organize and plan the Company's corporate culture and responsibility practice themed activities, continuously explore and promote the red spirit of China Resources and the responsibility concept;
- Organize corporate culture, social responsibility-related training and exchange activities, and build a team of corporate culture lecturers;
- Coordinate the preparation of the sustainable development report and related work.

## Sustainable Development Report Compilation Committee

- Carefully study and strictly implement the guidelines, policies, and regulatory requirements of SASAC, the Stock Exchange of Hong Kong Limited, and China Resources Group on social responsibility report and ESG report preparation;
- Formulate the preparation plan for the Company's annual sustainable development report;
- Organize the compilation of the Chinese and English versions of the Company's annual sustainable development report, including streamlining the indicator system, drafting disclosure calibers, and grasping design styles;
- Organize the launch and release ceremonies for the sustainable development report;
- Conduct sustainable development report rating;
- Guide subordinate entities in preparing independent social responsibility reports;
- Continuously improve report content, innovate report design and promotion formats, and enhance report quality.

### Rules of Procedure:

The Party-Mass Affairs Department, as the functional department for sustainable development report preparation, comprehensively carries out the specific work of the committee, coordinates resources from all parties, and ensures timely and high-quality completion of the report. Relevant departments mainly assist in content provision, indicator calibers, English translation, etc.

## Governance Mechanisms

### Sustainable Development Strategy

Upholding the corporate mission of "providing high-quality products, services and systematic solutions for the general public, promoting green development, leading digital transformation, and achieving sustainable growth", CR Bldg Materials Tech adheres to innovation-driven development, deeply practices the "entrepreneurial spirit", "innovative spirit" and "four distinguishing spirits" to continuously promote social responsibilities and ESG work, and integrates the concept of sustainable development into operations and business to facilitate the Company's healthy, sustainable, and high-quality development.

### Sustainable Development System

CR Bldg Materials Tech attaches great importance to the construction of a sustainable development system and strives to promote the standardization and normalization of the Company's sustainable development work through establishing and improving systems and mechanisms. The Company follows the Global Reporting Initiative (GRI) Sustainability Reporting Standards, Environmental, Social and Governance Reporting Guide to the Listing Rules and Guidance on Climate Disclosures of the Stock Exchange of Hong Kong Limited, Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) and Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG5.0) of Chinese Academy of Social Sciences, China Cement Association's Guidance on Social Responsibility of Cement Enterprise and Guidelines for Corporate Social Responsibility Reporting of Cement Enterprise, Social Responsibility Evaluation Index System of Cement Enterprises, Chinese Society for Testing & Materials, Zhongguancun's Guidelines for ESG Reports of Building Materials Enterprises, the SASAC General Office's Reference Index System for ESG Reports of Central Enterprises Controlled Listed Companies, and China Resources Group Management Measures for Social Responsibility and China Resources Group "1+N" Social Responsibility Index System Management Handbook, as well as the Social Responsibility Work Management Measures of China Resources Building Materials Technology Holdings Limited, clarifies the main work responsibilities, deepens the concepts of social responsibility and ESG, standardizes social responsibility work, enhances responsibility governance, improves the sustainable development management system, and strengthens the Company's information disclosure management.

### Sustainable Development Management Policy

CR Bldg Materials Tech implements the system of legal, compliance, internal control, and risk, and establishes an integrated risk control and compliance management model that adapts to the Company's business characteristics. Focusing on key EHS areas, and based on national environmental protection policies, "emissions peaking and carbon reduction" policies, and the new Work Safety Law, the Company comprehensively identifies a list of high-risk areas in the environmental, social and governance domains. It continuously strengthens the assessment and tracking management of major environmental, social and governance risks, regularly reviews the adequacy of the Company's ESG-related management resources, vigorously promotes the Company's sustainable development efforts, and effectively advances the implementation of responsibility practices and related work.

### Sustainable Development Capabilities

CR Bldg Materials Tech actively organizes and participates in internal and external training and seminars on social responsibility and ESG to actively understand the latest developments in domestic and international social responsibility and ESG work, strengthens learning on social responsibility and ESG theories, accurately understands the concept of sustainable development report compilation, and masters report compilation methods. The Company actively participates in ESG report evaluation activities and launched the "Annual Outstanding Social Responsibility Project Award" selection program in 2023. This encourages all entities to actively carry out distinctive responsibility practices while creating economic profits, showcase the Company's social responsibility achievements and build a corporate responsibility brand.



CR Bldg Materials Tech convened the ESG Work Conference and Sustainable Development Report Compilation Training in July 2023

## Stakeholder Communication

CR Bldg Materials Tech highly values the demands and expectations of stakeholders. It actively builds diversified internal and external communication platforms and discloses the Company's responsibility information in a timely, accurate, and rigorous manner through channels or forms such as information releases, information submissions, thematic presentations, shareholder meetings, site visits, public welfare activities, open days, employee activities, Company website, and official WeChat accounts. This comprehensively disseminates and showcases the Company's sustainable development concepts and responsibility dynamics to enhance stakeholders' understanding and support for the Company. The Company also actively listens to reasonable opinions and suggestions from internal and external stakeholders, continuously optimizes and improves the Company's sustainable development management work, enhances its overall competitiveness, and achieves win-win cooperation with all stakeholders.

Stakeholder category	Demands and expectations	Communication and response
<b>Government and regulatory authorities</b> 	<ul style="list-style-type: none"> <li>Compliant operations</li> <li>Production safety</li> <li>Occupational health</li> <li>Environmental protection</li> <li>Regional economic development</li> <li>Employment and taxes</li> </ul>	<ul style="list-style-type: none"> <li>Strictly abide by national laws, regulations and policies</li> <li>Deepen energy conservation, emission reduction, and drive green and low-carbon development</li> <li>Strengthen production safety and occupational health management</li> <li>Increase central-local cooperation and provide employment opportunities</li> <li>Pay taxes in full in accordance with laws</li> <li>Actively respond to government calls and disclose corporate information in a timely manner</li> </ul>
<b>Shareholders and Investors</b> 	<ul style="list-style-type: none"> <li>Corporate value</li> <li>Quality improvement and efficiency</li> <li>Standardized corporate governance</li> <li>Sustainable development</li> <li>Risk control</li> <li>Compliant information disclosure</li> <li>Protection of shareholders' rights and interests</li> </ul>	<ul style="list-style-type: none"> <li>Enhance business management, performance, and asset value</li> <li>Improve quality and efficiency to enhance overall competitiveness</li> <li>Standardize Board of Directors construction and improve a scientific and efficient governance system</li> <li>Focus on environmental protection, social responsibility, and improve relevant information disclosure and communication quality</li> <li>Enhance prevention and mitigation of major risks</li> <li>Establish a compliance management system, improve compliance review mechanisms, and conduct compliance training</li> <li>Strengthen investor relations management and information disclosure to protect the legitimate rights and interests of all shareholders</li> </ul>
<b>Customers</b> 	<ul style="list-style-type: none"> <li>Product quality</li> <li>Customer service</li> <li>Customer rights and interests</li> <li>Innovative development</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensively guarantee product quality</li> <li>Establish a sound customer service system, improve customer feedback and complaint handling mechanisms, conduct customer satisfaction surveys</li> <li>Strengthen marketing management system construction, protect customers' legitimate rights, interests and information security</li> <li>Promote product iteration, upgrades, and technological innovation</li> </ul>
<b>Employees</b> 	<ul style="list-style-type: none"> <li>Employee rights and interests</li> <li>Remuneration and benefits</li> <li>Democratic management</li> <li>Training and development</li> <li>Employee care</li> <li>Health and safety</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to equal employment principles and protect employees' legitimate rights and interests</li> <li>Convene employee representative meetings and establish employee communication platforms</li> <li>Formulate competitive compensation and benefits systems and improve various benefits</li> <li>Conduct employee training, evaluations and commendations, and improve incentive and promotion mechanisms</li> <li>Organize various activities to balance employees' work and life</li> <li>Focus on occupational health, mental health, and care for employees in difficulties</li> </ul>
<b>Suppliers and partners</b> 	<ul style="list-style-type: none"> <li>Timely fulfillment of contracts</li> <li>Fair trade</li> <li>Integrity and probity</li> <li>Equality and mutual benefit</li> <li>Cooperation for mutual success</li> <li>Industry progress and transformation upgrading</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen supplier and procurement order management, emphasize contract fulfillment</li> <li>Carry out regular anti-corruption education, implement transparent procurement</li> <li>Enhance industry exchanges and cooperation, build equal and mutually beneficial cooperation mechanisms and platforms</li> <li>Conduct regular meetings, visits, and exchange interactions</li> <li>Participate in the formulation of industry standards and technical research</li> </ul>
<b>Community</b> 	<ul style="list-style-type: none"> <li>Ecological protection</li> <li>Community development</li> <li>Public welfare and charity</li> <li>Local employment and economic development</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen production safety management, green production, green office, improve energy and resource utilization efficiency, develop a circular economy</li> <li>Create green mines, green factories, promote collaborative disposal projects</li> <li>Actively participate in community building</li> <li>Actively participate in rural revitalization, public welfare, charity, and volunteer activities</li> <li>Support local education and provide employment opportunities</li> </ul>
<b>Media</b> 	<ul style="list-style-type: none"> <li>Compliance with laws and regulations</li> <li>Information disclosure</li> <li>Operating performance</li> <li>Sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>Timely, truthful, and accurate disclosure of enterprise information and operating performance</li> <li>Consciously accept media supervision, respond promptly to concerns</li> <li>Facilitate external information release channels, promote interaction and communication with the media</li> </ul>

## Identification and management of significant issues

### Identification of significant issues

To fully and accurately convey the progress of sustainable development to internal and external stakeholders, CR Bldg Materials Tech has gradually improved the identification and management of sustainable development issues. Each year, before the preparation of the sustainable development report, the Company comprehensively identifies and sorts out the important issues for the year based on the existing list of important issues, taking national policies into account, Company development, standard guidelines, benchmarking with peers, and other multi-dimensional factors, and continues to improve the important issue management model.

#### Policy trend analysis

Closely follow national macro policy requirements, profoundly research on national and provincial/municipal policies and regulations in combination with the initiatives and requirements of the building materials and cement industries, to analyze the sustainable development trends of the building materials and cement industries.

#### Corporate development planning

Identify key material issues of significant importance to the Company's strategic goals, in accordance with the strategic development planning and annual targets by CR Bldg Materials Tech.

#### Peer benchmarking analysis

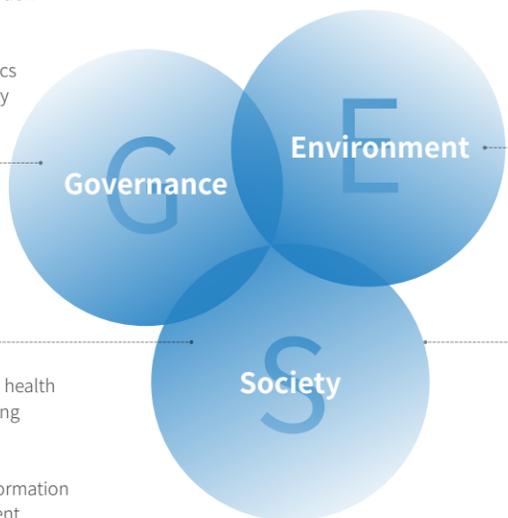
Benchmark outstanding sustainability reports of domestic and international peers to identify key issues in the building materials and cement industries and ways to respond to stakeholders.

#### Disclosure standard analysis

Follow the latest sustainable development issue management standards and information disclosure requirements, such as the Appendix C2 Environmental, Social and Governance Reporting Guide of the Listing Rules and Guidance on Climate Disclosures of the Stock Exchange of the Hong Kong Limited, Global Reporting Initiative (GRI) Sustainability Reporting Standards, Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) and Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG5.0) of Chinese Academy of Social Sciences, China Cement Association's Guidance on Social Responsibility of Cement Enterprise, Guide for Corporate Social Responsibility Reporting of Cement Enterprise, Social Responsibility Evaluation Index System of Cement Enterprises etc.

Based on the above analysis dimensions, the Company has identified 27 important issues with substantive impacts on CR Bldg Materials Tech from the environmental, social, and governance aspects.

- 1 Legal compliance and risk management
- 2 Anti-corruption and integrity promotion
- 3 Management efficacy, operational performance, and corporate value
- 4 Investor relations and business ethics
- 5 Reforms deepening and high-quality development



- 6 Environment governance and compliance
- 7 Energy, resource management and comprehensive utilization
- 8 Environmental protection technology and clean energy
- 9 Pollutant emissions
- 10 Waste disposal and comprehensive utilization
- 11 Address climate change and low-carbon development
- 12 Ecological environmental protection and biodiversity
- 13 Green mine construction

- 14 Employee rights and occupational health
- 15 Employee development and training
- 16 Employee care
- 17 Supply chain management
- 18 Innovation, R&D and digital transformation
- 19 Industry exchange and development
- 20 Promote fair competition
- 21 Product and service quality management

- 22 Smart marketing
- 23 Customer rights and satisfaction
- 24 Protection of intellectual property rights and commercialization of technological achievements
- 25 Production safety
- 26 Charity and public welfare
- 27 Support of regional development

### Prioritization of important issues

In 2023, to effectively implement the sustainable development concept, CR Bldg Materials Tech formulated a questionnaire on issue of importance survey to extensively understand the degree of attention paid by internal and external stakeholders to each important issue through email distribution, one-on-one invitations, and official WeChat account promotions. The Company collected a total of 1,746 valid questionnaires. Based on the survey results, the important issues were prioritized from the two dimensions of "importance to Company development" and "importance to stakeholders", and a materiality matrix was created. After review and suggestions from the Board of Directors, senior management, and external experts on the important issues and prioritization results, the Company identified the core important issues with high stakeholder attention and close relevance to the Company's sustainable development as the focus of information disclosure and response in the sustainable development report.

CR Bldg Materials Tech 2023 Sustainable Development Report Materiality



#### 2023

##### April

CR Bldg Materials Tech's 2022 Sustainability Report received a **double five-star** excellence rating for social responsibility and ESG standards from the China Corporate Social Responsibility Report Rating Committee.

##### June

CR Bldg Materials Tech **ranked 13th on the "China Listed Companies ESG Pioneer 100" list.**

##### August

CR Bldg Materials Tech **ranked 5th on the "China Listed Companies ESG Pioneer 50 in the Greater Bay Area" list.**

##### September

CR Bldg Materials Tech ranked 21st with a 4.5-star rating on the **"ESG Leading 100 Index for Central Listed Companies"** list. Its co-pressing responsibility practice "Cement Kiln as a 'Purifier' - Exploring a New Path for Corporate Emission and Carbon Reduction" was selected as an **outstanding ESG case.**

##### November

CR Bldg Materials Tech won the **"Running Bull Award - ESG Emissions Peaking and Carbon Neutrality Pioneer Award"**.

Responsibility honors



# Solidify the Governance Foundation

## Improving the governance system

### System construction

CR Bldg Materials Tech continues to coordinate and promote the construction of its system framework, and persistently enhances the Company's governance capabilities. Based on actual circumstances, the Company revised the "Rules for Delegation to the Chairman of the Board of Directors" and the "List of Decision-Making Matters under the Delegation of the Board of the Directors" with dynamically and promptly updated the responsibilities and authorities of the Chairman of the Board and the Chief Executive Officer. A special general meeting of shareholders was convened to revise the "Articles of Association of China Resources Building Materials Technology Holdings Limited" to adapt to the Company's name change and the latest requirements of the Listing Rules regarding shareholder communications. The Company also revised the terms of reference for each of the Board committees to further refine the authorities of the Board committees, enhance the scientific and standardized nature of decision-making and deliberations, and ensure the efficient operation of the Company's governance system.

### Organizational Structure

CR Bldg Materials Tech strictly complies with the requirements of the Corporate Governance Code set out in Appendix C1 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and the Company's Articles of Association. It has established a scientific and efficient corporate management structure, and clearly delineated the scope of authorities and responsibilities of the Board and its subordinate bodies. This forms a management mechanism with clear division of responsibilities, mutual checks and balances, and coordinated operations to ensure scientific and reasonable decision-making and maintain the company's efficient operations.



#### General Meeting of Shareholders

The general meeting is the highest authority of the Company. In 2023, the Company convened one annual general meeting and one extraordinary general meeting through a combination of online and offline formats. For the first time, shareholders were allowed to vote and raise questions online. By supporting shareholders' participation in voting through on-site attendance, proxy, or online methods, submitting written or online inquiries to the Board, and watching live broadcasts, the Company fully guaranteed all shareholders' equal and effective exercise of their rights to be informed, participate, speak, inquire, and vote, while reviewing and approving nine resolutions.

#### Board of Directors

The Board of Directors is the primary decision-making body of the Company and is accountable to the general meeting of shareholders. The Board is supported by the Chairman's meeting, the Chief Executive Officer's office meeting, and five committees, namely the Strategy and Investment Committee, Nomination Committee, Remuneration and Appraisal Committee, Audit Committee, and Risk and Compliance Committee. The committees regularly report to the Board and make proposals and discussions on matters such as internal governance, major investment activities, risk prevention, and remuneration management. In 2023, acting in the interests of all shareholders, the Board convened nine meetings, with Directors diligently fulfilling their duties by reviewing annual business plans, investment projects, financial reports, and a total of 78 resolutions on the appointment and dismissal, remuneration, and appraisal of directors and senior management. The Board also received six work reports and seven training reports.

#### Strategy and Investment Committee

The Strategy and Investment Committee is chaired by the Chairman of the Board and comprises of one executive director, four non-executive directors, and one independent non-executive director as members. It is responsible for researching the Company's strategic planning, investment projects, corporate culture, and providing recommendations to the Board. In 2023, the Strategy and Investment Committee convened a total of four meetings, and reviewed six agenda items.

#### Nomination Committee

The Nomination Committee is chaired by the Chairman of the Board and comprises of one non-executive director and three independent non-executive directors as members. It is responsible for researching the selection criteria and appointment and dismissal plans for directors and senior management, conducting annual review against the diversity of Board members and the independence of independent non-executive directors, and making recommendations to the Board. In 2023, the Nomination Committee convened seven meetings and considered fifteen agenda items.

#### Remuneration and Appraisal Committee

The Remuneration and Appraisal Committee is chaired by an independent non-executive director and comprises of one non-executive director and three independent non-executive directors as members. It makes recommendations to the Board regarding the remuneration and appraisal schemes for directors and senior management, total payroll, the Company's stock option plan and share award plan (if any), and other related matters. In 2023, the Remuneration and Appraisal Committee convened four meetings and considered seven agenda items.

#### Audit Committee

The Audit Committee is the committee of the Board responsible for financial risk control. It is chaired by an independent non-executive director and comprises of one non-executive director and three independent non-executive directors as members. The committee makes recommendations to the Board on matters such as the Company's financial statements and performance announcements, the independence and remuneration of external auditors, implements financial risk control responsibilities, and regulates decision-making on major financial matters. In 2023, the Audit Committee convened seven meetings and considered twenty-nine agenda items.

#### Risk and Compliance Committee

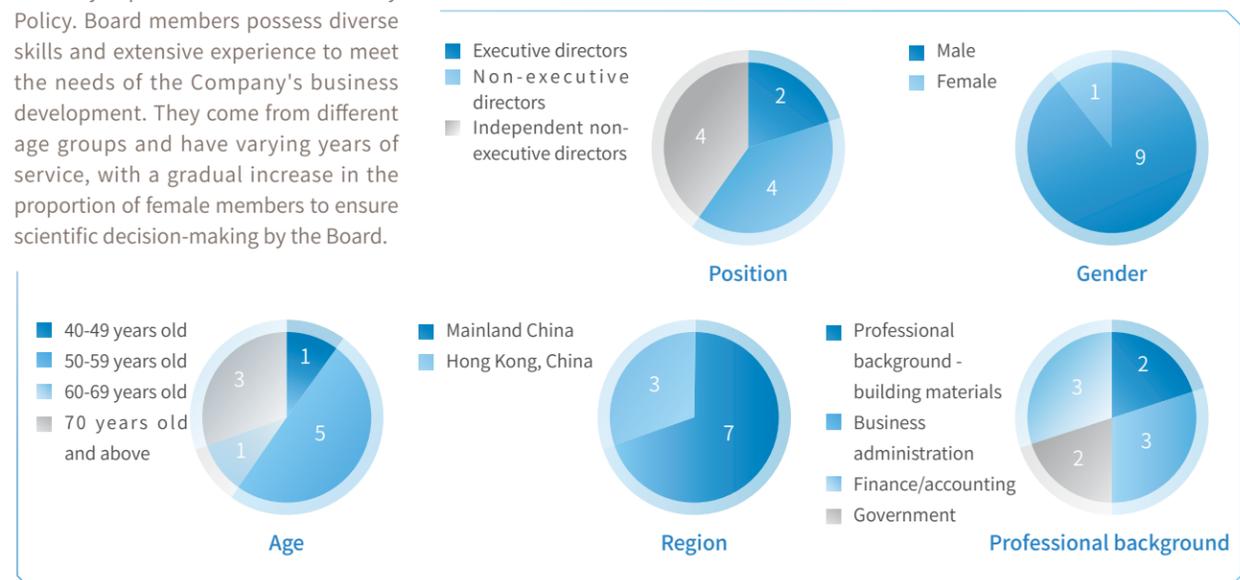
The Risk and Compliance Committee is the committee of the Board responsible for legal, compliance, internal control, and risk management. It is chaired by an independent non-executive director and comprises of two non-executive directors and two independent non-executive directors as members. The committee is responsible for supervising the Company's governance, legal compliance, risk management (including ESG risks) and internal control, and making recommendations to the Board. It also reviews the Company's sustainable development and ESG-related strategic plans, systems, implementation rules, and reports, while providing guidance on the company's ESG-related work. In 2023, the Risk and Compliance Committee convened six meetings and considered eleven agenda items.

## Board Diversity

The Board of CR Bldg Materials Tech earnestly implements the Board Diversity Policy. Board members possess diverse skills and extensive experience to meet the needs of the Company's business development. They come from different age groups and have varying years of service, with a gradual increase in the proportion of female members to ensure scientific decision-making by the Board.

As of the end of 2023

The Company's Board of Directors comprised **ten** members, including **eight** non-executive directors, accounting for **80%**.



## Board Independence

Taking full account of independence and objectivity, CR Bldg Materials Tech strictly selects and appoints independent non-executive directors in accordance with the qualification requirements stipulated in the Listing Rules, the Company's Articles of Association, and other relevant regulations. As of the end of 2023, the Company had four independent non-executive directors, exceeding one-third of the total number of directors, including one independent non-executive director who was a practicing accountant in Hong Kong. In 2023, all independent non-executive directors diligently performed their duties, actively participated in the Company's major decision-making processes, carefully reviewed various periodic reports and financial reports, carried out on-site research at grassroots business entities, and fully expressed independent opinions and views to the Company, the Board and Board committees. They also effectively safeguarded the interests of the Company and shareholders, especially minority shareholders, and played an important role in the Company's standardized operations.

### Independent Non-Executive Directors Conducted Business Research in Hunan of South China Region

From May 22 to 25, 2023, independent non-executive directors Mr. IP Shu Kwan Stephan, Madam ZENG Xuemin, and Mr. NG Kam Wah Webster led a team to conduct business research in Hunan, South China Region. They conducted in-depth inspections of the production operations and progress of projects under construction at Liangtian Cement, understood the issues and difficulties faced by the enterprise, and provided guidance for the future operations and development of Liangtian Cement.



Case Study

## Remuneration and appraisal of directors and senior management

### Management structure

The Board scientifically and effectively exercises its authority in appraising members of the senior management, with the Remuneration and Appraisal Committee specifically responsible for formulating remuneration policies and appraisal standards for Directors and senior management. The committee accordingly organizes operating performance appraisals for senior management and ensures that no relevant individuals participate in determining their own remuneration.

### Remuneration reasonableness

The Company has established a remuneration allocation mechanism based on job value, combined with performance contributions, individual capabilities, and talent development. The Remuneration and Appraisal Committee is responsible for formulating the overall remuneration policies, operating performance appraisal methods, and remuneration management measures for senior management. It implements tenure-based and contractual management for the Chief Executive Officer and other senior management, conducts annual reviews of their tenure-based operating performance pledges, and establishes differentiated appraisal mechanisms, remuneration and incentive mechanisms, and constraint mechanisms. The committee accordingly organizes operating performance appraisals for senior management.

### Remuneration transparency

Following the Listing Rules, the Securities and Futures Ordinance of Hong Kong, and other relevant regulations, the Company discloses the securities of the Company, associated corporations, and related interests held by substantial shareholders and Directors in its annual and interim reports each year. The Company regularly reminds substantial shareholders and Directors to actively report and disclose any changes in the aforementioned interests to the Stock Exchange and the Board of Directors, to ensure a high level of transparency in the Company's ownership structure and the interests held by Board members.

The Company's remuneration policy for Directors and specific remuneration data are included in the annual reports of the Company. With the authorization of the annual general meeting and after considering the prevailing market conditions and their duties and responsibilities within the Company, the Board determines the Directors' emolument. After considering the Company's performance, prevailing market conditions, and the recommendations of the Remuneration and Appraisal Committee, the Board of Directors determines the salaries, allowances, and discretionary bonuses for executive directors.

### Linking senior management remuneration to sustainable development

CR Bldg Materials Tech incorporates sustainable performance indicators, such as the establishment of the corporate governance system based on the law, green development, and compliant operations, into the existing operational performance appraisals for senior management. The Company assigns weights to two key management indicators: carbon emission intensity and comprehensive energy consumption per ton of clinker. In line with the energy conservation and emission reduction assessment requirements of the SASAC, the Company incorporates additional points or deductions related to energy conservation and emission reduction, and conducted comprehensive appraisals for the senior management.

## Development of Board of Directors

CR Bldg Materials Tech continues to promote the development of its Board of Directors system, enhances the standardization and effectiveness of system, comprehensively achieves the goals of establishing all necessary bodies, ensures complete and robust board composition, and implements the authorities of the Board of Directors. The Company consistently implements a long-term mechanism for the standardized operation of the Board of Directors, organizes the compilation of an annual work report and reports on the performance of non-executive directors, arranges interviews with external directors for the evaluation of the Board of Directors, as well as communication meetings on corporate governance, organizational control, and Board of Directors development, to ensure the scientific decision-making and effective execution of Board resolutions. The Company continuously optimizes the development of the Board of Directors and its committees, follows the "sixteen-character" guideline of "raising the stance, achieving effective penetration, promoting integration, and strengthening implementation". It formulates the Board of Directors Rectification Plan and listens to relevant departments' special reports on the rectification work of the Board of Directors, revises the terms of reference for the Board committees, and enhances the governance level of the Board of Directors. The Company deepens the authorization mechanism involving periodic reporting, tracking, monitoring, and dynamic adjustments, refines the list of decision-making and delegation matters for the Board of Directors, and further clarifies the boundaries of authority and responsibility for various governance entities, including the Board of Directors and the senior management.

## Adhering to legal compliance

CR Bldg Materials Tech strictly complies with laws and regulations such as the Civil Code of the People's Republic of China, the Company Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China, and the Anti-Unfair Competition Law of the People's Republic of China. The Company has established a compliance management system with "four pillars" covering the organizational structure, system framework, operational mechanisms, and cultural atmosphere. It has established a three-line defense for compliance management comprising business departments, functional departments, and supervisory departments. The Company strives to build a comprehensive and end-to-end compliance management system that includes ex-ante system standardization, in-process dynamic monitoring, and ex-post supervision and accountability. It also leverages information technology and digitalization to provide strong support for compliant operations.

## Improving the system framework

Based on international and domestic standards as well as internal requirements, CR Bldg Materials Tech has formulated the Compliance Manual of China Resources Building Materials Technology Holdings Limited. The Company has reviewed and issued compliance obligation lists and compliance risk identification lists in five areas: investment management, tendering and procurement, safety and environmental protection management, product quality management, and sales management, covering a total of 342 compliance obligations and their corresponding compliance risks. To further standardize and strengthen the prevention of conflicts of interest among directly managed cadres of CR Bldg Materials Tech, the Company formulated and issued the Measures for Prevention and Management of Conflicts of Interest of China Resources Building Materials Technology Holdings Limited in 2023, clarifying the red lines, reporting requirements, and declaration requirements for directly managed cadres in areas such as external equity investments, business operations, and related-party transactions. Additionally, to effectively enhance the compliance and efficiency of license management, the Company optimized and divided the License and Certificate Management System of China Resources Building Materials Technology Holdings Limited (2014 Edition) into a secondary policy, the License and Certificate Management Measures of China Resources Building Materials Technology Holdings Limited (2023 Edition)", and a tertiary system, the License and Certificate Management Guidelines of China Resources Building Materials Technology Holdings Limited (2023 Edition). The Company also formulated the List of Important Licenses for Business Entities and various workflow diagrams, comprehensively upgraded and optimized the license management system of CR Bldg Materials Tech. The original three approval processes were optimized and improved to seven processes.

## Strengthening compliance management

CR Bldg Materials Tech has deepened the construction of its compliance management system, established and improved the chief compliance officer mechanism, and appointed the Company's General Counsel as the Chief Compliance Officer. The scope of major decision-making matters requiring the Chief Compliance Officer's opinion has been clarified. In the area of tendering and procurement (including engineering and non-engineering tendering and procurement), the compliance management system has been formally implemented, with compliance red lines identified and the scope, form, and process mechanisms for the Chief Compliance Officer to issue compliance opinions clearly defined, ensuring the effective performance of duties by the Chief Compliance Officer and effective prevention and control of compliance risks. The Company has conducted an evaluation of the effectiveness of its compliance management system, carried out self-assessments on 155 evaluation indicators across four areas: overall compliance management, ecological and environmental protection, labor and employment, and information security. A total of nine areas for improvement were identified, and all improvement and rectification had been completed by October 2023.

## Building a compliance culture

The Company actively promotes a culture of legal compliance, and has organized training sessions to share and publicize typical compliance cases from central state-owned enterprises for the Company's management, all directly managed cadres, and key position holders. As part of the ISO 37301:2021 compliance management system certification project, the Company organized the certification training for the first batch of internal auditors at CR Bldg Materials Tech. It also organized training sessions to publicize various compliance management-related systems, such as the Compliance Manual of China Resources Building Materials Technology Holdings Limited, the License and Certificate Management Measures of China Resources Building Materials Technology Holdings Limited, and the Measures for Prevention and Management of Conflicts of Interest of China Resources Building Materials Technology Holdings Limited. Relevant departments and offices organized and assigned employees to attend compliance officer training camps in key compliance areas. Three additional compliance officers were nominated, and currently, CR Bldg Materials Tech has a total of 21 compliance officers. The Company organized all employees to sign the Compliance Commitment Letter, and through the effective promotion of the Compliance Manual and the comprehensive signing of the Compliance Commitment Letter, the employees' awareness of legal compliance has been continuously improved.

In 2023

CR Bldg Materials Tech conducted a total of **23** compliance training sessions covering topics such as "Investment Management Cases", "Construction Management Cases", and "Tendering and Procurement Cases", with a total of **2,200** attendees.

## Anti-unfair competition

CR Bldg Materials Tech strictly adheres to the provisions of the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Monopoly Law of the People's Republic of China, and the relevant requirements of the code of business conduct. The Company earnestly implements the principles of fair trade, actively carries out training on anti-monopoly and anti-unfair competition compliance, enhances the compliance awareness of the enterprise and its employees, and solidifies the foundation for fair operations.

In 2023

The Company was not involved in any litigation related to monopolies or unfair competition.

## Strengthening risk management

CR Bldg Materials Tech attaches great importance to risk management and internal control. A robust risk monitoring and early warning mechanism has been established. In 2023, the Company conducted quarterly risk monitoring four times and regularly carried out mid-year and annual major risk assessments. Through strict risk monitoring and effective risk assessment, potential risks during the Company's operations are promptly warned and effectively addressed and mitigated, which comprehensively enhances the Company's risk prevention capabilities. CR Bldg Materials Tech values and strengthens internal control efforts by organizing the 2023 internal control evaluation. Internal control self-assessments were conducted across wholly-owned and controlled subsidiaries within the actual operational scope of the Company. Third-party external professional institutions were engaged to conduct internal control supervisory evaluations, with a focus on identifying internal control deficiencies and promoting rectification. In 2023, the Company did not experience any major risk incidents.

## Maintaining integrity and probity

### Increasing disciplinary measures

Special campaigns were launched to address issues such as "taking advantage of the enterprise for personal gain", corruption in rural revitalization, and cross-border corruption, with resolute investigation and punishment of corruption problems.

In 2023

The Company imposed Party and administrative disciplinary actions on **71** individuals, organized the handling of **126** individuals, and recovered illicit gains totaling RMB **5.1416** million; audit accountability was pursued for a total of **169** person.

### Enhancing the "Grand Supervision" system

The Work Measures for the "Grand Supervision" System of China Resources Building Materials Holdings Limited have been formulated to further improve four major mechanisms: the meeting mechanism, information sharing mechanism, lead transfer mechanism, and joint supervision mechanism. The Company has continuously enhanced supervision measures in various business areas through the improvement of information systems, data models, and working mechanisms, while fully leveraging the specialized supervisory role of discipline inspection agencies and extending their reach to the grassroots level.

In 2023

The Company urged grassroots entities to conduct **171** risk prevention and control supervision inspections, identified **706** issues, completed **667** rectifications, and promoted the improvement of **10** institutional mechanisms.

### Cultivating a culture of integrity

Integrity education and warnings were regularly conducted to strengthen the ideological defense of cadres and employees. The executive Directors led the entire Company in convening two integrity education meetings to report on typical cases. The second "Integrity Culture Month" event was held, covering all employees, employees' families, suppliers, customers, and other external partners, as well as joint ventures.

In 2023

Entities at all levels organized **373** anti-corruption training sessions with **18,627** attendees.



Shantou Cement held the first integrity education meeting in 2023



Luchuan Cement held the second integrity culture month event and created integrity paintings

## Improving the whistleblowing mechanism

In 2023

The Discipline Inspection

Commission received **14** complaints and report leads through petition letters and whistleblowing.

The Rules for Investigative Teams was formulated, and the "Three Meetings" mechanism (i.e., kick-off meeting, analysis meeting, and debriefing meeting) was set up. Seven discipline inspection management regulations, including the Disciplinary Personnel Code of Conduct of China Resources Building Materials Technology Holdings Limited, were revised and issued to improve the discipline inspection system. Channels such as online, telephone, mail, and complaint boxes were established to facilitate the acceptance of complaints and reports. A standard interview room was set up and furnished with professional equipment to ensure normal operation. Simultaneously, the protection of whistleblowers' information was strengthened. Individuals involved in framing or false accusations were seriously investigated, and efforts were made to exonerate and restore the reputation of those wrongfully accused, thereby safeguarding the enthusiasm of cadres for work and entrepreneurship.



The official website has established a contact channel for addressing the issue of overdue accounts for small and medium-sized enterprises.

## Honor Column

The Audit Department of CR Bldg Materials Tech was awarded the honor of "National Advanced Collective for Internal Audit (2020-2022)".



## Carrying forward the DNA of reform

CR Bldg Materials Tech has implemented a new round of reform and deepening actions based on the foundation of the three-year reform action for state-owned enterprises. Guided by the principles of "Value Reshaping", "Business Reshaping", "Organizational Reshaping" and "Spirit Reshaping", the Company actively serves national strategic goals, adapts to technological development trends, and positions itself as a technology intensive building materials enterprise, and renamed itself as CR Bldg Materials Tech. The Company accelerates the development of emerging businesses, strives to build a technological innovation system focused on new technologies and new materials, and vigorously promotes the intelligent upgrading of traditional industries such as basic building materials. Leveraging the "Runfeng Wisdom" vertical industry industrial internet platform, CR Bldg Materials Tech has formed a smart combination of "1 platform, N bases, and M intelligent manufacturing scenarios". In the continuous process of promoting digitalization and intelligent upgrading, the Tianyang Base successfully obtained the certification as the first "Lighthouse Factory" in the global building materials industry, which is a vivid practice of CR Bldg Materials Tech's aspiration to "become a pioneer in the digital transformation of central enterprises".

## Protecting shareholders' rights and interests

### Safeguarding shareholders' rights

CR Bldg Materials Tech strictly convenes and holds shareholders' meetings in accordance with relevant regulations, such as Listing Rules and the Company's Articles of Association, to ensure that resolutions are made at shareholders' meetings in a fair and open manner, thereby protecting and safeguarding shareholders' rights and interests. Shareholders can submit inquiries or suggestions to the Board of Directors through written correspondence, email, or attending shareholders' meetings. Small and medium shareholders can also attend shareholders' meetings in person or by appointing representatives to exercise their voting rights, submit inquiries or suggestions to the Board of Directors, and nominate candidates for directorship or convene extraordinary general meetings, subject to the provisions of the Company's Articles of Association.



CR Bldg Materials Tech held its annual general meeting of shareholders (Shenzhen venue)



CR Bldg Materials Tech convened an extraordinary general meeting of shareholders (via online electronic meeting system)

## Emphasizing information disclosure

Information disclosure is an important window for investors and other stakeholders to obtain information about listed companies. CR Bldg Materials Tech strictly adheres to the principles of truthfulness, accuracy, timeliness, and reliability as required by the Listing Rules, and its appendices, in the establishment of various smooth communication channels and disclosure of major events related to operations, governance, environmental protection, and other important matters, to deepen investors' understanding and recognition of the Company. The Company prepares and publishes quarterly reports, interim reports, and annual reports, regularly updates the investor relations management column on its official website, and promptly discloses information such as the Company's development strategies and listed company results to enhance the level of information disclosure. During the year of 2023, the Company continuously fulfilled its information disclosure obligations as a listed company, published 75 documents at the Stock Exchange of Hong Kong Limited, and did not receive any administrative penalties from regulatory authorities due to issues related to information disclosure.

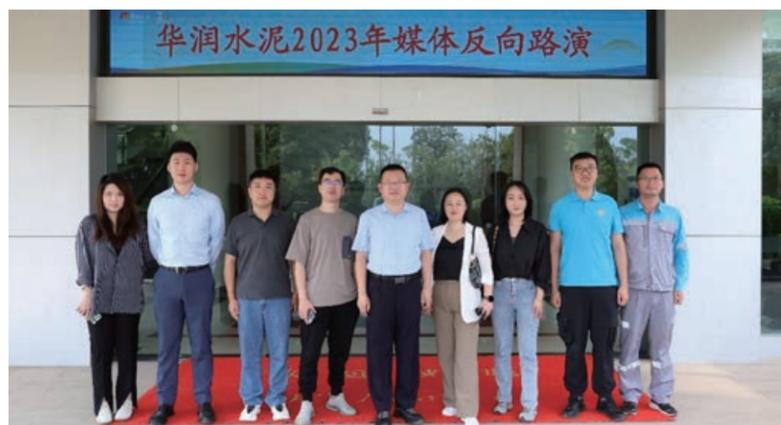
## Enhancing communication with investors

CR Bldg Materials Tech highly values communication and interaction with investors. During the reporting period, the Company utilized various channels, including the official website, telephone conferences, video conferences, roadshows, investor presentations, investor meetings, investor forums, and email inquiries, to promote investors' deeper understanding of the Company's operations and development. The Company continuously strengthened communication with investors and shareholders, and ensured that overseas shareholders and investors were promptly and fully informed about the Company's business operations and development strategies. In 2023, the Company organized and attended 4 result presentations, 8 investment banking strategy meetings, 17 group roadshows, 1 reverse roadshow, and 63 one-on-one roadshows, met or had telephone exchanges with over 600 fund managers, analysts, and other investors. The Company conducted international roadshows in Singapore, engaged in in-depth discussions with renowned international asset management companies, hedge funds, and other top-tier investment institutions, and actively attracted high-quality long-term funds.

### CR Bldg Materials Tech successfully hosted the 2023 reverse roadshow event

Case Study

From September 24 to 26, 2023, CR Bldg Materials Tech held the 2023 reverse roadshow event at the Tianyang Base in Guangxi, where it actively promoted the Company's green, low-carbon, and technological development concepts. The event showcased from multiple perspectives the transformation and development journey, as well as the current business progress, of Tianyang Cement, the first "Six-Star Benchmark Factory" of China Resources Group to achieve 5G full coverage and fully automated production. The event successfully attracted media and analysts from domestic and foreign funds and securities firms, receiving widespread praise.



Scan the QR code to read more:  
CR Bldg Materials Tech held 2023 annual results announcement and media meeting

### Honor Column

In June 2023, CR Bldg Materials Tech received the **9th Investor Relations Awards from the Hong Kong Investor Relations Association (HKIRA)**.



## Commitments and Fulfillments

### 2023 Commitments

- Continuously improve the "Grand Supervision" system and enhance supervision effectiveness
- The Disciplinary Committee fulfills the responsibility of intra-Party supervision and rigorously strengthens grassroots-level supervision
- Regular integrity education and warnings are conducted to fortify the ideological defenses of cadres and employees
- A comprehensive approach is adopted to promote the mechanisms of "not daring to be corrupt, not being able to be corrupt, and not wanting to be corrupt"
- Reporting channels are unblocked, and complaint handling is categorized and standardized

### 2023 Fulfillments

- Formulated the Work Measures for the "Grand Supervision" System of China Resources Building Materials Holdings Limited
- Conducted special rectifications on issues such as "taking advantage of the enterprise for personal gain", corruption in rural revitalization, and cross-border corruption
- Throughout the year, **171** risk prevention and supervision inspections were conducted at the grassroots level, **706** issues were identified, **667** rectifications were completed, and **10** systems and mechanisms improved
- **71** individuals received Party and administrative disciplinary actions, **126** individuals were investigated, and relevant personnel involved in cases were prompted to return illicit gains totaling RMB**5.1416** million. Reporting channels such as websites, hotlines, complaint mailboxes, and complaint boxes were established. The official website set up a complaint channel for work related to clearing arrears owed to small and medium-sized enterprises

### 2024 Commitments

- Promote the implementation and optimization of the "Grand Supervision" system
- Focus on key areas, strictly investigate and punish cases of "taking advantage of the enterprise for personal gain", "petty corruption", and violations of the spirit of the Central Committee's eight-point regulation, and create a strong deterrent effect of punishing all corruptions
- Deeply implement the reform and deepening actions to support the realization of the "14th Five-Year Plan" strategic goals

# 02

## Crafting excellence and leading industry prosperity

### Substantive topics:

- Supply chain management
- Research innovation, digital transformation
- Industry exchange and development
- Promote fair competition
- Product and service quality management
- Smart marketing
- Customer rights and satisfaction
- Protection of intellectual property rights and commercialization of technological achievements

CR Bldg Materials Tech regards "technological innovation" as one of its core competences. The Company strengthens the development of key core technologies, accelerates the introduction and cultivation of innovative talents, promotes the transformation and upgrading of traditional industries, catalyzes product innovation through industrial metamorphosis, and collaborates with customers and partners to create a win-win sharing ecosystem. It is committed to establishing an outstanding example of intelligent manufacturing in the building materials industry.

### United Nations Sustainable Development Goals (SDGs):



Responsibility  
column

# Building a lighthouse for the building materials industry, illuminating the future of intelligent manufacturing

On December 14, 2023, the World Economic Forum (WEF) announced a new batch of members of the Global Lighthouse Network. Tianyang Cement, a subsidiary of CR Bldg Materials Tech, was selected as an "Advanced 4th Industrial Revolution (4IR) Lighthouse", and became the first "Lighthouse Factory" in the global building materials industry.

### Knowledge Base

The "Lighthouse Factory" selection is jointly conducted by the World Economic Forum in Davos and McKinsey & Company, with an extremely rigorous review process. The selected enterprises are accredited as "the world's most advanced factories" and serve as exemplary models of "digital manufacturing" and "globalized 4.0," representing the highest level of intelligent manufacturing and digitalization in today's global manufacturing sector.



Scan the QR code to read more  
The first "Lighthouse Factory" in the global building materials industry was unveiled in Baise, Guangxi Province



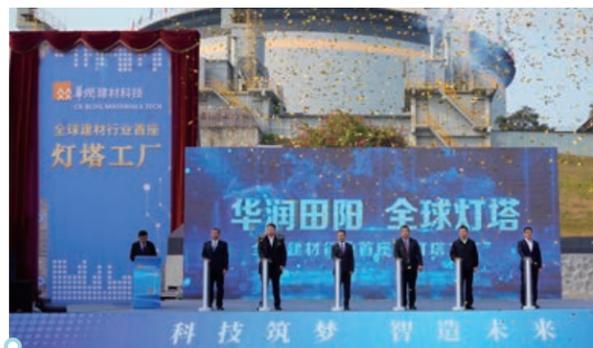
## The journey is long, but with perseverance, the destination is reachable

As "the world's most advanced factories", "Lighthouse Factories" seem difficult to associate with the traditional manufacturing industry of building materials. However, CR Bldg Materials Tech, with the mission of "leading the industry's digital transformation", embarked on the "Lighthouse Factory" construction journey without hesitation, a journey that lasted six years.

In 2018, CR Bldg Materials Tech began exploring the construction of an intelligent factory, formed an overall plan for intelligent manufacturing with "one body and four layers". Tianyang Cement in Baise, Guangxi, was selected as the pilot for an end-to-end intelligent factory. Focusing on six major business areas: EHS management, mining, production, quality, equipment, and shipment, the Company set the five targets of "manageable EHS, transparent production, stable quality, connected equipment, and reduced energy consumption" to develop intelligent manufacturing solutions and promote the construction of an intelligent factory.



Overview of Tianyang Factory



Unveiling Ceremony of "Lighthouse Factory"

In July 2020, the first phase of the Tianyang intelligent manufacturing pilot project went online. Based on advanced technologies such as advanced automation, the Internet of Things, artificial intelligence, and 5G, twelve 4IR use cases were deployed in mining and cement production. Continuous efforts were made to deeply apply supporting subsystems for the second phase of intelligent manufacturing. By 2022, more than 30 digitalization and intelligent use cases were deployed, achieving steady increases in per capita cement output and quality, as well as effective reductions in carbon dioxide emissions, promoting the realization of resource-saving, environmentally friendly, and sustainable manufacturing processes. However, the path to building a "Lighthouse Factory" was not easy. In the pre-assessment carried out in June 2022, only 3 out of 14 assessment standards met the advanced criteria, with several other important indicators still failing to meet the "Lighthouse Factory" requirements.



Central Control Room of Tianyang Cement



In September 2023, the World Economic Forum expert panel made on-site evaluations of Tianyang Cement's digital use cases

In March 2023, CR Bldg Materials Tech officially initiated the application for the "Lighthouse Factory" title. Over the course of nine months, the Company focused on driving transformations and optimizations across multiple aspects, including overall production efficiency, production operation costs and efficiency, product quality, and customer service. Significant improvements were achieved in 11 KPIs and 15 sub-KPIs related to labor efficiency, finance, operations, and sustainability. With the determination and perseverance to "see the blueprint through to the end", the Company successfully completed the "Lighthouse Factory" journey.

## Act with conviction, and perseverance will lead to success

In fact, the motivation and momentum for the digital and intelligent transformation of cement factories carrying the imprint of "traditional industries" are noticeably lower than those of other manufacturing industries. However, Tianyang Cement's success in "finding a new path" is underpinned by the integration of digital transformation into all aspects of the Company's strategic development, management efficiency improvement, operational optimization, and industrial upgrading.

### Digital Mining

In traditional mining, technicians need to go to the mining site, lay out blast holes, engage in manual measurements, manual calculations, and manual drafting. With digital mining, one only needs to outline the blasting area on the system, set the spacing between blast holes, and output the blast hole coordinates to the drilling machine for drilling, and the blast hole depth is accurate to the centimeter level. Simultaneously, the system can automatically calculate the dosing amount based on the blast hole depth and output the blasting design instructions and blasting drawings.

### Intelligent Blending

Manual experience-based blending production methods often result in large fluctuations in ore quality, excessive waste generation, and low resource utilization rates. Intelligent blending now employs digital twin and 3D modeling technologies to create virtual simulations of ore bodies, establishes blending units based on ore grades, automatically generates optimal combinations of mining locations and quantities, and achieve zero ore resource waste.

### Intelligent Scheduling

Traditional mine scheduling requires manual surveying, formulating transportation plans, issuing loading instructions, and recording output, followed by assigning drivers to operate diesel mining trucks for transportation. Currently, the system can automatically complete the above processes and match 5G and V2X-enabled pure electric unmanned mining trucks, enabling fully automated loading, transportation, and unloading through intelligent speed control, giving way/detour obstacle avoidance, and automatic parking functions. Simultaneously, three-dimensional simulation technology is utilized to monitor the operating conditions of loading equipment, transportation equipment, and loading/unloading points in real-time, and to automatically record information such as load weight, speed, output, and fuel consumption.

### Precise Control

In the kiln and mill stages, combining big data analysis and AI algorithms, 27 Advanced Process Control (APC) systems are deployed at key process points, to enable rolling optimization and automatic adjustment of key kiln parameters, and effectively reduce the workload of central control operators. Simultaneously, the large-scale use of more than five alternative fuels assists the Company in achieving a low-carbon and green transformation and upgrading.

The above highlights are just a few examples of the achievements brought by the "Lighthouse Factory" to Tianyang Cement. As of the end of 2023, by utilizing digital use cases and advanced technologies, Tianyang Factory has achieved a **24%** reduction in carbon dioxide emissions, a **105%** increase in per capita cement output, a **56%** decrease in unplanned equipment downtime, and a **25%** improvement in quality stability.

Tianyang Cement's 5G Intelligent Unmanned Mining Trucks



## Pursue the path illuminated by the light

Now that Tianyang Cement has achieved intelligent manufacturing across the entire cement production process, it has "transformed" into a "Lighthouse" within CR Bldg Materials Tech, and is promoting the application of these digital and intelligent upgrades to other production bases to enhance the Company's overall digital transformation efficacy. **As CR Bldg Materials Tech's Chief Executive Officer, Jing Shiqing, stated: "The Company boosts 49 clinker production lines and 101 cement production lines. If they all become intelligent manufacturing facilities, the traditional industry will be completed transformed and upgraded".**

We have previously described such a scenario: Ores are mined based on 3D modeling, unmanned mining trucks deliver the materials, artificial intelligence controls the equipment, robots automatically inspect products, experts remotely monitor equipment, and customers can place orders online and have their orders loaded by unmanned systems. Today, starting from the Tianyang "Lighthouse Factory", CR Bldg Materials Tech has gradually realized this vision and is dedicated to building a batch of intelligent factories that meet the lighthouse factory standards amidst the digital wave, continuously creating history in intelligent manufacturing for the building materials industry, and leaving a bold and vivid mark on the path of new industrialization in the industry!



Scan the QR code to read more

[McKinsey's Interview with Ji Youhong, Chairman of the Board of Directors, CR Bldg Materials Tech: How the Traditional Manufacturing Industry Makes Itself High-end-oriented, Intelligent-targeted and Green-based](#)

## Innovation Leads Development

### Innovating the management system

In 2023

CR Bldg Materials Tech invested

**RMB209 million** in research and development, with an R&D intensity of **0.76%**

CR Bldg Materials Tech has established and improved its scientific and technological innovation management system, revised the Research and Development Project Management Measures of China Resource Building Materials Technology Holdings Limited and the Scientific and Technological Talent Accreditation Measures of China Resource Building Materials Technology Holdings Limited. This has formed an innovative landscape with concerted efforts in areas such as academician cultivation, platform construction, intellectual property management, and innovative culture development. To encourage scientific and technological innovation personnel to take on responsibilities and strive for excellence, and to create an atmosphere conducive to reform, innovation, and entrepreneurship, the Tolerance and Correction Implementation Measures of China Resource Building Materials Technology Holdings Limited have been formulated.

“ **Stakeholder Testimonials**

"Our vision is to become a world-class building materials technology company that is respected globally. What shall we lead the industry with? Transformation and innovation-driven development is the answer we have found."

— Ji Youhong, Chairman of the Board of Directors, CR Bldg Materials Tech

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### Strengthening team building

CR Bldg Materials Tech is accelerating the construction of a new model of industry-academia-research collaboration, vigorously promoting the development of innovation platforms and talent teams, widely carrying out skills competitions, talent cultivation, promoting in-depth integration of industry, academia, and research, and vigorously creating an atmosphere in which innovation is encouraged and people dares to and embraces innovation. In 2023, the Guangxi Research and Development Company successfully obtained approval for a postdoctoral innovation practice base. The Company's Chief Expert, Tao Congxi, authored the book Exploration of Theories and Practices for Carbon Neutrality in the Cement Industry, which was published by Wuhan University of Technology Press.

As of the end of 2023, CR Bldg Materials Tech has a pool of **607** scientific and technological talents, including 2 scientific and technological leaders at the China Resources Group level, 6 at the company level, 6 scientific and technological backbone talents at the company level, and 26 young scientific and technological talents at the company level. Among the 81 full-time research and development personnel, there are 5 professor-level senior engineers, 17 doctors, and 48 masters. Additionally, CR Bldg Materials Tech has initiated the recommendation process for jointly cultivating part-time doctoral students with universities, providing strong talent support for innovation-driven development.

#### CR Bldg Materials Tech's "Runlan Laboratory" was officially unveiled

On August 15, 2023, CR Bldg Materials Tech's "Runlan Laboratory" was officially unveiled, with the Company's scientific and technological department's research and development laboratories being collectively named the "Runlan Laboratory". Taking the establishment of the "Runlan Laboratory" as a starting point, CR Bldg Materials Tech will closely focus on the transformation of new materials. The Company will continue to improve the scientific research mechanism, strengthen the construction of scientific and technological talent teams, enhance the capability for scientific and technological innovation, and it is committed to developing the "Runlan Laboratory" into a world-class laboratory for material research and development.



Case Study



CR Bldg Materials Tech Holds the Finals of the 8th "RunFeng Cup" Innovation Competition

## Innovative research and development and achievements transformation

CR Bldg Materials Tech continuously focuses on innovative product and technology research and development. It has independently developed specialized thermal equipment for treating heavy, difficult-to-burn, and low-to-medium calorific value solid wastes from household waste - the cyclonic furnace, as well as specialized thermal equipment for treating light, loose, and easily combustible biomass solid wastes - the progressive furnace.

CR Bldg Materials Tech has also developed proprietary in-situ carbon dioxide enrichment process reengineering technology and carbonated aerated concrete products, and has built a carbon utilization research platform at its Fengkai base, where it realizes an integrated industrial process of carbon capture and utilization, and creates a demonstration line for carbon neutrality in the cement industry.

The Company has also developed and promoted the application of raw meal roller presses and energy-saving and carbon reduction technologies for cement grinding.

Additionally, it has developed built-in mixture workability testing equipment, which can be combined with existing commercially available intelligent equipment to build new intelligent production lines.

It has achieved large-scale application of cement carbon reduction grinding aids, and its sound-insulating coatings are marketable. High-quality disposal products from engineered stone sludge have been trialed in downstream applications, and the color software has been delivered for trial use. The Company continues to promote the implementation of projects related to 3D printing, functional coatings, new wall materials, high-quality utilization of sludge, and carbon capture from steel slags.

Moreover, the Company is vigorously exploring new industries and seizing new opportunities by conducting feasibility studies on silicon-based materials, basalt materials, energy storage battery materials, perovskite solar cells, and aerogel materials, and those endeavors provide technological support for corporate transformation and upgrading.

CR Bldg Materials Tech is unceasingly accelerating the implementation and promotion of innovative ideas and achievements. In 2023, the Company achieved a breakthrough and started to supply cement to hydropower projects in Sichuan, Yunnan's Tibetan regions, and Tibet, secured the supply rights for medium and low-heat cement to five hydropower projects, including Rumei Hydropower Plant, Xulong Hydropower Plant, Lawa Hydropower Plant, Tuoba Hydropower Plant, and Yebatan Hydropower Plant. This amounted to a supply of 300,000 tons of "Runfeng" medium and low-heat cement throughout the year.

**The "Runpin" inorganic engineered stone project won the Gold Award at the 6th "Huabiao Cup"**

Case Study

On May 6, 2023, the Xi'an International Convention and Exhibition Center project submitted by Shenzhen Runfeng New Materials Technology Company Limited, a subsidiary of CR Bldg Materials Tech, was awarded the gold prize in the 6th "Huabiao Cup" for Quality Stone Decoration Engineering Awards. This marks the first time an engineered stone enterprise has received the prestigious "Huabiao Cup" accolade.



Xi'an International Convention and Exhibition Center project

The Xi'an International Convention and Exhibition Center project utilized approximately 43,000 m<sup>2</sup> of "Runpin" inorganic engineered stone as indoor wall and floor decoration materials. This award is another achievement for the Company's "Runpin" inorganic engineered stone after receiving certifications for advanced international scientific and technological achievements, the "China Building Materials Federation - China Silicate Society Science and Technology Progress Award for Building Materials" and other industry accolades.

**Promoting digital development**

The Company has established digital standard solutions for new business models, completed the coverage of basic information systems for **19** new bases

CR Bldg Materials Tech has incorporated "Leading Digital and Intelligent Transformation" into its corporate mission. In combination with the requirement of empowering sustainable development through digitalization, the Company is continuously promoting the application and development of intelligent manufacturing. The Company has established digital standard solutions for new business models, completed the coverage of basic information systems for 19 new bases, including those for aggregates and engineered stone materials. This rapidly achieves the standardized actions of "business online, management standardization, and business-finance integration", enhances operational control capabilities and reduces corporate management costs. The Company is also promoting the construction of information technology infrastructure for its business in Hong Kong, customizing an accounting system for Hong Kong, piloting its launch at Redland Concrete, and empowering rapid business development through digitalization.

**Intelligent design and preparation system for engineered stone colors:** The Company builds a digital and intelligent platform for its engineered stone business, adopts real-time rendering technology and machine vision technology to realize core functions such as color design and artificial stone formula recognition within the system. The innovative technology and products have been exhibited externally at the sales department of the Functional Building Materials Division and the Xiamen Stone Fair, and have been applied in color research and development scenarios, effectively enhancing the Company's influence in the engineered stone materials business and improving the color matching efficiency.

**Demolding-free technology for prefabricated components based on 3D printing:** Through the research, development, and combination of relevant technologies such as materials science, robot control, and software programming, the Company has developed 3D printing technology for concrete formwork of precast components, and effectively addressed the pain points of difficult demolding and high costs for prefabricated components. Currently, multiple precast stair components have been trial-produced and applied in prefabricated construction sites.

**Honor Column**



"Full-Process Intelligent Manufacturing Scenario Platformization and Integration" won the First Prize in the inaugural "Professional Competition of State-owned Enterprises on Digital Scenario Innovation".



"New Mode of Intelligent Operation and Maintenance for Manufacturing, Production and Operation Equipment" won the Second Prize in the inaugural "Professional Competition of State-owned Enterprises on Digital Scenario Innovation".



"Financial Sharing Facilitating Digital Transformation of Enterprises in the Cement Industry" won the Third Prize in the inaugural "Professional Competition of State-owned Enterprises on Digital Scenario Innovation".

The case "From Existence to Excellence: Exploring the Construction of a Freely Combinable, One-Click Audit Element Model & Mode" was successfully selected as a "leading" benchmark case for audit digitalization in 2023.



"Systematically Promoting Digital Transformation, Empowering High-Quality Development with Digital Intelligence" was selected as an "Outstanding Case of National Enterprise Digitalization Construction in 2023".

The "Intelligent Factory Solution for the Manufacturing Industry Based on 5G + Industrial Internet" was shortlisted in the "Next-Generation Mobile Communication Track" of the 4th Central Enterprise Innovation and Creativity Competition hosted by the State-owned Assets Supervision and Administration Commission of the State Council.

The "5G Fully Connected Factory Empowering Smart Port Application Project" was selected for the "2022 Industrial Internet Pilot Demonstration List".

## Protecting intellectual property rights

CR Bldg Materials Tech attaches great importance to the protection of intellectual property rights. It implements the Intellectual Property Management System, Patent Management System, and Brand Rights Protection Guidelines, and has formulated the Intellectual Property Management Measures of CR Bldg Materials Tech to further standardize the intellectual property management system and strengthen risk prevention measures. The Company respects the intellectual property rights of others, includes relevant intellectual property clauses in cooperation contracts, and has them reviewed by the Legal and Compliance Department. While protecting the Company's intellectual property rights, it effectively prevents the legal risks of infringing upon others' intellectual property rights.

As of the end of 2023	The Company held <b>322</b> valid patents	including	<b>59</b> invention patents and <b>263</b> utility model patents	With an effective invention patent ratio of <b>18.32%</b>
In 2023	<b>32</b> new patents were granted		An increase of <b>11.00%</b> in the total number of valid patents being held compared to the previous year, and <b>32</b> new journal articles were submitted for publication	

## Pursuing Craftsmanship and Quality

### Emphasizing quality assurance

As of the end of 2023

all cement production bases of the Company had obtained ISO 9001:2015 Quality Management System certification.

In 2023

the Company did not experience any incidents of recalling sold or delivered products due to safety, health, or quality reasons.

### Product quality management

CR Bldg Materials Tech strictly adheres to the Product Quality Law of the People's Republic of China and has formulated the Basic Building Materials Production Process Management Measures of China Resources Building Materials Technology Holdings Limited, Grinding Aid (Fuel) Management Regulations of China Resources Building Materials Technology Holdings Limited, which cover quality standards for raw materials, coal, raw meal, and clinker.

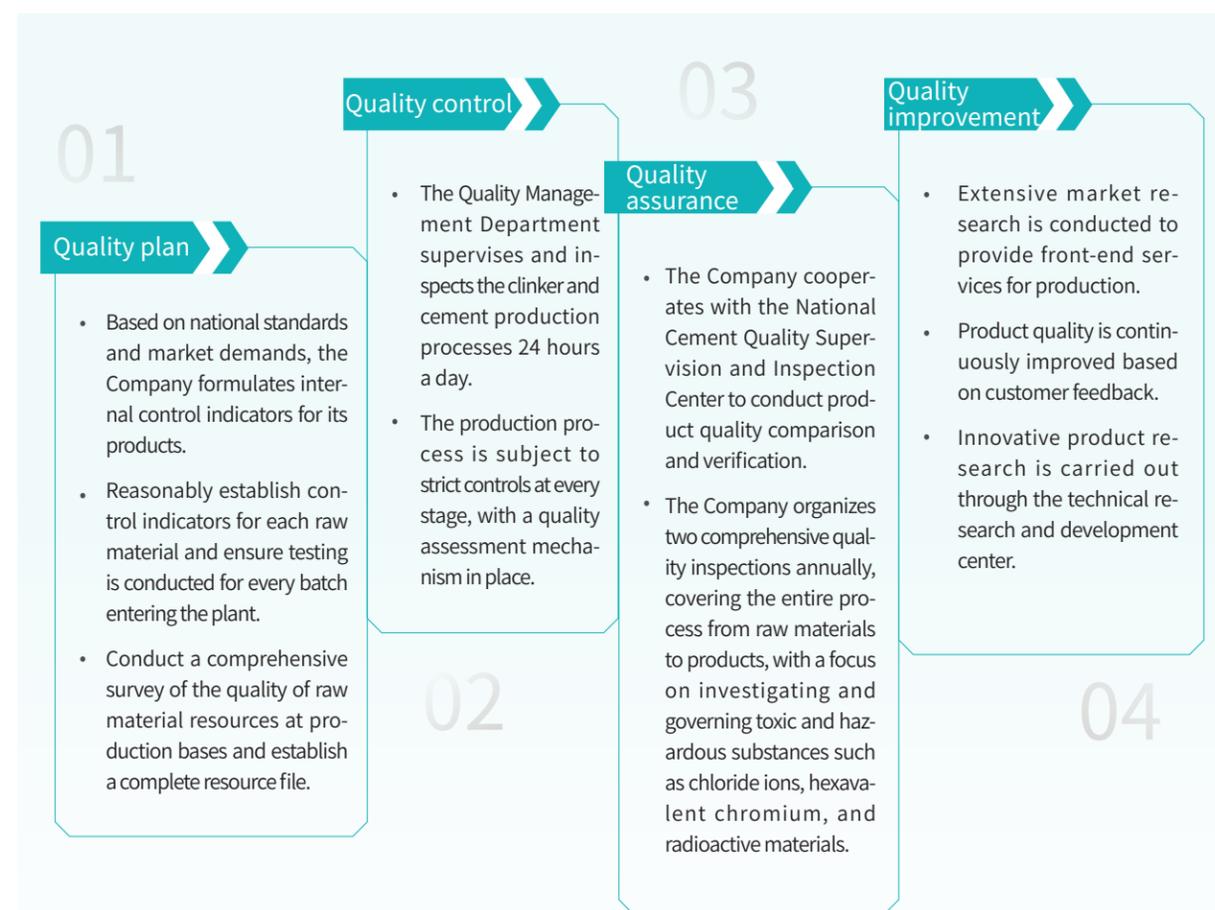
The Company continuously carries out quality improvement campaigns, conducts quarterly quality inspections of cement and concrete products, and strengthens the inspection of raw materials and quality control of products at each stage of the production line.

CR Bldg Materials Tech strictly controls product quality and has established quality incident management standards. It analyses quality incidents, and provides solutions for handling non-conforming products, compensation standards, recall mechanisms, and handling processes. If non-conforming products are found to have been delivered or if serious quality issues occur during product usage, the company will immediately notify relevant customers to stop using or isolate the affected batch of products, organize the recall of unused products from that batch, confirm and compensate customers for losses, investigate and analyze the quality incident, formulate rectification actions and affix responsibilities, and confirm the effectiveness of the corrective actions.

The Company has independently developed an intelligent quality management system to further improve the quality control system during the production process and the new product research and development management system. Customers can view product quality inspection information online and print test reports.

It actively assists customers in investigating the causes of quality issues during product usage and ensures that corrective actions are effectively implemented.

### The Company's product quality inspection process:



Fengkai Cement and Shangsi Cement won the "Special Award" in the 19th "Meinolf Cup" National Cement Quality Indicator Comparative Inspection in 2023.

## Enhancing product performance

CR Bldg Materials Tech focuses on maintaining and improving product performance, and continuously invests efforts in the specialized and new functional building materials segments.

In 2023, the Company continued to promote the "Strong Transportation Country" project, continuously optimized the performance of its "Runfeng High-Performance Road Silicate Cement" product, which was successfully applied in Changle Airport Phase II Runway Project in Fujian and listed as a key recommended cement for road construction in Fujian Province.

The Runfeng nuclear cement and prestressed cement products, with their outstanding performance, are currently continuously used in important nuclear power plant structures such as the conventional island, nuclear island interior, and nuclear island containment of multiple new coastal nuclear power projects in China.

## High-standard and high-quality products contribute to Shanghai Suhewan MIXC World

Case Study

"Runpin" has been actively promoting the outdoor application of engineered stone materials with adaptation to harsh outdoor environmental conditions and excellent weather resistance. Suhewan MIXC World is a key project in Shanghai, and the outdoor plaza floor uses the "Runpin" engineered stones and Suhewan limes, both of which feature colorful and vibrant aggregates. The floor materials for this project are non-standard rectangular slabs, using a unique irregular interlocking processing technique with a high degree of difficulty. It is precisely due to strict process requirements of "Runpin" that the project ultimately presents an extraordinary visual effect to the public.



## Stakeholder Testimonials

"The 'Runfeng' P.O42.5 cement produced by China Resources Hongshuihe Base has obvious advantages in terms of performance and stability. From the start of the project until now, customers have been extremely satisfied with both the product quality and supply services. CR Bldg Materials Tech's production bases have a guaranteed supply, and there has never been a situation where insufficient supply affected the project progress. They are a reliable and qualified partner".

— Liu Tong, Project Manager of the Shanglin-Hengxian Expressway Project

## Enriching product categories

CR Bldg Materials Tech focuses on enriching the category of basic building material products. It has developed and supplied specialized cement products such as nuclear prestressed cement for nuclear island containment grouting, slow-setting cement for airport pavement base layers, and rapid-hardening cement suitable for brick plants and precast component plants with rapid setting requirements. The Company continuously develops and optimizes medium and low-heat cement and medium-heat concrete products, supports the construction of major regional projects such as the Sichuan-Tibet Railway, hydropower plants in Sichuan and Tibet, and Pinglu Canal in Guangxi, effectively extends the industrial chain, enriches product categories, and expands application scenarios.

In terms of functional building material products, Runpin engineered stone has gradually established a comprehensive product system based on application scenarios, colors, prices, and other dimensions. Runpin tile adhesive has constantly enriched its diversified supporting products, including high-strength interface agents, colored reinforcing agents, leak sealants, backings, anti-seepage mold-resistant sealants, and waterproof coatings. The Company actively researches and promotes other functional building material products such as ALC adhesives, floor sound insulation coatings, and self-cleaning coatings.

## Promoting brand building

CR Bldg Materials Tech vigorously promotes brand building and continuously leverages the leading roles of its two major product brands, "Runfeng" and "Runpin". In 2023, the Company held anniversary celebrations for both the "Runfeng" and "Runpin" product brands and released a "Grand Marketing System Construction" work plan to all customers. Uniting the collective strength of "Runfeng" and "Runpin" as the core, it leads the coordinated development of cement, aggregates, concrete, engineered stone materials, tile adhesives, and other businesses.



CR Bldg Materials Tech held a brand anniversary and customer appreciation event themed "Riding the Wave, Winning the Future"

## Protecting customer rights and interests

In 2023

The Company did not experience any network information security incidents or violations of customer privacy.

### Adhering to fair trade

CR Bldg Materials Tech upholds the principles of equality, voluntariness, equivalence, fairness, integrity and credibility throughout cooperation with customers. The Company continuously strengthens the development of channel customers, end-users and sales teams. Customers and the Company exercise rights and obligations equally, eliminate unscrupulous acts like compulsory sales, and strive to create a partnership based on equality, transparency and mutual respect.

### Ensuring information security

CR Bldg Materials Tech carries out customer information protection in accordance with the Confidentiality Management Regulations of China Resources Building Materials Technology Holdings Limited and Commercial Secrets Management Measures of China Resources Building Materials Technology Holdings Limited. Customer information is included in the Company's commercial secrets protection scope, with dedicated personnel responsible for collecting, filing, updating information, and setting corresponding information query and export permissions. Information system defense capabilities are enhanced to ensure customer information security.

### Strengthening marketing responsibility

CR Bldg Materials Tech insists on providing accurate product promotion, producing product manuals, promotional materials etc. in accordance with the Advertising Law of the People's Republic of China. Lawful and compliant product promotion activities are carried out, and standardized marketing conduct is strengthened to ensure truthfulness and reliability in product promotion.

In 2023

There were no counterfeit cases or incidents elevated to administrative or judicial authorities.

### Combating counterfeits

CR Bldg Materials Tech has established a product quality traceability monitoring system, and integrated weighbridges and packaging systems into the ERP system. This ensures each outgoing bagged cement has an identity code for subsequent quality monitoring and anti-counterfeiting. In collaboration with CR Intellectual Property Management Company Limited, counterfeits and infringements related with "Runfeng" are monitored and deterred, to resolutely protect the Company's legal trademarks and merchandise.

## Delivering satisfactory service

### Customer service management

CR Bldg Materials Tech continues to implement the Customer Service Management Measures of China Resources Building Materials Technology Holdings Limited, and establish a customer-oriented service system. Customers are categorized in detail based on type, with specific service strategies for different categories. Through regular customer visits and gathering opinions and suggestions, client's demand response mechanism is improved and response speed are enhanced.

## Carrying out customer training

CR Bldg Materials Tech proactively educates customers on product performance and operation protocols. Regular activities and training are organized for different customer groups like distributors, engineering clients, decoration companies and contractors in sales regions. Knowledge on product features, operation essentials, construction safety etc. is imparted to promote better understanding of products and proper usage.

## Providing value-added services

For specific business conditions and logistics services, CR Bldg Materials Tech fully coordinates internal resources, leverages digital and intelligent systems and platforms to provide value-added services in transactions, contracting, settlement, logistics, financing etc. Multi-portfolio integrated solutions covering basic building materials, structural building materials, functional building materials etc. are tailored to project needs, and diverse value-added services are provided.

### West China Region provided customers with multi-faceted value-added services

Case Study

In 2023, for the special conditions and needs of the "Sichuan-Tibet Railway" project sections, the West China Region provided comprehensive multi-faceted value-added services for the full process. An innovative logistics tendering scheme based on transportation capacity by group flexibly engaged substantial external transportation capacity to ensure project supply and cost reduction goals. Dedicated personnel were arranged on-site to address logistics, product usage and other issues. Close communication with the Qinghai-Tibet project team was ensured thorough pre-sales, in-sales and after-sales service, and effectively guaranteed smooth project progress with consistent recognition from relevant parties from multiple sections.



### Addressing customer complaints

CR Bldg Materials Tech has optimized complaint handling processes that require 24-hour responses from customer service staff. Root causes are investigated through site visits, sampling and testing. Customers are communicated with explanations or solutions. Dedicated personnel follow up based on complaint category and nature, and provide written statements or substantive remedial measures when necessary to protect customer rights.

In 2023

CR Bldg Materials Tech received a total of **25** complaints regarding products and services with a **100%** resolution rate.



#### CR Bldg Materials Tech actively addressed customer complaints in a customer-centric manner

Case Study

In late October 2023, a project at an industrial park in Dongguan, Guangdong, lodged a complaint against the Runfeng M32.5 masonry cement supplied in two batches by the Dongguan Cement Plant, citing expansion issues with the grout causing tile protrusions. CR Bldg Materials Tech treated this quality issue with utmost importance, and immediately dispatched a team comprising sales, quality management, distributor representatives and other relevant personnel to conduct an on-site investigation.

On-site comparative experiments validated the customer's description. However, re-inspection found the batch still met stability requirements. The Company acknowledged after discussions the possibility of unstable performance under specific environmental conditions. To safeguard the customer's interests, ensure construction progress, and maintain engineering quality, the Company swiftly allocated other cement batches. The sincere after-sales service and practical solution were highly appreciated by the customer.

### Enhancing customer satisfaction

CR Bldg Materials Tech prioritizes customer satisfaction, conducts regular surveys to gain insights for analysis and timely rectification of identified shortcomings, and tangibly improves satisfaction levels.

In 2023

The Company received **5,873** valid survey responses reflecting a **98.2%** customer satisfaction rate. A **0.57%** year-on-year increase.

## Partnering for Mutual Growth

### Promoting win-win cooperation

#### B2B cooperation

CR Bldg Materials Tech consistently drives multi-party collaboration, proactively coordinated resources from all sides to achieve mutual benefits through joint development. In 2023, the Company signed strategic cooperation agreements with renowned industry leaders including CSCEC E-Commerce, CSCEC West Construction, CGGC Supply Chain Management, Wanfang Concrete, CCCC Third Hobor Engineering, China Railway Material Group, China Railway Beijing Engineering Group, and China Railway Tunnel Group etc. Focused on digital transformation, supply chain management, and industrial development, the in-depth cooperation integrates resources and synergizes operations for a strong alliance and win-win development.

#### CR Bldg Materials Tech partnered with Shenzhou Space Biotechnology Group on bamboo reed research

Case Study

On October 31, 2023, the selected test tube-cultured bamboo reed seedlings, jointly cultivated by CR Bldg Materials Tech and Shenzhou Space Biotechnology Group successfully mutated through space exposure, returned to earth aboard the Shenzhou-16 manned spacecraft, marking a new milestone in the joint R&D efforts leveraging space bamboo reed for energy conservation and emission reduction. Research shows space bamboo reed grows faster, is sturdier, and yields higher output compared to regular bamboo reed. At scale, it forms a "triple carbon economy model" integrating carbon reduction, sequestration, and utilization, providing an effective pathway for the cement industry's energy conservation and emission reduction goals through the Company's steady cultivation experiments.





CR Bldg Materials Tech signed a strategic cooperation agreement with CCCC Third Harbor Engineering



CR Bldg Materials Tech signed a strategic cooperation agreement with China Railway Material Group



CR Bldg Materials Tech signed a strategic cooperation agreement with CSCEC West Construction



CR Bldg Materials Tech signed a strategic cooperation agreement with CGGC Supply Chain Management



CR Bldg Materials Tech signed a strategic cooperation agreement with Shenzhen Baoying Construction Group



CR Bldg Materials Tech signed a strategic cooperation agreement with CSCEC E-Commerce

## Government-enterprise cooperation

CR Bldg Materials Tech actively explores government-enterprise cooperation mode, and engages in in-depth exchanges with multiple local governments and relevant entities. Leveraging its business characteristics and resource advantages aligned with local development strategies, the Company deeply integrates local resources to facilitate project implementation tailored to local attributes. In 2023, the Company conducted friendly visits and exchanges with governmental entities including the Hong Kong SAR Government Development Bureau, local government units of Zhaoqing, Yangjiang, Meizhou, Tongchuan, Xuyi County of Huai'an, Qingliu County of Sanming etc. It also welcomed research and guidance from organizations including the All-China Federation of Trade Unions, Guangxi Zhuang Autonomous Region Government, Hainan Provincial People's Congress etc., striving to create a new landscape of mutually beneficial government-enterprise cooperation.

### CR Bldg Materials Tech collaborated with Pingyuan County Government to advance implementation of a cooperative project

Case Study

On August 9, 2023, the signing ceremony for the first phase of the CR Calcium-based New Materials Industrial Park project in Pingyuan County, Meizhou, was held at the Pingyuan County Government. In line with its corporate strategic planning, CR Bldg Materials Tech actively participates in the development of the eastern Guangdong region and invests in the CR Calcium-based New Materials Industrial Park project in Pingyuan County, Meizhou. The Company is closely following up with the project's investment, construction, operation, and marketing efforts. The goal is to drive the project's implementation and attract more upstream and downstream enterprises to invest and settle in Meizhou, and achieve mutual progress and win-win cooperation.



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### Stakeholder Testimonials

CR Bldg Materials Tech drives the building materials industry of Zhaoqing City forward. In 2022, the sector realized an output value of RMB 6.8 billion and is mending its pace to a hundred billion yuan level.

—Xu Xiaoxiong, Mayor of Zhaoqing City

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## Industry-academia-research operation

CR Bldg Materials Tech continuously strengthens the in-depth integration of industry, academia, and research led by enterprises. In 2023, it jointly applied for the establishment of the China Concrete and Cement-based Products Association (CCPA) Engineered Stone Technology and Engineering Innovation Center (a provincial-level platform). Additionally, the Company formed an environmental protection innovation alliance with CR Environmental Protection and East China University of Science and Technology. Hongshuihe Cement, a subsidiary, signed an internship agreement with Guilin University of Electronic Technology, while Fangchenggang Cement, another subsidiary, collaborated with the Employment Service Center of Fangcheng District Human Resources and Social Security Bureau and Fangchenggang Zhonglian Training School to jointly promote innovation, entrepreneurship, and resource sharing.



Hongshuihe Cement and Guilin University of Electronic Technology held a college student symposium titled "Unleashing New Voices, Discussing the Future Together"

## Media cooperation

CR Bldg Materials Tech strengthens its exchange and cooperation with mainstream media, financial media, and industry media. During important events such as the 20th anniversary celebration of CR Cement, the Company's renaming ceremony, and the "Lighthouse Factory" unveiling ceremony, it invited reporters from SASAC Xiaoxin, People's Daily Online, 21st Century Business Herald, Phoenix News, Orange News, Southern Daily, Southern Metropolis Daily, Guangxi Television Station, and Shenzhen Jingbao Daily to attend or conduct online interviews and reports, effectively expanding the events' reach and impact.

## Supporting industry development

CR Bldg Materials Tech continuously promotes industry exchanges and discussions, actively supports and cooperates with industry associations, participates in the formulation of industry standards, and makes tangible contributions to industry development. In 2023, the Company participated in the research and release of standards such as the Technical Guidelines for Air Pollution Prevention and Control in the Cement Industry (T/CSES 83-2023), Product Traceability in Building Materials - General Requirements for Traceability Systems, and Evaluation Requirements for Intelligent Factories in the Cement Industry. It also engaged in in-depth discussions with organizations like the China Cement Association and the China Building Materials Federation on issues related to industry development.

### CR Bldg Materials Tech hosted the second Science and Technology Innovation Forum

Case Study

On July 14, 2023, CR Bldg Materials Tech hosted the second Science and Technology Innovation Forum titled "Innovation and Development Empowered by Science and Technology". Industry experts and business representatives gathered in Guangzhou to jointly explore cutting-edge technologies, new material applications, and the current utilization of alternative fuels and raw materials in the traditional cement industry, and actively contributed suggestions for the high-quality development of the industry. During the forum, the "CR Cement - CR Environmental Protection Energy Conservation and Environmental Protection Technology Innovation Alliance" unveiling ceremony was held, with both parties committing to in-depth cooperation in the field of green building materials, focusing their efforts on areas such as carbon neutrality, intelligent manufacturing, and new materials.



CR Bldg Materials Tech participated in High-Quality Development Summit for Leaders of Major Cement Industry Enterprises



CR Bldg Materials Tech attended 2023 Top 50 Cement Industry Executive Forum

## Building a responsible supply chain

In 2023

over **1,000** sourcing orders underwent compliance spot checks

in which over **200** issues were identified

more than **400** management recommendations were raised

### Strengthening internal management

CR Bldg Materials Tech has established and improved management mechanisms in the procurement domain, implemented the Procurement Management Systems of China Resources Building Materials Technology Holdings Limited, the Supplier Management Measures of China Resources Building Materials Technology Holdings Limited and other regulations. The Company has issued a compendium of standardized manuals such as the system collection and risk identification handbook, adopted a checklist-based management approach to standardize procedures, behaviors, and documentations. This establishes a procurement management system founded on standardization, driven by daily supervision, and supported by compliance training, ensures "prevention beforehand, control during the process, and supervision afterward", and fortifies the first line of defense for business operations.

Advocating open procurement

Adhering to the principles of "legality, openness, fairness, and balancing efficiency with compliance", the Company has adopted "open procurement" as its management orientation, enhanced procurement transparency and optimized the business environment.

In 2023 all employees signed the Compliance Commitment Letter, with an open procurement rate of **91.7%**



Optimizing the procurement system

The Company revised and issued the Operation Guidelines for Auxiliary Materials and Spare Parts Acceptance at China Resources Building Materials Technology Holdings Limited (2023 Edition), and refined operational details in the execution process. It has also promoted the "Runfeng Procurement" system's digital and intelligent transformation, and strengthened oversight of upstream and downstream sourcing and contract fulfillment processes. By leveraging the electronic platform, the Company has reinforced standardized management across the entire procurement process, striving to create an open, fair, and just procurement platform.

Strengthening procurement training

Through examining common practices that restrict or exclude potential bidders in public tendering documents, the Company enhances compliance and fairness in procurement plan formulation. It has organized a series of training sessions, learning activities, and exchanges on procurement laws and management systems, to improve the procurement team's capabilities and compliance awareness.

In 2023 the Company held **12** training sessions for procurement personnel, covering over **25,800** person-times



## Optimizing supplier management

CR Bldg Materials Tech is committed to building an efficient procurement management system, strictly implementing procurement management regulations and supplier management measures. The Company continuously optimizes supplier evaluation standards, establishes a full life-cycle management system spanning supplier admission, cooperation, evaluation, and exit. Through the supplier evaluation system, it dynamically manages suppliers in real-time, and stipulates that outstanding suppliers should be prioritized for cooperation, provided target costs are met. Feedback on issues requiring rectification is promptly provided to relevant suppliers, with assistance offered and rectification results verified within a set timeframe. Unqualified suppliers are promptly removed from the qualified supplier pool. The Company strictly enforces the blacklist management system, publicly discloses violators and restricted their participation in procurement activities for a specified period through the supplier relationship management system. In 2023, 54 suppliers had their cooperation terminated due to non-compliance, and 7 potential suppliers were rejected.



### Facilitating supplier growth

In 2023

The Company actively conducted training for suppliers on business and anti-corruption topics, with a total of **1,123** supplier personnel trained.

CR Bldg Materials Tech strives to build a transparent, dynamic, and traceable supply chain. By promoting direct sourcing from origins and collaborating directly with construction machinery manufacturers, who manage their agents, the Company further unifies service standards, coordinates product supply, avoids counterfeit and shoddy spare parts, and effectively enhanced the service capabilities of agents. Regarding safe transportation, the Company requires all involved suppliers to undergo safety evaluations, and prompted them to improve their own qualification requirements.

### Advocating honest business practices

CR Bldg Materials Tech adheres to the principles of "equality, voluntariness, honesty, and trust". Internally, it conducts warning education and business conduct training for procurement personnel. Externally, all participating suppliers are required to sign the "Sunshine Declaration", which is annexed to the procurement contract. For suppliers violating integrity requirements or failing to perform contracts properly, the Company promptly initiates the supplier evaluation process and implements the supplier management evaluation mechanism. Warning education is provided to suppliers to curb illegal and unethical conduct from the source, and further cultivate a fair and compliant business environment.

### Building a responsible supply chain

In 2023

The Company's case "Building a Green Supply Chain and Enabling High-Quality Development" was selected as a national outstanding public procurement case.

CR Bldg Materials Tech's subsidiaries implement the signing of a Safety and Environmental Protection Agreement with transportation, construction, solid waste, and hazardous waste disposal suppliers, incorporate environmental principles into suppliers' daily management mechanisms and encourage them to gradually enhance environmental awareness and performance. During the prequalification stage, bidders for raw material procurement projects are required to possess stable and legal sources of supply. All bidders must provide safety commitment letters and safety management goal commitment letters. In the bid evaluation stage, suppliers having obtained environmental management system certification receive additional prequalification scores. Winning bidders must provide road/ship transportation safety pre-evaluation forms before contract conclusion and concurrently sign the safety and environmental protection agreement.

### Ensuring supply chain stability

CR Bldg Materials Tech's headquarter fully leverages its bridging role between suppliers and production bases by providing meticulous service support to guide suppliers in achieving stable and sustainable development, proactively introduces direct coal suppliers and trading companies, and expands the scale of direct gypsum supply. Based on gypsum varieties and regional market conditions, it flexibly adjusts procurement methods, explores new sourcing channels, promotes full competition, ensures supply stability while reducing procurement costs, and enhances the competitiveness of its production sites.

## Commitments and Fulfillments

### 2023 Commitments

- Adhere to a customer-centric service philosophy, be dedicated to providing high-quality products, services, and systematic solutions to the public, and infuse the essence of "quality" into its offerings
- Leverage abundant resources across the building materials industry chain, a diversified product portfolio, standardized service processes, and an integrated service management system, actively respond to market changes, meet diverse customer needs, and create greater value from building material products
- Optimize and strengthen our core businesses, promote integrated development of industrial parks, accelerate the construction of aggregate projects, and intensify integration efforts for acquired enterprises
- Increase investment in scientific and technological research and development, continually empower business operations with digital intelligence. Build the first lighthouse factory in the building materials industry at Tianyang Cement base and vigorously conduct research into new material industry layouts
- Optimize and refine organizational mechanisms to stimulate entrepreneurial vitality
- Expand external cooperation to accelerate the establishment of high-level R&D platforms

### 2023 Fulfillments

- In 2023, CR Bldg Materials Tech achieved a comprehensive customer satisfaction rate of **98.2%**, an increase of 0.57 percentage points year-over-year
- The Company jointly established the China Concrete and Cement-based Products Association (CCPA) Engineered Stone Technology and Engineering Innovation Center (a provincial-level platform) and CR Cement-CR Environmental Protection-East China University of Science and Technology Environmental Protection Innovation Alliance. Its Guangxi R&D Company was successfully approved as a postdoctoral innovation practice base (an R&D talent cultivation platform)
- In 2023, the Company obtained **32** new authorized patents, an increase of **11.00%** in the total number of valid patents compared to the previous year. It submitted **32** new journal articles, completed one scientific and technological achievement appraisal, and applied for **2** national and **6** provincial research projects
- All cement production bases have obtained ISO 9001:2015 Quality Management System certification
- The Company has continuously deepened digital intelligence empowerment, promoted mature intelligent applications, launched safety production, quality management, advanced control, and other systems at multiple bases, and implemented **3** artificial intelligence algorithms. CR Bldg Materials Tech completed the coverage of basic information systems for **19** new bases in aggregates, engineered stone materials, and other sectors. It advanced the construction of the Everbest ERP system and completed the pilot launch of the Hong Kong version of the accounting system for Redland Concrete
- Tianyang Cement was evaluated as the world's first "Lighthouse Factory" in the building materials industry. Its advanced IIOT technology architecture, extensible vertical industry industrial internet platform, powerful data analysis system, and ecosystem were featured as a case study in the 2023 Global Lighthouse Network Annual White Paper

### 2024 Commitments

- Continuously improve product quality and customer experience, striving to maintain a comprehensive customer satisfaction rate of no less than **98%** in 2024
- Accelerate the upgrading of traditional industries, and strengthen foundations to enhance core competitiveness
- Increase the efficiency of scientific and technological investment, and achieve a transformational breakthrough in new materials businesses

# 03

## Green Building Materials that Benefit the Nation

### Substantive topics:

- Environment governance and compliance
- Energy, resource management and comprehensive utilization
- Environmental protection technology and clean energy
- Pollutant emissions
- Waste disposal and comprehensive utilization
- Address climate change and low-carbon development
- Ecological environmental protection and biodiversity
- Green mine construction

### United Nations Sustainable Development Goals (SDGs):



CR Bldg Materials Tech plans its development from the perspective of harmonious coexistence between humanity and nature. With the main focus on "ecology, environmental protection, safety, and intensive resource utilization", the Company actively engages in energy conservation, emission reduction, and carbon reduction efforts, which continuously promotes industrial transformation and upgrading while adhering to a path of green, sustainable development. The Company rigorously implements ecological and environmental protection responsibilities, and establishes a long-term mechanism for consistently excellent in this area. CR Bldg Materials Tech adheres to precise, scientific, and lawful pollution prevention and control, fights tough battles against pollution, and thoroughly investigates and rectifies ecological and environmental issues. It steadily and orderly advances its emissions peaking and carbon neutrality efforts, puts into practice the concept that "green mountains and clear waters are as valuable as gold and silver", and strives to become a model of green, low-carbon development in the building materials industry.

## Co-processing of Sludge in Guangzhou

The report of the 20th National Congress points out that it is necessary to coordinate industrial restructuring, pollution control, ecological protection and response to climate change, to synergize carbon reduction, pollution reduction, green expansion and growth, and to promote ecological priority, conservation and intensification, and green and low-carbon development. Municipal sludge, a typical representative of urban organic solid waste, has long lacked effective disposal methods due to its large volume, complex sources, low resource utilization rate, and risk of secondary pollution, posing an increasingly evident threat.

Practice has shown that the construction of a "waste-free city" is both a comprehensive approach to systematically solving solid waste issues and an effective vehicle for promoting green, low-carbon urban development. At the end of 2021, the Work Plan for the Construction of Waste-Free Cities during the 14th Five-Year Plan Period was jointly formulated and officially released by multiple authorities, including the Ministry of Ecology and Environment and the National Development and Reform Commission. The work plan explicitly stated the need to "promote the co-processing of solid waste in cement kilns, coal-fired boilers, and other facilities, investigate and classify historical solid waste for rectification, and accelerate the resolution of historical issues".

### Knowledge Base

Sludge, a solid sedimentary substance generated during wastewater treatment process, contains a large amount of pathogenic microorganisms, parasite eggs, and harmful heavy metals, and poses a high risk of "secondary pollution" to water bodies, soil, and the atmosphere. Traditional disposal methods such as landfilling, co-incineration, and composting have drawbacks like land occupation and the need for secondary treatment, making it difficult to achieve an effective and thorough solution.

## Seeking a breakthrough strategy for sludge

CR Bldg Materials Tech seized the opportunity presented by the construction of "waste-free cities" and continuously conducted exploratory research on the co-processing of solid waste in cement kilns. The Company converted its industry advantages in solid waste treatment into environmental, social, and economic benefits, and strive to achieve coordinated development between urban construction and environmental protection.

As early as 2010, the Company began exploring co-processing models in cement kilns. Yuebao Cement, a subsidiary, initially invested RMB100 million to build a wet sludge co-processing project with a treatment capacity of 600 tons per day, which utilized the exhaust gas from cement kilns to dry wet sludge before feeding it into the kilns for incineration and utilization. Although this disposal method effectively addressed the hazardous treatment of municipal sludge, it faced opposition from local residents due to odor emissions during the drying process.

Subsequently, CR Bldg Materials Tech proceeded with the research and sought breakthroughs. In response to the Guangzhou municipal government's designated sludge disposal technology route of "in-plant drying and reduction + incineration", the Company proposed the development concept of "wastewater treatment plant drying + cement kiln incineration" for sludge disposal between 2014 and 2016. After repeated technical evaluations and field trials, this development concept was gradually implemented. In 2017, the Company took the initiative in investing RMB30 million to build a cement kiln co-processing project for dried sludge at Zhujiang Cement, with a daily treatment capacity of 300 tons. The sludge was decomposed and incinerated in the cement kiln's decomposition chamber, achieving 100% reduction, resource utilization, and clean disposal.

In 2017

the Company took the initiative in investing **RMB 30 million** to build a cement kiln co-processing project for dried sludge at Zhujiang Cement, with a daily treatment capacity of 300 tons.

## Co-processing, a path to development



A view of the Zhujiang Cement dried sludge co-processing project site

Having achieved a breakthrough, why not take it a step further? Building on previous successful experiences, CR Bldg Materials Tech seized the opportunity to innovatively propose a technology route of "in-plant drying at wastewater treatment plants + co-processing in cement kilns" for large-scale, high-quality utilization of municipal sludge. The project initiated preliminary feasibility studies in 2018, and successively verified the feasibility of utilizing Yuebao Cement and Zhujiang Cement to address dried sludge disposal in Guangzhou's central urban area. It developed sludge stockpiling and storage processes, which significantly improved sludge storage

capacity and project flexibility. They commissioned the China National Quality Inspection and Testing Center of Explosion-proof Equipment to conduct tests on dust explosion, ignition temperature, and other parameters, to confirm the safety level for sludge dust control and related processes. Simultaneously, from 2018 to 2020, adhering to the principles of safety, reliability, and advancement, as well as a meticulous attitude, the project frequently organized core technical personnel to review and optimize technical solutions, and continuously drive improvements in design proposals, equipment selection, construction, and operations.

As sludge drying facilities were successively put into operation in wastewater treatment plants in Guangzhou, the project welcomed a new breakthrough from conception to implementation. In December 2020, the Company, together with Heidelberg Cement, invested RMB80 million to build a dried sludge disposal project with a daily treatment capacity of 600 tons, equivalent to a wet sludge treatment capacity of 1,800 tons per day (560,000 tons per year). The project commenced trial operations with materials in October 2021, and performance tests and commissioning evaluations met the expected design targets. In late May 2022, the project successfully passed the project completion acceptance, marking CR Bldg Materials Tech's achievement in developing and applying integrated processes and equipment for large-scale co-processing of municipal dried sludge in cement kilns.



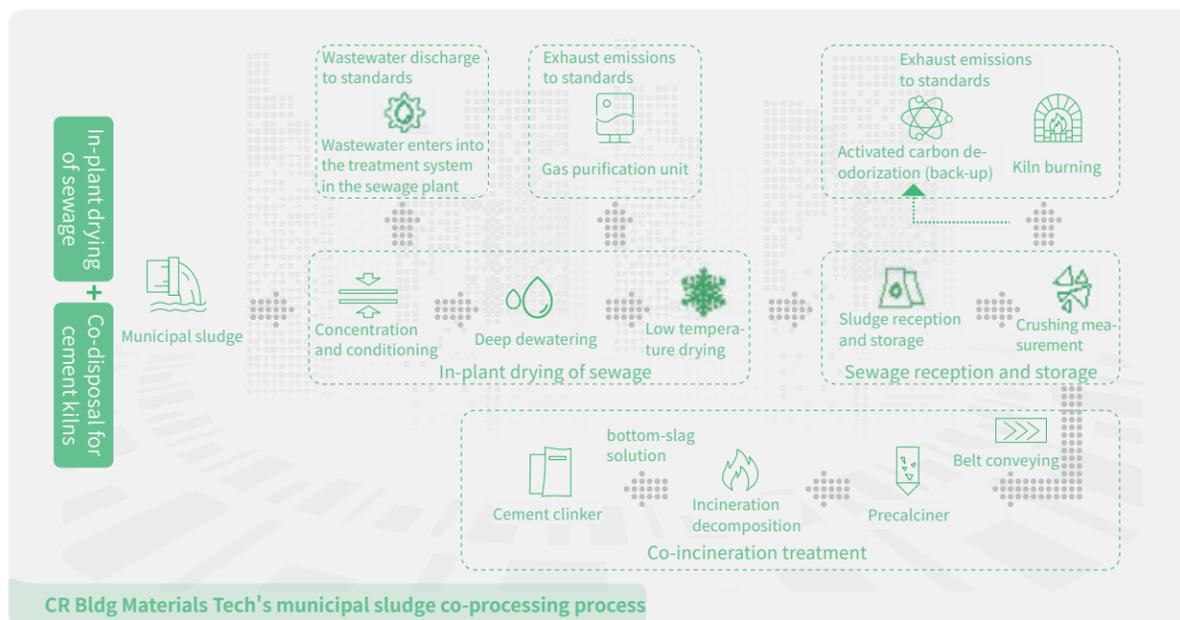
A panoramic view of Yuebao Cement



Yuebao Cement Drying Municipal Sludge Co-disposal Project



Odor treatment facility



CR Bldg Materials Tech's municipal sludge co-processing process



The "multi-point servo sludge feeding" and "stratified combustion control" technologies were recognized as being at an internationally advanced level

Even since a long time ago, CR Bldg Materials Tech has continually explored co-processing models in cement kilns, and profoundly integrated dried sludge disposal with the cement industry. Leveraging the large-scale, high-quality utilization technology of dried sludge on clinker lines of cement kilns, the processed dried sludge can substitute a portion of the raw materials for clinker production. The dust and odors generated during the disposal process are controlled and contained, with all environmental protection indicators tested by third-party authoritative agencies exceeding national standards, truly achieving harmless, reduced, and resourceful disposal of dried sludge. In June 2023, the project "Key Technology Research and Application for Large-Scale Co-processing of Dried Municipal Sludge in Cement Kilns" at Yuebao Cement received a scientific and technological achievement certification from the China Building Materials Federation. The "multi-point servo sludge feeding" and "stratified combustion control" technologies were recognized as being at an internationally advanced level.



Scientific and technological achievement certification

As the domestic cement kiln project with the largest single-line sludge disposal capacity, Yuebao Cement can increase its waste heat power generation by approximately 3 million kilowatt-hours annually. Combined with the completed Zhujiang Cement sludge project, it can collectively dispose of more than half of Guangzhou's dried sludge, which further promotes the development and utilization of advanced municipal sludge disposal technologies, and resolves Guangzhou's sludge issues!

In the future, CR Bldg Materials Tech will persist in green innovation and transformation, and fully leverage the characteristics of the building materials industry to continue its in-depth exploration of co-processing in cement kilns. Through transformation and upgrading, the Company will empower its high-quality development and contribute to the construction of a beautiful China through scientific and technological innovation.



Yuebao Cement can increase its waste heat power generation by approximately **3 million kilowatt-hours** annually.

## Deepening Green Management

### Environmental management system

CR Bldg Materials Tech has always practiced the concept of green development throughout the entire corporate development process, and strictly complied with relevant laws and regulations such as the Environmental Protection Law of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, the Air Pollution Prevention and Control Law of the People's Republic of China, and industry standards. The Company continuously establishes and improves its ecological and environmental protection management system, formulates budgets for ecological protection expenses and fund utilization plans. In 2023, a total of RMB412.8 million was invested in areas such as energy-saving and emission reduction technological upgrades, environmental monitoring, environmental protection publicity activities, environmental protection training, online monitoring system upgrades and operations, and maintenance. As of the end of 2023, the Company had achieved full coverage of the ISO 14001:2015 Environmental Management System certification.

#### Management system

CR Bldg Materials Tech continuously innovates its Environment, Health, and Safety (EHS) evaluation and management work, systematically carries out system revisions, and in the past year revised and released five environmental management systems and norms, including the EHS Organizational System Construction Guidelines, Guidelines for Environmental Protection Management of Co-disposal of Solid Waste in Cement Kilns, EHS Supervision Measures, Accountability Measures for EHS Accidents and Incidents, and EHS Accident and Incident Management Guidelines. This further improves the company's "13263" EHS management system, and ensured that environmental management has systematic guidelines to follow.

#### Organizational structure

CR Bldg Materials Tech persistently optimizes the EHS management structure at all levels, refines the responsibilities and work content of the EHS management organizations in the regions, and establishes differentiated management and control requirements for the EHS organizations. The headquarters implements a "professional + regional" matrix management approach, and ensures that subordinate units have an EHS Management Committee, EHS Supervision and Management Department, and EHS Support Department. Additionally, regional EHS directors have been newly designated to assist in the management of controlled EHS operations and promote the implementation of environmental management responsibilities.

#### Evaluation system

CR Bldg Materials Tech has established and continues to improve an excellent operation management evaluation system. Based on operational performance, relevant target values are set, and evaluation experts are selected to comprehensively evaluate the performance of grassroots entities in areas such as environmental protection according to the predetermined targets, using the evaluation to drive improvement and enhance the management level of production sites.

## Environmental risk management and control

CR Bldg Materials Tech insists on strengthening environmental risk management and control, and earnestly implements the Environmental Impact Assessment Law of the People's Republic of China. The Company regularly organizes production bases to spot environmental impact factors, identify and transform legal and regulatory requirements, comprehensively analyze, predict, and evaluate the potential environmental impacts of new projects, extensively solicit opinions from stakeholders, and conduct group exchanges with industry experts and regulatory authorities. This ensures high-quality completion of environmental impact assessments and guarantees no environmental violations or non-compliance in operations. An effective environmental risk management and control mechanism has been established. Through the issuance of relevant policies, guidelines, interpretations, and case warnings, the Company guides production bases in identifying potential risks, formulating environmental emergency response plans, and promptly eliminating environmental risks.

The Company strictly adheres to environmental management requirements, develops a normalized environmental compliance inspection mechanism, creates environmental compliance inspection checklists, and conducts special inspections on pollutant discharge permits, self-environmental monitoring, the Yangtze River and Yellow River basins, solid waste, and the Pearl River basin. Identified key issues are supervised and rectified to ensure closed-loop management. In 2023, the Company did not have any environmental violations or receive administrative penalties related to environmental protection.

## Environmental early warning and emergency response

In accordance with legal and regulatory requirements and considering the characteristics of the building materials industry and the company's production management practices, CR Bldg Materials Tech has formulated and issued the Comprehensive Emergency Response Plan for Environmental Emergencies. This requires subordinate entities to develop emergency response plans based on the emergency response plan that align with their management practices and effectively coordinate with relevant government authorities and institutions. Additionally, the Company adheres to the people-oriented and safety-first principle, places great importance on the safety and protection of emergency rescue personnel during emergency response to environmental incidents, and minimizes casualties and physical harm caused by environmental incidents.

## Building green factories

CR Bldg Materials Tech firmly grasps the trend of industrial green transformation and promotes energy conservation, clean production, and intelligent manufacturing based on the requirements of green factories, namely "intensive plant layout, harmless raw materials, clean production, waste resource utilization, and low-carbon energy". Those efforts are evaluated from the perspectives of safety and environmental protection, energy consumption indicators, and informatization. As of the end of 2023, the Company had 20 production bases included in the "Green Factories" list at national, provincial, or autonomous region levels.

### CR Bldg Materials Tech added new accomplishments to its green factories

Case Study

On March 23, 2023, the General Office of the Ministry of Industry and Information Technology announced the 2022 list of green manufacturers, which included Anshun Cement, bringing the number of national-level green factories under CR Bldg Materials Tech to 11. Adhering to the concept of "Green Development and Ecological Circulation", Anshun Cement established a green factory construction leading group, clarified the path to green, cycle, and low-carbon development, promoted energy-saving technological transformation, equipment upgrades, and comprehensive resource recycling and utilization. As a result, its clinker production per ton has achieved first-level energy consumption levels, with major pollutant emissions significantly lower than national standards and all environmental protection indicators ranking among the industry leaders.



### Green factories Certification level



### Honor Column



DongGuan Universal Classic Material Ltd. was honored with the title of "National Green Factory in the Stone Industry".



## Promoting green operations

### Green procurement

Adhering to the principle of sustainable development, CR Bldg Materials Tech has achieved positive results in comprehensive resource utilization. In 2023, CR Bldg Materials Tech comprehensively utilized 570,000 tons of fly ash and 300,000 tons of slag powder. The Company promoted the use of manufactured sand to replace natural sand, and procured approximately 7.11 million tons of manufactured sand, with a usage ratio of approximately 98.6%. Additionally, it comprehensively utilized over 130,000 tons of dust stone powder waste generated during the aggregates production process.

### Green packaging

The Company upholds the concept of resource recycling and actively promotes low-carbon, environmentally friendly, and green production practices while carrying forward green packaging policies. By the end of March 2022, the Company had comprehensively adopted valve bottom bags to replace sewn bottom cement packaging bags, and effectively resolved the severe issue of dust emissions in cement packaging workshops. Simultaneously, it recycled and utilized imported wooden pallets for approximately 130 m<sup>3</sup> in 2023, and reduced carbon emissions by 130 tons.

## Green transportation

CR Bldg Materials Tech vigorously advocates green transportation and strengthens the management of transportation vehicles. It requires cooperative transportation vehicles to stringently comply with national fuel consumption and emission criteria for motor vehicles, and prioritizes the use of new energy vehicles to reduce transportation pollution. The Company takes the lead in piloting a bulk bag transportation model in the Southeast Region, reduces the consumption of transportation capacity caused by multiple transfers and transshipment operations during bagged cement transportation. Concurrently, the Company follows a bulk bag recycling strategy to achieve cost reduction and improved transportation efficiency.

## Green storage

The Company actively adopts green storage practices. With reasonable planning and scientific layout, it precisely selects locations with extensive coverage and proximity to demand bases as transshipment ports. At the ports, coal stockpiles are equipped with retaining boards to prevent cargo spillage or loss. Rainproof canopies are installed over the coal stockpiles to prevent wind-driven dust pollution. At the storage sites, spilled cargo is promptly recovered, and sprinkler systems are scheduled to spray water to reduce air particulate pollution. In 2023, the Company's transshipment ports recovered scattered coal, sedimentation pool coal, and discarded sample coal 356 times, totaling 6,918 tons.

## Green office and education

### Advocating green office

CR Bldg Materials Tech actively cultivates a low-carbon, eco-friendly green office atmosphere. It promotes the use of office systems such as OA and ERP, and reduces paper consumption through paperless office practices and online cloud document access. The Company adopts water conservation devices and energy-efficient equipment while encouraging employees to practice frugality and reduce resource and energy waste. Based on actual needs, shuttle buses are provided for employees, and they are encouraged to commute by walking, cycling, or choose public transportation to embrace a new green, low-carbon lifestyle. In 2023, the Company's Shenzhen headquarter reduced paper usage for printing by 15% compared to the previous year.

### Emphasizing green education

The Company emphasizes the construction of a green culture and consistently organizes environmental protection-themed activities and specialized training, such as World Environment Day, National Energy Conservation Publicity Week, and National Low-Carbon Day. It actively disseminates environmental protection concepts, enhancing employees' awareness of environmental protection and low-carbon practices. Through practical actions, the Company empowers the construction of an ecological civilization and contributes to building a beautiful China with lush mountains and vibrant life.



Pingnan Cement conducted a tree-planting public welfare activity



Longyan Cement conducted publicity and knowledge quiz activities around the "Ten Norms for Citizens' Ecological and Environmental Behaviors"

# Conserving Energy and Resources

## Strengthening energy management

### Implementing energy conservation and consumption reduction

CR Bldg Materials Tech has formulated and strictly implemented the EHS Supervision and Management Work Guidelines of China Resources Building Materials Technology Holdings Limited (2023). In compliance with ISO 5001:2018, the Company has established and improved its energy management system. Through digitalization and intelligent technologies, it empowers the production processes across its sites, deepens the promotion and application of new energy conservation and environmental protection technologies, equipment, materials, and innovative achievements, and statistically evaluates, analyzes, and optimizes the energy and resource consumption throughout the entire process, and further enhances the comprehensive utilization efficiency of energy and resources. By the end of 2023, all cement production bases under the Company had obtained ISO 5001:2018 energy management system certification.

Following the "Four-Year Action Plan for Energy Conservation and Carbon Reduction," the Company has formulated its 2022-2025 targets for comprehensive energy consumption per unit clinker product, along with two major technical routes and four technical inventories to achieve these goals. In 2023, the Company went on with energy-conservation renovations, successfully promoted the application of five large-scale high-efficiency energy-conservation centrifugal fans, 37 high-efficiency blowers, and four high-efficiency air compressors, and saved RMB4.48 million in power consumption. Stringently following the Catalogue for the Elimination of Backward Production Capacities (Products) of High Energy Consumption issued by the Ministry of Industry and Information Technology, the Company has carried out the elimination of high energy-consuming and backward electromechanical equipment. Since 2014, it has cumulatively replaced and updated upgraded 13 transformers and 5,891 motors, with an equipment replacement investment exceeding RMB36 million.

#### Energy Management Efficacy



**Target**

2023 comprehensive energy consumption target per unit clinker product: 104.45 kg/t.cl.

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**Achievements**

In 2023, the Company's comprehensive energy consumption per unit clinker product decreased by 4.34 kg/t.cl. Fourteen production lines achieved the Grade I energy consumption benchmark level stipulated in GB16780, representing a total production capacity of 20.67 million tons, accounting for 33% of the total. This target of having over 30% of production capacity reach the benchmark level by 2025, as required by the five ministries and commissions, was achieved two years ahead of schedule.

In 2023, CR Bldg Materials Tech's production bases actively explored technological renovations in energy conservation and carbon reduction and strengthened the implementation of energy conservation and carbon reduction measures:

 <div style="background-color: #00a651; color: white; padding: 5px; border-radius: 10px; width: 60px; margin: 10px auto;">Project</div> <p style="font-size: small;">Upgrade and renovation of "high-efficiency low-resistance preheater and calciner + fourth-generation high-efficiency grate cooler + auxiliary supporting equipment"</p>	 <div style="background-color: #00a651; color: white; padding: 5px; border-radius: 10px; width: 60px; margin: 10px auto;">Base</div> <p style="font-size: small;">Shangsi, Fengkai, Guigang, Pingnan, Nanning</p>	 <div style="background-color: #00a651; color: white; padding: 5px; border-radius: 10px; width: 100px; margin: 10px auto;">Energy conservation and consumption reduction achievements</div> <p style="font-size: small;">Standard coal consumption reduced by &gt; 2.5 kgce/t Clinker process electricity consumption reduced by &gt; 1.0 kW · h/t Annual standard coal savings of 26,000 tons Annual electricity savings of 10 million kW · h</p>
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Project	Base	Energy conservation and consumption reduction achievements
"Five-level+" parallel and series-coupled restructured heat exchange technology renovation for the preheater	Pingnan, Guigang	Standard coal consumption reduced by ≥ 4.1 kgce/t
"Five-to-Six" technological renovation	Fengkai	Standard coal consumption reduced by > 5 kgce/t
"Oxy-fuel combustion" technology pilot	Pingnan	Standard coal consumption reduced by > 2.5 kgce/t

### Developing clean energy

CR Bldg Materials Tech continuously speeds up the replacement and coverage of clean energy sources, persists in research and application of photovoltaic power generation, fuel substitution, and other technologies. The Company is consistently reducing fossil energy consumption and optimizing the energy structure to empower green development.

The Company has vigorously promoted the application of alternative fuels in the resource-rich Guangdong and Guangxi regions, and achieved significant results in coal conservation and carbon reduction. Following the construction of China's first large-scale mechanized cement kiln alternative fuel production line using textile waste at Fengkai Cement in 2021, the Company has successively promoted its application to production bases such as Pingnan, Nanning, Yongding, Yangchun, and Luchuan. By the end of 2023, 97% of the Company's production bases were using or trialing alternative fuels. Throughout the year, the cumulative use of alternative fuels reached 690,000 tons (including solid waste), approximately 400,000 tons of physical coal was saved, with a substitution rate of 5.55%.

#### Knowledge Base

Alternative fuels: General industrial solid waste such as textile waste and waste plastics, as well as biomass waste such as bark and straw, can be used as alternative fuels in the cement industry for comprehensive resource utilization. These fuels feature high calorific value, low pollution, low cost, and renewability, and enable excellent environmental, social, and economic benefits.

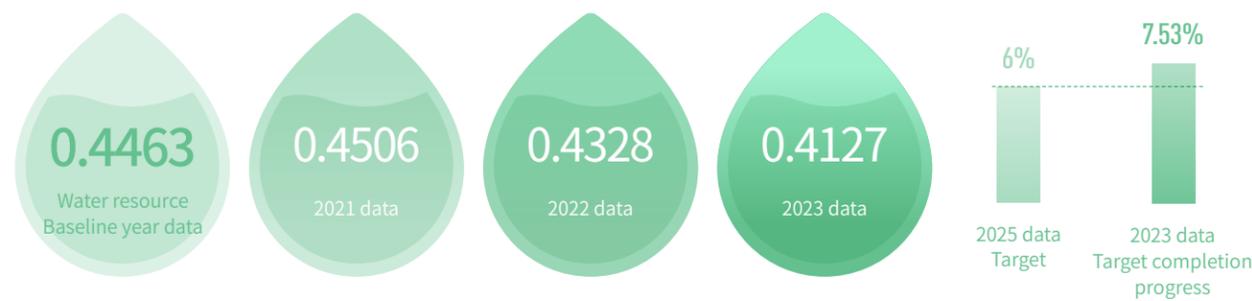


Wuxuan Cement's distributed photovoltaic project

## Comprehensive resource utilization

### Refined water resource management

**Target**  
Target for water utilization benefits: By 2025, the annual water resource utilization intensity will decrease by 6% compared to 2020.



The treated wastewater is reused as greening and production process water, with a wastewater resource utilization rate of over

**95%**.

CR Bldg Materials Tech, in accordance with the Company's Water Pollution Prevention and Control Management Guidelines, requires each production base to plan a unified water supply system within the factory area in consideration of its own characteristics, to advocate water conservation and recycling. They are instructed to compile complete water network system diagrams and water balance diagrams, establish a water usage metering and statistical ledger, and analyze the Company's water usage. Advanced wastewater treatment facilities are installed for source water, domestic sewage, as well as production wastewater. The treated wastewater is reused as greening and production process water, with a wastewater resource utilization rate of over 95%, which is at an advanced level among domestic peers.

The Company's water intake quotas are in compliance with relevant national and local standards and regulations. Water intake and use are subject to obtaining water intake permits from water administrative authorities or basin management institutions, and water resource fees are paid accordingly to acquire the right to intake water from rivers, lakes, or groundwater sources. In 2023, the Company did not encounter any issues in obtaining applicable water sources.

### Promoting resource recycling

CR Bldg Materials Tech has constructed a resource recycling and utilization system covering the entire process. Following the principles of scientific allocation, comprehensive conservation, and recycling, the Company continuously promotes total resource management to maximize resource reuse and minimize the impact on environment. The Company has conducted research on high-quality utilization of engineered stone waste slurry, enabled the reuse of engineered quartz stone waste slurry powder and promoted the development of high-quality products from waste slurry powder by successfully utilizing its characteristics. The Company has also explored a path for whitening and impurity removal of silicon tailings sand, and applied it in the production of engineered stone products, which constitutes a comprehensive utilization of solid waste across industries.

In 2023, the Company recycled and reused the stone powder, edge scraps, and other solid waste generated during the production and processing of engineered stone as admixtures and raw materials, with an annual resource utilization exceeding 10,000 tons. Through the recycling of water in engineered stone production via water treatment equipment, the Company saved approximately 3,000 m<sup>3</sup> of water annually.

In 2023

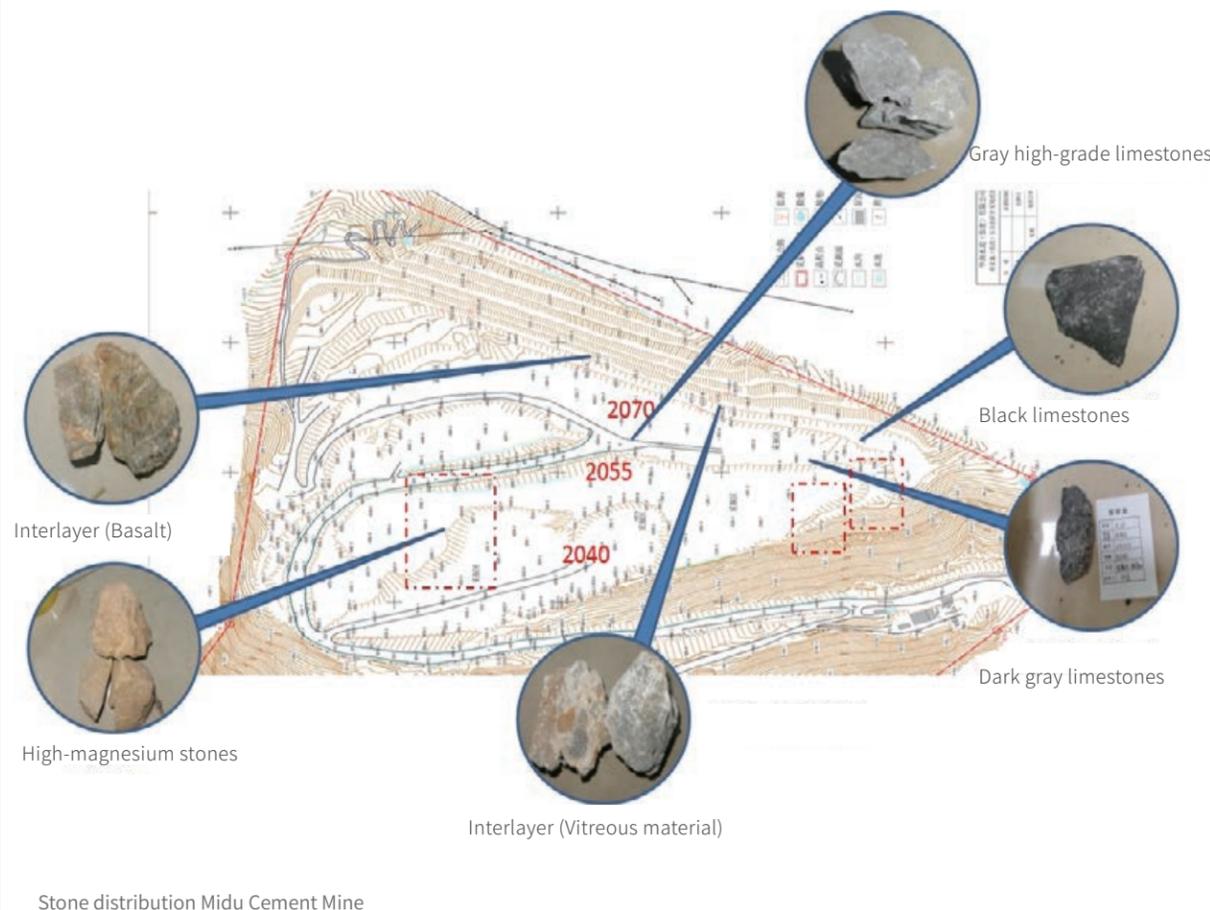
The Company's annual resource utilization exceeded

**10,000 tons** and saved approximately **3,000 m<sup>3</sup>** of water annually.

### Systematic Restructuring, Exploratory Innovation

### Case Study

In 2023, to address the issues of discharge of stones such as high-magnesium stones and basalt and land occupation caused by mining and construction, Midu Cement vigorously conducted research on comprehensive utilization of mining resources. During the mining process, the Company coordinated the utilization of high-magnesium stones, low-grade stones, interstitial soil, and stripped soil as raw materials, and turned low-grade stones and other materials into valuable resources. On the basis of reasonable utilization of mining resources, the goal of zero discharge mining of stones was achieved, with a total raw material substitution exceeding 87,729 tons.



In 2023

the Company's total cogeneration reached approximately

**1,536.2 million kWh.**

### Cogeneration

The Company's cement clinker production bases have achieved full coverage of pure low-temperature cogeneration systems, effectively recovering and converting the waste heat from the production process into electricity. In 2023, the Company's total cogeneration reached approximately 1,536.2 million kWh.

# Reducing pollutant emissions

## Improving emission management systems

CR Bldg Materials Tech has developed and optimized an emission monitoring system, implemented public disclosure of emission information, introduced advanced pollutant emission control technologies, and stringently controlled the emissions of various pollutants. The Company ensures that 100% of its cement production bases obtain pollutant emission permits and strictly comply with the emission requirements stipulated in these permits. The Company has established a monitoring platform for environmental pollutant emissions at its headquarter, through which the Company can promptly identify and urge production bases to investigate abnormal data, and achieve real-time monitoring and early warning of pollutant emissions across all production lines at the headquarter level. By the end of 2023, all of the Company's cement clinker production bases were equipped with denitrification systems, bag filters, and other pollutant control facilities, to ensure pollutant emissions below national and local regulatory standards.



Changjiang Cement Co-disposal of Construction Waste Project

## Flue gas emission control

For the main flue gas emissions of nitrogen oxides, sulfur dioxide, and particulate matter generated during its production and operations, CR Bldg Materials Tech set emission targets for 2023, namely: Particulate matter, sulfur dioxide, and nitrogen oxide emissions to decrease by 3%, 2%, and 6%, respectively, compared to 2020 levels. The Company took comprehensive measures to control the generation and emission of flue gas from the source to the end, including conducting research on ultra-low emission technologies and introducing advanced emission reduction technologies and equipment. In 2023, the Company exceeded its annual targets for pollutant emission, with particulate matter, sulfur dioxide, and nitrogen oxide emissions decreasing by 48.89%, 14.39%, and 37.39%, respectively, compared to 2020 levels.

The target by 2025 is for all cement production lines to have the capability of achieving nitrogen oxide emission concentrations controlled below 100 mg/m<sup>3</sup>, sulfur dioxide emission concentrations below 50 mg/m<sup>3</sup>, and particulate matter emission concentrations below 10 mg/m<sup>3</sup>.

### Emission Reduction Measures

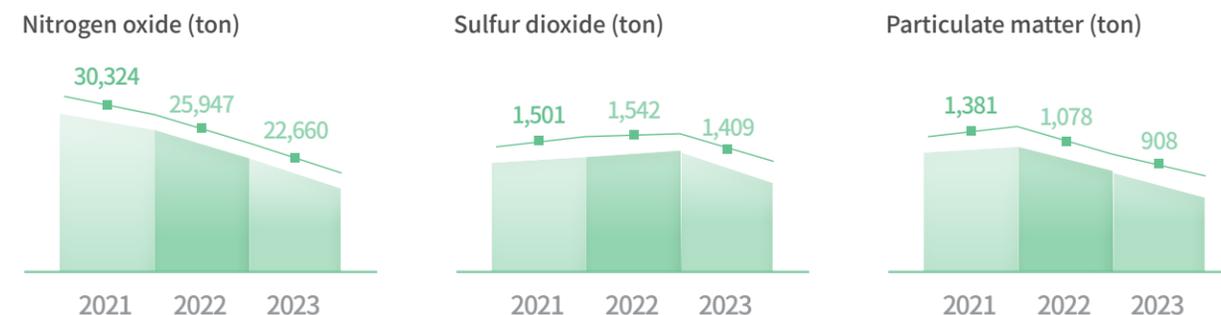
**Nitrogen oxide emission reduction measures**

The Company has promoted the use of intelligent and highly efficient selective non-catalytic reduction (heSNCR) technology at multiple production bases and has also driven the renovation of selective catalytic reduction (SCR) technology in combination with the actual conditions of the production sites. By the end of 2023, the Company had completed SCR renovation projects on four production lines, including those in Nanning Guangxi, Changzhi Shanxi, and lines No. 1 and No. 2 at Fengkai Guangdong. The construction of SCR renovation projects for five more lines, including those in Huizhou and Anshun, is ongoing, laying a solid foundation for achieving nitrogen oxide emission reduction targets during the 14th Five-Year Plan period.

**Sulfur dioxide emission reduction measures**

The Company has built four wet desulfurization systems and eleven composite desulfurization systems, thus achieved significant sulfur dioxide emission reduction, with emissions stabilizing at lower levels and decreasing.

The total emissions of pollutants such as nitrogen oxides, sulfur dioxide, and particulate matter from the main emission outlets of the Company's cement production bases are as follows:



## Waste discharge control

CR Bldg Materials Tech stringently complies with the Solid Waste Pollution Prevention and Control Law of the People's Republic of China and other relevant laws and regulations. Adhering to the principles of "conservation, intensification, and reduction", the Company implements standardized waste management practices, develops comprehensive solid waste disposal solutions, and takes effective measures to ensure 100% safe and compliant disposal of hazardous waste and 100% efficient recycling and utilization of non-hazardous waste, thereby reducing the environmental burden caused by waste discharge.



The Company follows the principles of "harmlessness, reduction, and resourcefulness" by comprehensively recycling and reusing waste oil generated during the production and manufacturing processes (such as for machinery lubrication), minimizing the generation of hazardous waste to the greatest extent possible. In accordance with national laws and regulations, other hazardous wastes like waste oil drums, are either reclaimed by the original manufacturers or entrusted to qualified third-party organizations for proper treatment. By the end of 2023, the Company had generated 440 tons of hazardous waste, 100% treated in compliance with regulations.



Embracing the concept of a circular economy, the Company maximizes resource utilization. Apart from annually procuring and consuming large quantities of industrial slag, effective measures are actively implemented during daily operations to reduce waste generation, such as regularly recycling dust collected by dedusting equipment for use as raw materials, semi-finished, or finished products. Plastics and paper generated from office activities are recycled to enable maximum reuse of office supplies. In 2023, the Company generated 70,163.19 tons of non-hazardous waste, with approximately 45,636 tons treated, achieving a treatment rate of around 63.97% for the year. The remaining waste will continue to be processed until 100% recycling and utilization is achieved.



Leveraging its technological advantages, the Company continuously innovates in co-processing technologies and optimizes solid waste disposal solutions. CR Bldg Materials Tech actively utilizes cement kilns for co-processing solid waste, effectively employs high temperatures to remove toxic pollutants like dioxins, conserving land resources while reducing environmental burdens. This truly achieves "harmless, reduced, and resourceful" treatment, practically addresses secondary pollution concerns, continuously improves living environments, and steadily enhances happiness indices.

Co-Processing - A Powerful Ally for Waste-free Cities

In 2023, CR Bldg Materials Tech's Guangxi Hepu domestic solid waste project commenced trial operations. The project introduces the Company's independently developed cyclonic furnace technology, which leverages the cement kiln system's high-temperature three-stage air-assisted combustion to promote efficient incineration of domestic solid waste within the cyclonic furnace. The flue gas and ash then enter the cement kiln system's decomposition furnace, to enhance the efficiency and scale of solid waste utilization. The project effectively promotes the improvement of the ecological and environmental protection industry chain and elevates local environmental governance standards. It is expected to enable the harmless treatment of approximately 164,200 tons of domestic solid waste annually from Hepu as well as surrounding counties and cities.

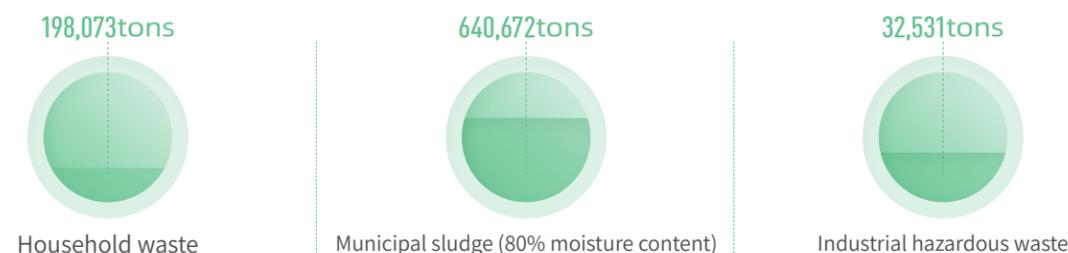


Case Study

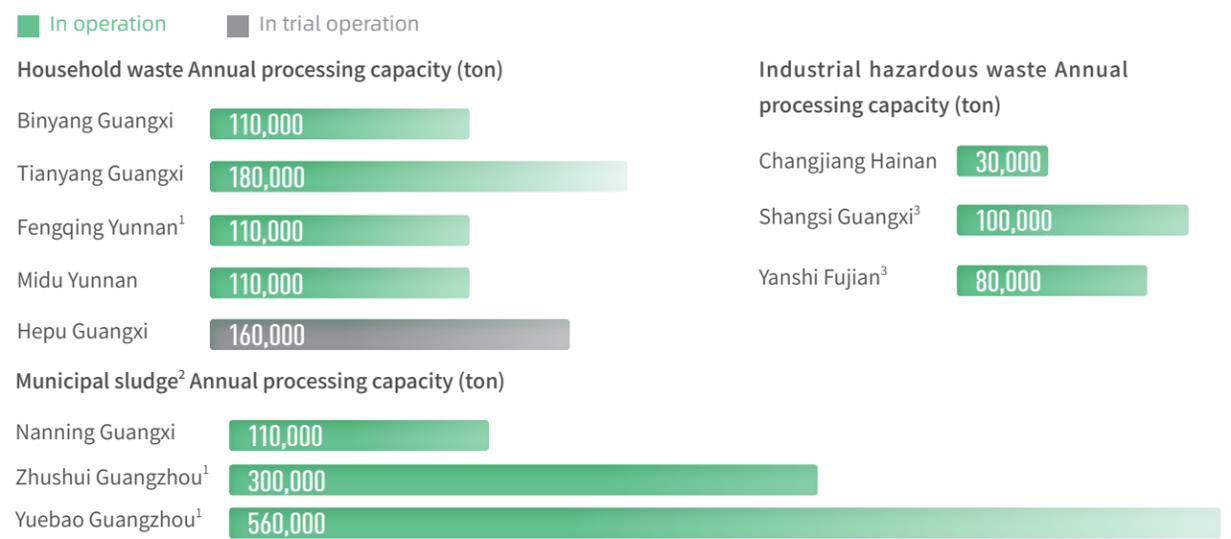


Pingnan Industrial Park Alternative Fuel Project

Co-processed volume of CR Bldg Materials Tech (including joint ventures and associates):



By the end of 2023, CR Bldg Materials Tech had a total of 11 co-processing projects. Specific projects are as follows:



Notes:  
 ① Located at the production sites of the joint ventures and associates.  
 ② Nanning project handled wet sludge with a moisture content of 80%, while Zhushui and Yuebao projects handled dry sludge with a moisture content of less than 40%.  
 ③ Co-processed projects developed by partnership between CR Bldg Materials Tech and CR Environmental Protection.

Wastewater discharge control



Luoding Cement Zero Discharge Project

In strict compliance with the Water Pollution Prevention and Control Law of the People's Republic of China and other relevant laws and regulations, CR Bldg Materials Tech stringently controls the discharge of wastewater and sewage while continuously implementing comprehensive sewage treatment projects at its cement production sites. Referring to national Level 1 emission standards, the Company has developed strict sewage treatment processes and indicators. Following the principles of classified collection, quality-based treatment, and segmented reuse, industrial wastewater, domestic sewage, and initial rainwater are treated through methods including but not limited to: Pretreating and utilizing biochemical processes for domestic sewage; pretreating (coagulation and sedimentation) and deeply treating (sand filtration, membrane treatment, etc.) industrial wastewater; employing scientifically designed piping networks to achieve site rainwater and sewage diversion. Domestic sewage and industrial wastewater are reused within the site when they reach the criteria, and efforts are made to achieve the goal of zero wastewater discharge. By 2023, the Company had completed zero wastewater discharge projects at 30 cement plants and grinding stations, while similar projects at the Jingang, Yingqi, and Hepu bases are under construction.

# Protecting Ecological Environment

## Green transformation of mines

CR Bldg Materials Tech has always abided by the laws and regulations such as the Mineral Resources Law of the People's Republic of China, the Environmental Protection Law of the People's Republic of China, the Regulations on the Protection of Geological Environment of Mines, the Green Mine Construction Specifications for the Sand and Gravel Industry, and the Green Mine Construction Specifications for Cement Limestone. We aim to improve the ecological environment and scientifically and reasonably develop resources, continuously improve the mine management system, optimize resource development methods, and strictly practice the principle of "whoever mines governs; governing while mining" in the process of raw material extraction. We are fully committed to promoting green mine construction, reducing the ecological impact on mining areas, and fulfilling our responsibilities in preserving the ecological environment and biodiversity of mines.

### Before mine development

The Company actively carries out environmental impact assessments, investigates the current status of local flora and fauna resources, rigorously assesses the impact of mine exploitation on land vegetation and the survival environment of wildlife, and develops ecological environmental protection plans and restoration measures throughout the development process, with the aim to minimize land occupation and damage to vegetation in the mine area.

### During mine development

The Company strictly follows the environmental impact assessment report, environmental protection plans, and restoration measures, utilizes techniques such as controlled blasting or non-blasting mining, hole-by-hole micro-differential blasting, and others to avoid or reduce slope rock rolling, damage to the mountain and slope vegetation, and to significantly decrease the impact of seismic waves, shock waves, and noise on the surrounding ecology. Dust reduction measures, including the use of dust collection equipment, spraying facilities, dust suppression vehicles, etc., are taken at all dust emission points throughout the entire process to maintain a clean mining area and surrounding environment.

By 2023

The Company had increased the reforestation area of the mine by approximately

**650,000** m<sup>2</sup>.

By the end of 2023, CR Bldg Materials Tech's reforestation area in mines had reached

**3.8** million m<sup>2</sup>. A total of

**25** mines had been awarded provincial-level (autonomous region-level) and above green

mine titles, with **9** among them being included in the national green mine list.



Reforestation of Midu Cement Mine

# Climate change analysis

## Climate change risk identification and response measures

Main risks	Main climate change risks related to CR Bldg Materials Tech	Response measures
<p><b>Policy and legal risks</b></p>	<p>As China's goals of emissions peaking and carbon neutrality are progressively advanced, national policies and requirements are becoming increasingly stringent. For instance: in key regions for air pollution prevention and control, the addition of production capacity in six key industries, including cement, is strictly prohibited;</p> <p>The regulations for carbon emission trading and the pricing of carbon emission quotas are subject to change over time;</p> <p>Production safety requirements for non-coal mines are heightened;</p> <p>Illegal sand mining activities are severely investigated;</p> <p>Ecological and environmental protection constraints on project development strengthened, increased compliance costs for the enterprise.</p>	<p>Proactively engage with local policy-making authorities to learn and understand the content and direction of policies, identify potential risk points, and reduce risks through standardized management;</p> <p>Conduct research to establish and continuously refine medium- and long-term targets for carbon emission reduction;</p> <p>Lead the construction of intelligent mines, and enhance production safety and standardized operation of mines and riverways.</p>
<p><b>Market and technology risks</b></p>	<p>By 2025, the proportion of clinker production capacity that exceeds the industry's energy efficiency benchmark will have reached 30%, the production capacity of clinker below the energy efficiency baseline will have been essentially eliminated, while the comprehensive energy consumption per unit product of cement clinker is expected to decrease by more than 3%;</p> <p>Future carbon emission quotas may gradually decrease in the future, while trading prices will likely rise, posing higher demands for carbon asset management.</p>	<p>Accelerate the adoption of alternative raw materials and fuels as well as ultra-low emission upgrades by improving processes, reducing energy consumption to lower greenhouse gas emissions, and conducting research and development on alternative clinker, alternative fuels, carbon capture and storage, and low-carbon products, and actively prepare for the future unified national carbon market for the cement industry;</p> <p>Collaborate with CR Power and CR Learning and Innovation Center to establish the CR Carbon Neutrality Research Institute for scientific R&amp;D planning and investment. Strengthen energy storage technology applications, tackle key technological challenges, and promote research and application of carbon capture, utilization, and storage (CCUS) technologies.</p>
<p><b>Extreme weather risks</b></p>	<p>Increased frequency of extreme weather events such as heavy rains, floods, and typhoons may lead to operational disruptions or even damage production and operating facilities, resulting in reduced capacity. Such events may also trigger secondary disasters, pose threats to personal safety, environmental pollution, and challenge the company's asset and production safety.</p>	<p>Coordinate disaster prevention and mitigation efforts, identify safety hazards in key areas, prepare disaster relief materials, formulate emergency plans, and regularly organize disaster safety drills to enhance employees' awareness and response capabilities;</p> <p>Purchase commercial insurance and take other measures to reduce potential personal injuries and property losses caused by disasters and accidents of all kinds;</p> <p>Continue to expand procurement channels, closely monitor the power and coal supply situations in operating regions to ensure supply security;</p> <p>Arrange shipments based on weather conditions, immediately halt deliveries during extreme weather, safely evacuate staff from the transit warehouse, secure loading/unloading equipment, notify customers in advance, and entrust transport companies to reasonably arrange vehicles;</p> <p>Assist retail customers in goods storage and relocation.</p>
<p><b>Chronic natural disasters</b></p>	<p>Changes in rainfall patterns and weather extremes may increase construction costs for the company, and result in project delays, equipment damage, and other issues;</p> <p>Intense precipitation and elevated sea levels may result in inundation, damage to plant buildings, equipment and facilities, depreciation of assets, escalated maintenance expenditures, and increased insurance premiums for equipment and personnel;</p> <p>Rising or falling average temperatures may increase the Company's operating costs, such as increased demand for cooling water for equipment and heating/cooling for office spaces.</p>	<p>Encourage subordinate bases to identify climate vulnerabilities in their respective regions;</p> <p>Optimize energy conservation and environmental protection facilities, improve energy and water efficiency, and rely less on natural resources;</p> <p>Initiate educational programs for employees on climate change to disseminate knowledge about the issue.</p>

## Opportunities presented by climate change and strategic measures

Opportunities presented by climate change	Strategic measures
The Chinese government is actively promoting the construction of green factories and mines, and setting progressively higher environmental standards for the cement industry.	Continuously drive energy conservation and emission reduction, enhance production and operational efficiency, advance the comprehensive utilization of resources, reduce long-term operational costs, and further solidify competitive edge in the industry.
The Chinese government actively advancing the development of a national carbon emission trading market.	Stay abreast of the latest national policies, engage in carbon asset management in a timely manner, and leverage market mechanisms to help the enterprise maintain and increase the value of carbon assets. For more detailed information, please refer to the section "Strengthening Carbon Emission Management" in the chapter "Green Building Materials that Benefit the Nation".
As the Chinese government promotes the development of green buildings, there is an anticipated increase in demand from customers for low-carbon cement, green building materials, and products and services.	Plan to conduct R&D of low-carbon cement and high carbon-capture concrete technology; supply reliable and stable green building materials according to customers' personalized needs; continuously promote the low-carbon certification of cement and clinker products; develop inorganic engineered stone products that are more environmentally friendly and energy-saving.
The Chinese government's push for green building development has led to various levels of government introducing policies to support the growth of prefabricated construction and encouraging the resourceful utilization of construction waste to improve urban environments.	Orderly advance the development of prefabricated construction projects and vigorously promote green building materials. Establish an autoclaved aerated concrete block and panel production line and support the construction industry's innovation in energy conservation and emission reduction, as well as construction methods. Develop a construction waste disposal project in Changjiang Hainan, which helps reduce the consumption of natural resources and drives the green development of the industry.

## Addressing climate change

CR Bldg Materials Tech has implemented a series of strategies, measures, and actions to address climate change risks and opportunities. We have formulated a carbon emission work plan for 2023 and regularly review and summarize the progress towards our goals. We have completed on-site special inspections and training on carbon emission management for all our clinker sites, in an effort to guide them to enhance management levels. We have also fulfilled the carbon market obligations for Guangdong and Fujian in 2022 and continue to advance energy conservation and carbon reduction projects such as alternative raw fuel to reduce carbon emission intensity.

### Carbon Reduction Achievements



**Carbon emission targets**

By 2025, the total emissions of carbon dioxide will have reached their peak, and by 2023, the carbon emission intensity will have decreased by 2% compared to 2020.

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**Carbon emission performance**

Carbon dioxide emissions in 2023 (Scope 1) 41,195,700 tons (Scope 2) 559,400 tons, the carbon emission intensity decreased compared 2020: 3.9%.

Notes: Scope 1 is direct emissions from activities under the operational control of the enterprise. This includes greenhouse gas emissions from fuel combustion, refrigerant leakage from air conditioners, process emissions from manufacturing operations, and emissions from corporate vehicles. Scope 2 covers indirect emissions associated with the purchase and consumption of electricity, heat, and steam by the enterprise. For indirect emissions, the relevant production processes are not directly controlled by the organization, and they are induced by the enterprise's consumption activities.

## Four-Year Action Plan for Energy Conservation and Carbon Reduction

CR Bldg Materials Tech established the "Four-Year Action Plan for Energy Conservation and Carbon Reduction" in 2021, which sets targets for the comprehensive energy consumption per unit product of clinker from 2022 to 2025, and outlines two major technological approaches and four technical lists to achieve these goals. Focusing on the high proportion of coal consumption, which accounts for 94.01% of the comprehensive energy consumption, the Company has launched a series of actions and measures to fully promote the use of alternative raw materials as the main direction, comprehensively carry forward the application of second-generation technology in new/replacement projects, upgrade the existing capacity with second-generation technology, and popularize general single energy-saving technologies.

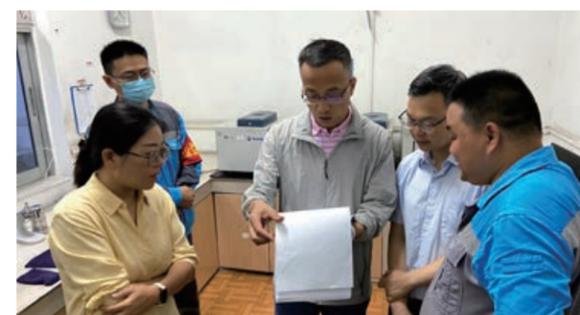
**Target**  
By 2025, the goal is to achieve 50% of cement production lines reaching the benchmark energy consumption level set by five ministries, and 100% reaching the baseline level. The overall integrated energy consumption per ton of clinker will decrease by 5.0 kg/t.cl (from an average of 106.57 kg/t.cl to 101.57 kg/t.cl).



## Strengthening carbon emission management

Based on national policies and its own circumstances, CR Bldg Materials Tech has formulated medium and long-term carbon emission targets for the 14th Five-Year Plan period, a "emissions peaking and carbon neutrality" action plan, and strategic goals. Treating "emissions peaking and carbon neutrality" as a crucial next-stage task to address climate change, the company has rolled out a series of measures for organizational development, capacity building, and carbon asset management:

- Optimize the carbon emission management model and system to enhance emission control capabilities;
- Establish a carbon emission management leading group headed by Company leaders to coordinate the Company's carbon emission control efforts. Designate the EHS Department for daily carbon emission management, organize and coordinate strategy, project implementation, technological R&D, budgeting from with the strategic management department, operational management department, technological innovation department and finance department;
- Conduct comprehensive internal inspections on carbon emission management at self-operated clinker production bases through spot checks by the Company and cross-regional checks to drive improvement and standardize data regulation;
- Continuously improving staff's technical capabilities through internal professional training integrated with external exchanges and programs to cultivate professionals;
- Strengthen policy analysis, strictly follow carbon trading regulations, and compliantly participate in local pilot quota settlement in Guangdong and Fujian, forecast quota surplus/deficit and realize carbon asset preservation and appreciation while reducing compliance costs against the background that the cement industry is to be included in the national carbon emission trading market.



CR Bldg Materials Tech conducted dedicated carbon emission management inspections



### Low-carbon products and terminal sequestration

Keeping pace with the new era of "emissions peaking and carbon neutrality", CR Bldg Materials Tech actively promotes R&D and application of carbon capture technologies and low-carbon products to facilitate a green and low-carbon industrial chain, taking action to help the building materials industry address climate change.

#### Low-carbon product development

Following the approach of "increasing cement hydration degree + activating inert blending materials + improving hydration product morphology", the Company has developed a low-carbon cement grinding aid applied across 26 bases. In 2023, 20,286 tons of the low-carbon product were supplied, clinker blending in cement was decreased by 4%-6%, power consumption was lowered by 1-2kWh/t, while the mill throughput was increased by 10-20t/h, and carbon emissions were cumulatively reduced by around 800,000 tons.

#### Carbon capture and sequestration technologies

The Company has successfully developed construction waste recycled aggregates carbon sequestration and steel slag carbon sequestration technologies. Based on industry characteristics, R&D on carbon sequestration aerated concrete is underway to open new paths for large-scale CO<sub>2</sub> utilization in the cement industry. As of end of 2023, the first industrial trial phase for carbon sequestration aerated concrete was completed, with product performance reaching grade B07 A5.0 and carbon sequestration exceeding 10wt%.

## Commitments and Fulfillments

### 2023 Commitments

- Resolutely implement ecological and environmental protection responsibilities and spare no efforts in building a long-term mechanism for sustained efforts;
- Adhere to precise, scientific and law-based pollution prevention and control to deeply fight the tough battle against environment pollution;
- Solidify the concept that lucid waters and lush mountains are as invaluable as gold and silver, and thoroughly investigate and rectify ecological and environmental issues;
- Steadily and orderly promote the emissions peaking and carbon neutrality goals to make green the distinctive feature of high-quality development.

### 2023 Fulfillments

- Improve the environmental management system for full corporate coverage, and achieve ISO 14001:2015 certification. Formulate plans on budgets and fund utilization for ecological protection, with an investment of around RMB413 million;
- Dedicated inspections were conducted for pollutant discharge permits, self-monitoring, Yangtze River and Yellow River basins, solid wastes, Pearl River basin, etc., with key issues placed under supervision;
- All cement production bases obtained 100% pollutant discharge permits and discharge strictly according the permits. All clinker production lines were 100% provided with low-temperature waste heat power generation equipment, denitration systems and bag filter systems with emissions far below national and local standards;
- A carbon emission management leadership group was established with the Company's leadership serving as the head, to coordinate the company's carbon emission control efforts; the EHS department was designated as the entity responsible for the daily management of carbon emissions, with various relevant departments being organized and coordinated to carry out carbon emission management from strategic planning, project implementation, and technological research and development aspects; comprehensive special inspections on internal carbon emission management at self-operated clinker bases were conducted to ensure full coverage, using these inspections to drive improvements and to continuously standardize the management of carbon emission data; quota clearance work in the pilot areas of Guangdong and Fujian was carried out in accordance with laws and regulations, with quota surplus and deficit forecasted in advance;
- By the end of 2023, 20 production bases had been listed as "Green Factories" at the national, provincial or autonomous region level;
- Carbon emission intensity in 2023 decreased by 3.9% compared to 2020.

### 2024 Commitments

- Uphold the new development philosophy, solidify the environmental protection management foundation, and take responsibility for green transformation and development;
- Enhance carbon emission management to drive high-quality, low-carbon development.

# 04

## Cementing Hope, Harmonizing Society

### Substantive topics:

- Employee rights and occupational health
- Employee development and training
- Employee care
- Production safety
- Charity and public welfare
- Support of regional development



CR Bldg Materials Tech emphasizes development and contribution, takes the lead in boosting regional growth, creates a caring workplace and pioneers in public welfare and charity. Unified in progress, converging positive energy as the cornerstone, the Company continually improves employee wellbeing through development, promotes charity as a social ethos, and joins all sectors to create a better future.

### United Nations Sustainable Development Goals (SDGs):



Responsibility  
column

# Footsteps with Warmth

## —Lighting the Way of Public Welfare at CR Bldg Materials Tech

"A small stream can become a mighty river; a tiny spark can ignite a wildfire". Since 2020, CR Bldg Materials Tech has hosted the "Run for Excellence" public welfare cloud running event for four consecutive years, to promote healthy lifestyles and advocate charity actions. Over four years, CR Bldg Materials Tech has practiced public welfare through running. By syncing step counts from offline walks and online tracking, then converting to education sponsorships, more children can realize their dreams of education, and the hope is lighted for more families.

### The beginning: Initiating a unique public welfare journey in the name of love

In 2020, CR Bldg Materials Tech advocates a civilized and healthy lifestyle and fulfills corporate social responsibility, CR Bldg Materials Tech innovatively launched the first "Run for Excellence" public welfare cloud run. The 3-day event attracted nearly 500 passionate employee participants, and showcased the stride of CR Bldg Materials Tech's "running friends." After online tracking via sports apps, the inaugural event accumulated 1,920 km (around 384,000

steps). The Company converted them to RMB50,000 in education sponsorships, donated to Xinan Primary School in Nantang Town, Lufeng City, the designated assistance recipient of Shenzhen's Luohu District. The funds were used to upgrade some teaching equipment and purchase books, and created better learning conditions for the children.

### Development: Keeping the date with love, nurturing blossoming flowers

The summer of July 2021 brought scorching heat, but could not dampen the running passion of CR Bldg Materials Tech team. Building on the positive results and impact of the first event, the Company rallied over 2,900 employees to "start running" again. A quiz challenge segment was innovatively introduced for edutainment, and ushered in even greater participation enthusiasm. The uplifting team spirit sustained the warming flow of love. This time, the Company converted the "donated steps" to RMB100,000 in public welfare funds to purchase smart blackboards and student uniforms for impoverished schools, providing children with enriched learning environments.



The Second "Run for Excellence" Public Welfare Cloud Run

Love is a race without a finish line. CR Bldg Materials Tech representatives were invited to the beneficiary Xinan Primary School for the "Great Love Nurtures Unlimited Wisdom" donation ceremony. During the ceremony, CR Bldg Materials Tech regional customer representatives additionally donated nearly 200 school bags to Xinan Primary School. The children received more warmth and joy, and beamed with happiness. Their pure, resounding performance of "Let Me Say Thank You" still seems to linger.



Scan the QR code to read more  
The Heartwarming Story between  
CR Bldg Materials Tech and Xinan  
Primary School

### Growth: Illuminating the Path, Accelerating Public Welfare Initiatives

The public welfare cloud run opened up a brand-new athletic experience for CR Bldg Materials Tech's running enthusiasts, and made it one of the most anticipated annual events. The third cloud run arrived as scheduled in September 2022. Themed "Welcoming the 20th Party Congress, Striding Towards a New Journey", the online event scene transitioned from sports apps to the "CR Work" platform, to allow more employee participation. During the week-long event, everyone checked in daily

through the "Run for Excellence" column on CR Work, answered randomly assigned quiz questions about the 20th Party Congress spirit. This allowed them to draw perseverance from running. Needless to say, this cloud run carried deeper meaning and value. As always, CR Bldg Materials Tech actively organized and swiftly responded, converted the 24.08 million accumulated steps into RMB50,000 in education sponsorships, to light up more children's paths to knowledge.



The Third "Run for Excellence" Public Welfare Cloud Run

CR Bldg Materials Tech donated public welfare funds to Muzi Town



"We hope these small good deeds help Muzi Town schools further improve teaching facilities, creating a better learning environment for children. In the future, we will shoulder our mission, bravely take responsibility, and continue hosting the cloud run to contribute even more light and warmth to public welfare causes. CR Bldg Materials Tech representative made this firm commitment at the donation ceremony, and delivered the sponsorship funds and additionally donated printers, computers, and school bags from regional distributors to the Muzi Town government. At the moment of receiving red neckties from Honglang Primary School student representatives, CR Bldg Materials Tech team vowed to become steadfast practitioners of charitable causes, continually strengthen their own ability to fulfill responsibilities and sustainably build a socially valuable, sustainable brand public welfare program.

The Company donated

**RMB 50,000** to

Pingling Subdistrict, Longmen County for impoverished student sponsorships and high school graduate rewards,

**RMB 50,000** to the

Longmen County Federation of Literary and Art Circles ,

and **RMB 50,000** to

Pingling Experimental School for facility renovations and teaching equipment purchases.

The fourth event received an enthusiastic response, and accumulated over 40 million steps - a new record high. As before, CR Bldg Materials Tech converted the steps to public welfare funds for impoverished student sponsorships and high school graduate rewards, for the "Cultural & Artistic Public Welfare Nurtures the Heart, Boosts Rural Education" volunteer service series, and for facility renovations and teaching equipment purchases. The Company additionally donated 12 laptops and 4 projectors. This encouraged Pingling students to keep striving towards their goals, daring to challenge themselves and become successful participants.

**Stakeholder Testimonials**

"CR Bldg Materials Tech has always cared about and supported the rural revitalization and educational development of Pingling Subdistrict. This year, we have cumulatively donated over RMB600,000 to Pingling Subdistrict for various charitable causes, and put corporate social responsibility into concrete action. Pingling Subdistrict will make good use of the charitable funds. Through joint efforts between the subdistrict and the enterprise, every child will be able to enjoy quality educational resources, and this propels Pingling's education to new heights."

—He Tianwei, Member of the Party Working Committee of Pingling Subdistrict, Longmen County

## Prosperity: Sports goes on, and the public welfare journey never ends

2023 marks the 85th anniversary of CR's founding, the 40th of CR Group, and the 20th of CR Bldg Materials Tech. Facing immense industry headwinds and the pressing mission to "stabilize growth, secure budgets" while solidifying high-quality development foundations, the Company continued to engage in public welfare and charity. Upholding the spread of warmth and love, the Company hosted the 4th "Run for Excellence" public welfare cloud run as scheduled, and successfully rallied nearly 1,000 employees nationwide to "start running" simultaneously. At the kick-off ceremony, participants surged forth at the whistle like a tide, challenged themselves with speed and passion along the Shenzhen Talent Park running routes, and completed the 5km task in order.

The "check-in" mechanism added fun, and allowed participants to launch step tracking daily on the CR Work event column. Every 20,000 steps unlocked a "check-in" milestone, blending exercise, public welfare support, and learning/sharing themed education content, which truly fused knowledge with delight, and integrated education into the heart.



The Fourth "Run for Excellence" Public Welfare Cloud Run



Student representatives presented red neckties to the honored guests

From 3.84 million steps in the inaugural 2020 public welfare cloud run to 40 million in 2023's fourth event, this leap represents not just numbers, but the fruitful results of the Company's "sports + public welfare" approach - a manifestation of CR Bldg Materials Tech team's united commitment and concerted efforts. In the future, CR Bldg Materials Tech will strive to develop the public welfare cloud run into an outstanding, uniquely branded philanthropic event. More employees will embrace the concept of "exercise for health", and cultivate positive, optimistic, uplifting, and civilized lifestyles while deeply practicing public welfare to spread even more love and kindness.

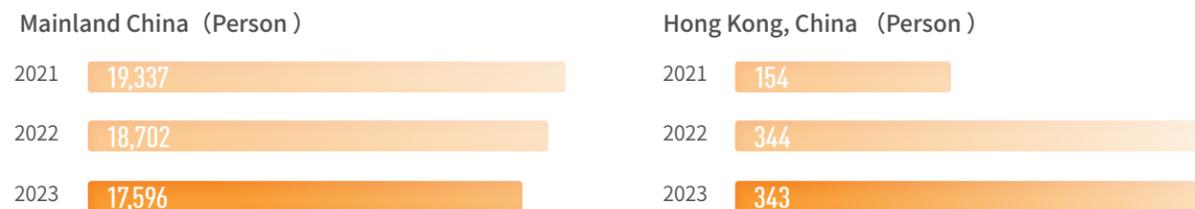
# Safeguarding employee rights

## Protecting basic rights

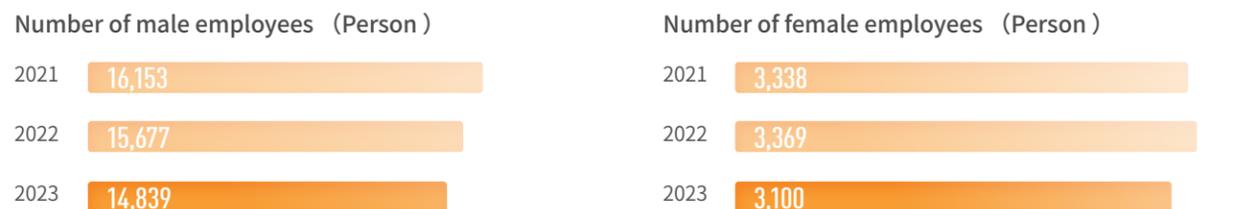
## Adhering to legal employment

CR Bldg Materials Tech strictly complies with laws and regulations like the Labor Law of the People's Republic of China, Labor Contract Law of the People's Republic of China, Law on Protection of Minors of the People's Republic of China, Special Provisions on Protection of Underage Workers, and Provisions on Prohibition of Child Labor. We uphold fair and just employment principles, resolutely oppose forced labor, harassment, and abuse, prohibit child labor and resist all forms of discrimination, insist on diversity and equal opportunity, treat job applicants and employees fairly regardless of nationality, region, ethnicity, religion, gender, age, education, sexual orientation, or disability status. We legally execute labor contracts with employees, guarantee their rights to rest and leave. We emphasize employee information and privacy protection, solidify information management mechanisms, control relevant permissions through HR system processes, require employees handling personal data to sign confidentiality agreements, and strictly manage and keep employee information and privacy confidential. Upon hiring, employees must truthfully declare their personal information. After onboarding, they must carry out work according to the Company's relevant regulations. If fraudulent identification, misrepresented personal details, work misconduct, or other violations are discovered, the Company will handle them according to relevant rules and disciplinary measures. Serious violations with adverse impacts may be pursued legally. In 2023, the Company conducted employment activities compliantly as per laws and regulations, all of the employees are full time, with no instances of child labor, forced labor, human rights-related negative events, or major labor disputes occurred.

### Employees by region



### Employees by gender



In 2023

The Company achieved 100% coverage of the staff representative congress across **104** grassroots entities, and approved **198** policies and regulations in total.

## Practicing democratic management

CR Bldg Materials Tech respects employees' freedom of speech, actively listens to their voices and effectively safeguards their lawful rights to information, participation, expression, and supervision. We accept grievances through multiple channels like whistleblowing email addresses and hotlines on the Company website and "Online Messages" sections, and promptly respond to reasonable employee demands. The Company continually improves the operation mechanisms of the trade union and staff representative congress. On the basis of strengthening the construction of trade union organizations, we comprehensively promote the development of the staff representative congress, effectively ensure that staff representatives perform their duties, exercise and implement the powers of the staff representative congress in accordance with the law, enhance the sense of participation among employees, and actively play the important role of democratic management in the Company's operations and development. In 2023, the Company achieved 100% coverage of the staff representative congress across 104 grassroots entities, and approved 198 policies and regulations in total.



Group photo of the Fourth Staff Representative Congress' Sixth Meeting of Pingnan Cement



Democratic voting at the Fourth Staff Representative Congress' Third Meeting of Guigang Cement

In 2023

The Company increased commercial insurance public liability coverage to a total of **RMB 300,000**, and reimbursed medical expenses for **13** middle and grassroots employees facing financial difficulties due to illness.

## Optimizing compensation and benefits

CR Bldg Materials Tech adheres to a business-oriented approach, closely tracks corporate performance and industry dynamics. Using value creation as the guideline, we differentially allocate total compensation to different business formats and groups, continually refine income distribution mechanisms, precisely implement competitive compensation adjustments to retain core roles and top talents. Simultaneously, the Company provides employees with multi-dimensional benefits and allowances covering health, living, etc., and enhances employee recognition and sense of belonging from a humanistic care perspective. In 2023, the Company increased commercial insurance public liability coverage to a total of RMB300,000, and reimbursed medical expenses for 13 middle and grassroots employees facing financial difficulties due to illness.

## Focusing on occupational health

CR Bldg Materials Tech stringently implements the principal responsibilities for occupational disease prevention and control as an employer. We execute the Provisions on Occupational Health Management, improve occupational health management systems, proceed with the source control of occupational disease hazards, and pursue essential health. We have carried out 45 governance projects targeting key occupational hazards like dust, noise, and high temperatures, prioritized new technologies, processes, equipment, and materials conducive to preventing occupational diseases and protecting workers' health to improve the working environment. We regularly organize physical examinations for all employees, especially specialized examinations for special operations and hazardous job roles. We care about employees' mental wellbeing, regularly arrange psychological counseling and venting sessions while proactively holding health training sessions and lectures to comprehensively enhance health awareness. In 2023, the Company achieved its target of zero new diagnosed occupational disease, with 100% coverage of ISO 45001:2018 Occupational Health & Safety Management System.

The Company vigorously creates a healthy enterprise, and selects health ambassadors. In 2023, 7 new provincial-level healthy enterprises were established, with 8 individuals named provincial health ambassadors. Quanzhou Cement and Guangxi Concrete were honored as "Excellent Enterprises" in national healthy enterprise construction. An occupational health project was included in the list by the National Health Commission's "Outstanding Cases in Healthy Enterprise Construction - Enterprise Construction Chapter". Tianyang Cement, Shantou Cement, and other bases have launched "Intelligent Health Stations", "Employee Wellness Rooms", and other initiatives, taking concrete actions to fully safeguard occupational health.



Tianyang Cement carried out free medical consultation activities titled "Occupational Health Publicity Week".



Hepu Cement conducted health examinations and lecture events titled "Guard Health Now".



Yanshi Cement organized themed activities for "Employee Health Care".

## Cultivating elite talents

### Enhancing employee capabilities

CR Bldg Materials Tech highly values talent development, continually establishes and improves talent management and cultivation mechanisms. Implements the "1211" talent development plan, and conduct dedicated talent projects step-by-step. We issued the Guidelines on Management Trainee of China Resources Building Materials Technology Holdings Limited to systematize, standardize, and streamline management trainee programs; improved supporting management mechanisms for technical talents, developed and published the Report on R&D Talent Team Analysis and Recommendations and Measures for Accreditation of Technological Talents (2023 Edition) to enable layered, categorized technological talent management. The Company also co-developed an engineering master's/doctoral program with Southeast University, to expand new channels for engineering talents cultivation. The Company runs targeted training programs for different audiences, such as the "Future Stars" boot camp, "Runpeng" training, first-in-command advancement program, "Spark Class" for excellent manufacturing engineers, supply chain artisan training, "Runpin Master" talent program, "100 Craftsmen Program" for skilled talents, "Sapphire Blue" program, executive discussion training and more, striving to build a learning organization and empower rapid employee growth.

### CR Bldg Materials Tech "1211" Talent Development Program

<b>Cultivation objectives</b>	<b>100</b> principal managers	<b>20</b> industry leaders	A cohort of distinguished engineers, high-skilled and proficient professionals		
<b>Cultivation program</b>	<b>First-in-command advancement program</b> Business and strategic thinking	<b>Leadership program</b> Leading and core talent at the Group and CR Bldg Materials Tech	<b>Distinguished engineers training program (100 participants)</b>	<b>Professional leadership program</b>	<b>Skilled talents Cultivation program</b>
	<b>Production base heads &amp; reserve cultivation program</b> Elite program – production base heads & reserve young elite program - reserve cadres	<b>Young backbone program</b> Youth and backbone Technological talents	Headquarter leadership Integration of innovative talents, intelligent and digital talents, and other quality programs	Qualified finance Qualified procurement Qualified audit Qualified HR Qualified sales	Skill competition – guidance on national skilled personnel
	<b>Career breakthrough program</b> Middle management and reserve cultivation program		<b>Frontline consolidation "Blue Beam" engineer program for production sites</b>		
<b>100</b> outstanding young talents	<b>Youth Talents Professional Leadership Program</b> Runpeng Program			<b>Future Star Boot Camp</b>	



Camp VII, South China Region, "Future Star" New Employee Boot Camp



Second Intensified Training, Phase III, Elite Cultivation Program, CR Bldg Materials Tech "Deep Blue Plan"



Digital Translator Special Training, "Spark Class", CR Bldg Materials Tech Digital Literacy Skills Training



2023 Kiln Operation and Mill Operation Professional Skills Competition, CR Bldg Materials Tech



Skilled Talent Training Class, Wuxuan Cement "Hundred Craftsmen Program"



Second Supply Chain Craftsmen Training Class, Runfeng Trading Development Co. Ltd.



Special Promotion of "3M+2T" Team Building, West China Region



2023 "Woman's Demeanour Cup" Skill Competition of CR Bldg Materials Tech



## Honor Column



CR Bldg Materials Tech has won the Group Excellence Award in the Cement Clinker Calcination Worker (Kiln Operation) Professional Skills Competition in National Building Materials Industry, with multiple employees receiving individual honorary titles.

团体优胜奖获奖名单

序号	获奖单位	名次
1	陕西建材科技集团股份有限公司	一等奖
2	四川省星船城水泥股份有限公司	二等奖
3	华润水泥控股有限公司	三等奖

优秀教练员获奖名单  
(不分排名)

序号	优秀教练员姓名	单位
1	文思宇	华润水泥控股有限公司
2	吴青山	四川省星船城水泥股份有限公司
3	杨小兵	华新水泥股份有限公司
4	安立新	中建材峨边水泥有限公司

铜牌窑操能手获奖名单

序号	选手姓名	单位
1	黄鑫	西昌航天水泥有限公司
2	吕正雄	葛洲坝老河口水泥有限公司
3	吴长阳	华新红塔水泥(景洪)有限公司
4	王振祥	重庆华新地埋水泥有限公司
5	胡春景	晋城山水水泥有限公司
6	王野鹏	华润水泥(封开)有限公司
7	董维	四川省星船城水泥股份有限公司
8	杨必双	华润水泥(鹤庆)有限公司
9	李波	晋城山水水泥有限公司

银牌窑操能手获奖名单

序号	选手姓名	单位
1	谢隆山	青海祁连山水泥有限公司
2	郭华江	华润水泥(金沙)有限公司
3	冯永旺	星船城宜宾瑞兴实业有限公司
4	范福军	蒙东海天水泥有限责任公司
5	张亮	汉中西乡亮柏水泥有限公司
6	赵仕强	保山昆甸惠丰水泥建材有限公司
7	梁俊文	华润水泥(武宣)有限公司
8	魏朝宇	重庆华新地埋水泥有限公司
9	董海鹏	华润水泥(南宁)有限公司



5th "Runfeng Cup" Basketball Tournament of CR Bldg Materials Tech



3rd "Runpin Cup" Badminton Tournament of CR Bldg Materials Tech



Family Day and Fun Sports Meeting at CR Bldg Materials Tech Headquarter



"Meeting in Midsummer" Youth Employee Sodality Event, Zhaoqing Runxin

## Smoothing career pathways

The "professional technical personnel track" encompasses

**35** specialties.

CR Bldg Materials Tech has always regarded talent as a precious asset. Based on the "3+1" talent team structure and the "1211" talent development program, we have delineated career development pathways for the "management track", "professional technical personnel track", and "skilled personnel track", known as the "Three Tracks". The "professional technical personnel track" encompasses 35 specialties, covers P2-P7 job levels and 228 job qualification standards, and clearly focuses on the growth path of each employee. The Company continuously improves talent management methods, further clarifies management requirements in areas such as job evaluation, talent exchange and utilization, employee growth, and talent mechanisms, enhances the practicality of the system and safeguards employees' professional development within the enterprise.

## Caring for employees

## Enriching employee life

With a people-oriented approach and a caring heart for employees, CR Bldg Materials Tech is committed to creating a happy workplace. Through sports activities, birthday parties, book sharing sessions, sodalities, and a series of holiday-themed cultural events, we aim to relieve employees' work pressure, enrich their cultural life, enhance team happiness and cohesion, and foster a relaxed and pleasant workplace atmosphere. In 2023, the Company's headquarter labor union organized a total of 143 group activities across six interest groups, including basketball, badminton, soccer, and swimming groups.



"March 3rd of the Zhuang People" Series of Activities, Guigang Cement



"Labor and Cuisines" Community Banquet Event, Wuxuan Cement

Scan the QR code to read more  
"International Women's Day" Themed Series of Activities, CR Bldg Materials Tech



In 2023

The "Gratitude Fund" raised a total of **RMB 1.3154 million** from the Company and employees to assist **32** individuals with illnesses, emergencies, and their immediate family members, with a total disbursement of **RMB 1.5357 million**.



Scan the QR code to read more CR conducted Spring Festival care activities

## Practical employee care

CR Bldg Materials Tech cares for the work and life of its employees, ensures fair and just promotion opportunities, compensation and benefits for women. Focusing on employees' urgent, difficult, and worrying issues, we continue to advance 198 annual practical projects around employees including dormitory construction, garden factory development, and factory sports and cultural facilities configuration. Regular visits and assistance are provided to employees and their families in difficulty, with an additional policy of six round-trip travel reimbursements for employees separated from their spouses and children due to work. The "Gratitude Fund" provides assistance to struggling employees; in 2023, the "Gratitude Fund" raised a total of RMB1.3154 million from the Company and employees to assist 32 individuals with illnesses, emergencies, and their immediate family members, with a total disbursement of RMB1.5357 million.

### Jinsha Cement built an employee residential community - CR Home

Case Study

Jinsha Cement is located in a remote suburban area with relatively harsh living conditions. To improve employees' living environment, Jinsha Cement specially constructed an employee residential community, CR Home, providing 88 housing units. This effectively solved accommodation issues for about 120 employees, as well as schooling for 17 primary school students and 13 kindergarteners. CR Home is equipped with an outdoor children's playground, indoor library, ping-pong room, badminton court and other basic facilities, greatly enhancing employees' sense of happiness, fulfillment and security.



## Reinforcing Safety Defenses

### Improving production safety management systems

CR Bldg Materials Tech always upholds life and health as paramount, keeps safety production taut, adheres to the safety culture concept that "all accidents are preventable". The Company continually promotes safety standardization and dual prevention mechanism construction, and unceasingly refines the "13263" EHS management system. In 2023, CR Bldg Materials Tech formulated/revised 8 EHS policies and standards to provide guidance for subordinate entities' safety efforts. The Company established an audit guidance team for safety standardization to direct and supervise standardization safety efforts at production sites. It increased safety investment, totaling RMB299 million in 2023 to improve on-site working environments and elevate operational safety coefficients.

CR Bldg Materials Tech stringently requires relevant parties to follow safety production management, and has developed the Contractor Safety Management System of China Resources Building Materials Technology Holdings Limited to clarify related parties' responsibilities in safety management. By the end of 2023, all construction contractors, equipment maintenance parties, transportation providers, labor suppliers, vendors, waste disposal handlers, tenants, and technical service providers had been incorporated into the scope of related party management.

## Strengthening emergency response mechanisms

In 2023

Subordinate entities executed

**1,778** emergency drills with **25,495** participants in total.



Company leaders made pre-Mid-Autumn and National Day safety inspections at Tianyang Cement

CR Bldg Materials Tech has established sound emergency management policies and systems, issued Comprehensive Emergency Response Plan for Production Safety Accidents of China Resources Building Materials Technology Holdings Limited, Comprehensive Emergency Response Plan for Environmental Emergencies of China Resources Building Materials Technology Holdings Limited, and EHS Emergency Management System of China Resources Building Materials Technology Holdings Limited to strengthen and standardize corporate EHS emergency management. The Company sets up an emergency command body led by top executives and rescue teams, delegates emergency duties to organizations and individuals. It also undertakes risk identification and assessment for contingencies, formulates risk mitigation and emergency response measures, deeply explores integrated emergency rescue platforms and digitalized command systems, builds a comprehensive, rapid-response emergency system across subordinate entities to fully enhance the Company's risk resistance and incident handling capabilities. In 2023, subordinate entities executed 1,778 emergency drills with 25,495 participants in total.



Zhanjiang Cement performed a special emergency drill for fire accidents



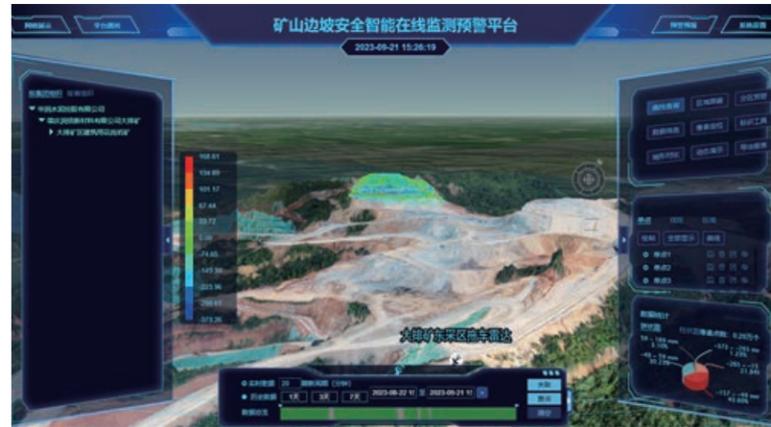
Pingnan Cement carried out an emergency rescue drill for mine cave collapse and vehicle injury accidents

## Promoting science and technology empowered safety

CR Bldg Materials Tech vigorously promotes deep integration of new infrastructure like big data and 5G with production safety. The Company combines the integrated production safety management system with the smart park systems at production bases to form intelligent early-warning integrated management solutions for production sites, and fosters more systematic, mobile and intelligent safety management mechanisms. With new technologies and equipment in place to build intelligent mines, we innovate to reinforce mine safety and elevate intrinsic safety levels.

### Zhaoqing Runxin Dapai Mine co-built a national key lab for intelligent mining Case Study

Zhaoqing Runxin Dapai Mine jointly applied with China University of Mining and Technology, Guangdong Hongda Blasting Co., etc. to establish the "Key Laboratory of National Mine Safety Administration for Safe Intelligent Mining in Non-coal Surface Mines" to accelerate the development of intelligent benchmarking mines. The construction covered intelligent functions across the entire production process including surveying, drilling, blasting, excavating, transportation, hauling, dumping, and online slope monitoring. This drove the transformation of the project into an advanced domestic aggregates production base integrating safety, green, intelligence and efficiency.



## Focusing on hazard Investigation and rectification

In 2023

The Company organized hazardous chemical hazard investigations, identified

**340** hazards, and **100%** were rectified.

CR Bldg Materials Tech promotes the establishment of a risk grading and hazard investigation system, organizes hazard investigation and governance while emphasizing supervisory safeguarding. The Company leaders led teams to conduct thorough safety inspections and rectifications, organized full-coverage safety inspections, issued rectification notices and tracking their implementation to ensure 100% hazard rectification rate. Specialized checklists for specific inspection themes were formulated monthly and targeted inspections were implemented. In-depth investigations and rectifications of major accident hazards were conducted to prevent and defuse major safety risks. CR Bldg Materials Tech has established a safety management system for comprehensive hazardous chemicals, clarified full-cycle health and safety requirements for procurement, transportation, loading and unloading, warehousing, use and disposal of hazardous chemicals. Hazardous chemical management and operating personnel possess qualified knowledge and skills. We organized hazardous chemical hazard investigations, identified 340 hazards, and 100% were rectified.

## Conducting safety education

In 2023

The Company organized **5** EHS training sessions for **60** key role personnel and **298** mid-level and grassroots staff. **1,370** mid-level and above employees participated in position qualification exams.

Persisting in promoting the concept that "everyone is the lead in production", CR Bldg Materials Tech actively organizes thematic activities such as Production Safety Month, Safety Open Day, safety knowledge contests, Promotion Week of Occupational Disease Prevention Law, etc., and adopts diverse safety publicity and education formats to ingrain safety concepts. We advance "3M+2T" team building, organize multi-level EHS training and exams to improve EHS work quality and efficiency. In 2023, the Company organized 5 EHS training sessions for 60 key role personnel and 298 mid-level and grassroots staff. 1,370 mid-level and above employees participated in position qualification exams.



Launch Ceremony of "Production Safety Month" in Southeast China Region



7th EHS Knowledge Contest at Zhanjiang Cement



EHS Open Day at Caoxi Cement



EHS Experience Hall Officially Launched at Wuxuan Cement

## Support of regional development

### Supporting Rural Revitalization

Always bearing in mind that "national rejuvenation requires rural revitalization", CR Bldg Materials Tech actively participated in the 2nd "Week of Central Enterprise Consumption for Agricultural Revitalization", purchased agricultural products worth RMB310,000 from counties for designated assistance and paired support to show support for rural revitalization through practical actions. We implemented a talent assistance project titled Five-Year Plan to Support Haiyan County Development, organized senior and mid-level management to provide one-on-one assistance to 10 impoverished college students from Haiyuan County with RMB10,000 as sponsorship funds. Four South China regional production bases responded to the "6.30 Rural Revitalization Action" and the public welfare initiative of the "Hundreds of Counties, Thousands of Towns, and Tens of Thousands of Villages Development Project", to help address imbalances in urban-rural development in South China, and donated cement and funds totaling RMB710,000.



Hongshuihe Cement's care event titled "Caring Support for Rural Revitalization, Hand-in-Hand for a Better Life"



Huizhou Cement's event titled "Micro Wishes" to aid students and "Caring Classroom" to support rural education



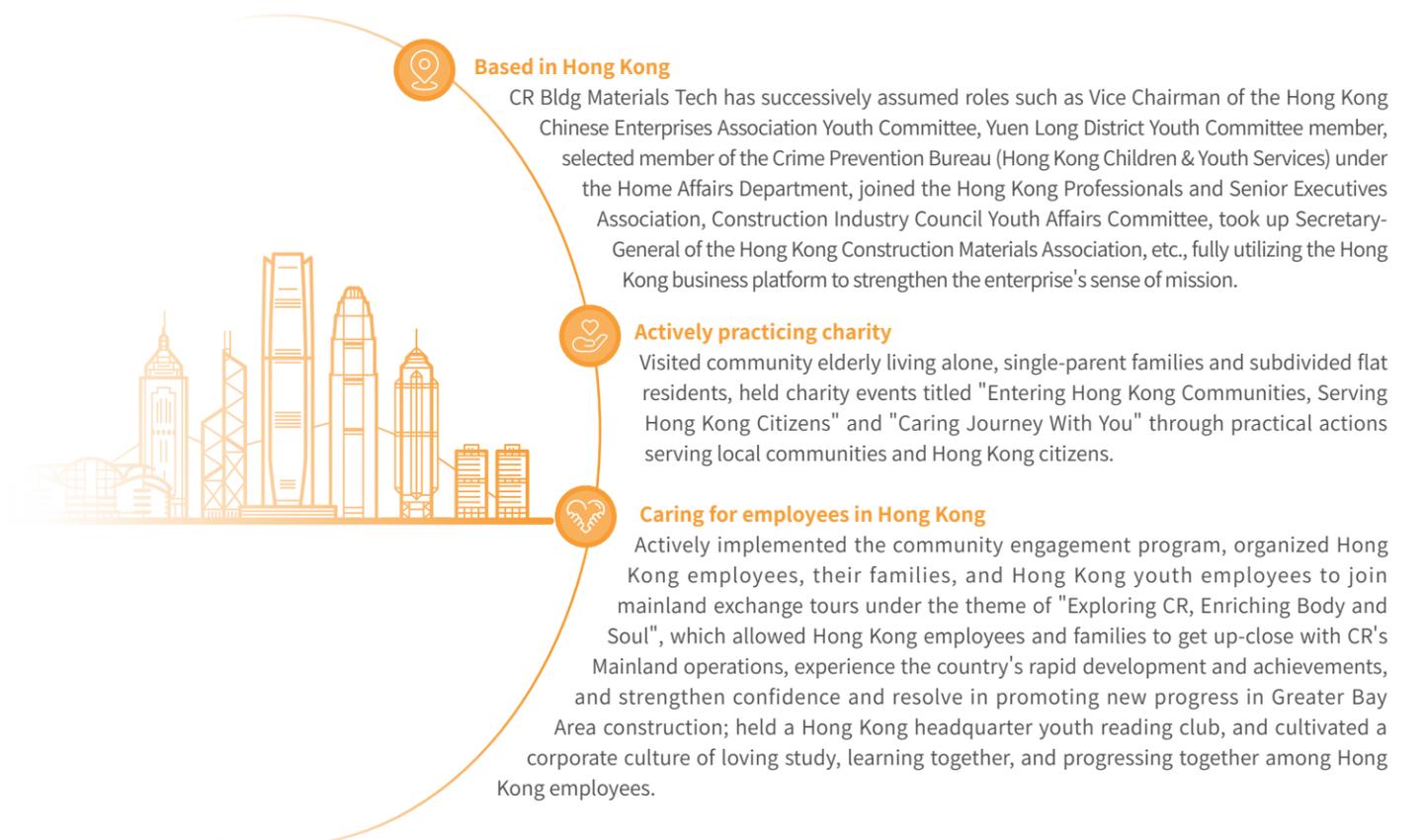
Zhaoqing Concrete assisted Tangkou Village in road construction



Fengkai Cement participated in the "6.30 Rural Revitalization Action" and the public welfare initiative of the "Hundreds of Counties, Thousands of Towns, and Tens of Thousands of Villages Development Project"

## Supporting Hong Kong's development

Based in Hong Kong, CR Bldg Materials Tech actively fulfills the social responsibilities of mainland enterprises in Hong Kong, deepens youth development, promotes community engagement programs, and charitable assistance, and strives to be a bearer of the "Reinvigorating Hong Kong Business" strategy.



### Hong Kong Construction Industry Council "Greater Bay Area Exchange Program for Youth in the Construction Industry" Visited CR Bldg Materials Tech

Case Study

From July 20 to July 22, 2023, CR Bldg Materials Tech hosted the stage event titled "Greater Bay Area Exchange Program for Youth in the Construction Industry", and organized over 70 exchange group members to visit Fengkai Cement for exchange activities. The group toured the "Runpin" exhibition hall, autoclaved lightweight concrete (ALC) production line, tile adhesive plant, Fengkai port and intelligent lab. They visited the safety training experience hall, experienced the 52 kilometer limestone belt conveyor, participated in the "My Vision of CR Fengkai Cement" drawing contest, and engaged in the "Retracing the Long March" and "Upward Steps" outward bound projects. This allowed Hong Kong youths in the construction industry to deeply understand the latest building materials development in the Mainland and culture and living in the Greater Bay Area, cultivated them into patriotic Hong Kong youth with ideals and commitment, which made CR Bldg Materials Tech a "confidant, enthusiast, and guide" for Hong Kong youth.



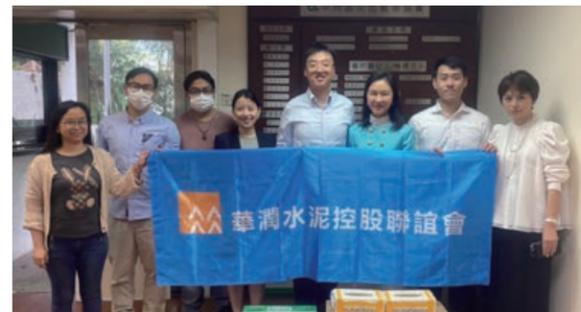
**Stakeholder Testimonials**

"Greater Bay Area Exchange Program for Youth in the Construction Industry" enabled these 70 youths to tour multiple MIC plants and environmentally-friendly cement production bases. Most importantly, it enriched their life experiences, and transformed them from having no concept of the construction industry to loving CDE and MIC in just two weeks. This exchange program helped us take a very important small step forward!"

—Ho On-sing, Chairman of Hong Kong Construction Industry Council



CR Bldg Materials Tech held "Caring Journey With You" to support Hong Kong truck drivers



CR Bldg Materials Tech Fellowship Association held a thematic event titled "Entering Hong Kong Communities, Serving Hong Kong Citizens"

## Building a harmonious society together

In 2023

The Company provided

approximately **RMB 3.37**

million in charitable donations through funds, supplies and other means.

CR Bldg Materials Tech has long striven to enable its charity endeavors to shine brightly. The Company vigorously leveraged the Gratitude Fund as a platform for mutual assistance and care contribution, revised the Articles of Association of Gratitude Fund of China Resources Building Materials Technology Holdings Limited to add principles for Gratitude Fund to follow and six new major disease clauses; vigorously promoted the volunteer spirit, focused on disadvantaged social groups, organized various volunteer activities like sports event services, clothing recycling, sludge clearing, etc. In 2023, the Company provided approximately RMB3.37 million in charitable donations through funds, supplies and other means.

### Visiting Longyan Special Education School, caring for children's growth

On May 28, 2023, CR Bldg Materials Tech's Southeast Region partnered with distributors and the Longyan Volunteers Association to visit Longyan Special Education School, where they held the "Soaring Hearts, Joyful Growth" public welfare event, and jointly celebrated Children's Day with the kids. They prepared a series of fun games like "Clean Plate Tug-of-War", "Chopstick Ball Fetch", and "Pot Tossing". Employee volunteers created warmth through compassion and spread happiness through action, and helped each other with the children in a memorable Children's Day filled with laughter.

### CR Bldg Materials Tech assisted disaster-affected residents Shanggule Village in rebuilding homes

Case Study

In August 2021, a landslide occurred in Shanggule Village, causing the collapse of 45 villager homes and affecting 196 residents who long resided in temporary shelters. After the disaster, CR Bldg Materials Tech swiftly provided disaster relief supplies including food and oil to help affected residents through the difficult time. On March 16, 2023, the Company held a cement donation ceremony to support Shanggule Village's post-disaster relocation, and donated 10 tons of cement to each affected household for rebuilding homes. For any shortfalls, "compassionate cement" was bought at below-market prices, offering "solid" assistance for Shanggule Village residents to rebuild the ancient village after the disaster.



Case Study



Relayed ball-passing



Clay DIY



Tug-of-war with CD as the base point



Ringtoss



Clamping balls with Chopsticks



Pitch-pot



CR Bldg Materials Tech volunteer service team maintained light show order



Southwest China Region visited social welfare home to support the elderly



Ding'an Runfeng Mining supported soldiers and martyrs' families



Changjiang Cement organized "Heartwarming Care for Children" charity donation



Fangchenggang Cement's voluntary service titled "River Embankment Protection in Lei Feng Month"

## Commitments and Fulfillments

### 2023 Commitments

- Implement the health and safety goals of "Zero Fatalities, Zero Serious Injuries, Zero Occupational Diseases";
- Implement people-oriented policies, strictly fulfill the principal responsibilities of the employer in occupational disease prevention and treatment, and address occupational hazards at the source;
- Prioritize new technologies, processes, equipment and materials beneficial for occupational disease prevention and treatment as well as worker health protection;
- Vigorously promote "technology empowered safety", fully integrate new infrastructure like big data and 5G with production safety;
- Execute a 5-year plan for young talent development; enhance key talent support; advance team building for highly-skilled personnel;
- Actively engage in public welfare and charity, fully leverage the Gratitude Fund's role in mutual assistance and charity;
- Deepen the implementation of the national decisions and plans on consolidating the achievements of poverty alleviation and effectively connecting it with rural revitalization. Through methods such as consumption assistance, promote the quality improvement, efficiency enhancement, and sustainable development of characteristic industries in poverty-stricken areas.

### 2023 Fulfillments

- 100% coverage of ISO 45001:2018 Occupational Health and Safety Management System; carried out 45 projects addressing major occupational hazards like dust, noise and heat throughout the year, and comprehensively reduced incidence of occupational disease hazards exceeding standards;
- Improved employee working environments, established 51 automated bagging lines, 38 automated loading lines, replaced over 100 magnetic/air suspension (low-noise) fans, etc.;
- Formed CR Bldg Materials Tech's "13263" EHS management system, and formulated/revised 8 EHS policies and standards;
- Increased safety investment with RMB299 million invested throughout the year;
- Established a comprehensive production safety management system, integrated it with the base smart park system, and formed a comprehensive management solution for intelligent early warning at CR Bldg Materials Tech's bases;
- Established management trainee mechanisms, implemented a 5-year cultivation plan; organized job rotation and phased evaluations; introduced 3 external recruitment channels and internal talent incentive programs; fulfilled talent support responsibilities, recruited 7 high-level talents, 2 aggregates business talents, 14 management trainees, with 90% professional talent replenishment

### 2023 Fulfillments

- rate at headquarters; collaborated with the Technological Innovation Department to issue the Measures for Accreditation of Scientific and Technological Measures (2023 Edition), and achieved categorized talent management; strengthened skilled personnel guidance, set up 5 new model worker/craftsman studios and 1 new certified skills appraisal entity;
- Held the 6th training seminar for senior management focused on the mid-term review of the 14th Five-Year Plan, implemented 10 research projects, drove the "Ten Critical Battles", and addressed 18 in-depth issues;
- Launched Phase III of the Gemstone Blue Program with 60 base managers and candidates participating; initiated the first-in-command advancement program delivered over 3 projects, output the "1313" leadership quality model, promote three systems and marketing restructuring, business-finance integration, and addressed operational challenges from 54 business entities;
- Provided approximately RMB3.37 million in donations through funds, cement and other means;
- Organized "one-on-one" support to impoverished college students in Haiyuan County by company middle and senior managers for ten person-times, and provided RMB10,000 in sponsorship funds; four bases in the South China Region responded to "6.30 Rural Revitalization Action" and the public welfare initiative of the "Hundreds of Counties, Thousands of Towns, and Tens of Thousands of Villages Development Project" initiatives by donating cement and funds totaling RMB710,000.

### 2024 Commitments

- Persist with the safety management theme of "Solidifying EHS Foundations, Pursuing Zero Accidents", use the "13263" EHS system as the main line to carry out fundamental safety actions, strengthen "Two News" enterprise management, promote EHS informatization, elevate overall safety management and prevent accidents;
- Deepen the three-tier talent pool construction, implement the succession plan, and aid management rejuvenation;
- Clarify talent needs, open recruitment, and prioritize targeted introduction of leading talents;
- Leverage the role of the International Center for Technology and Innovation as a platform to introduce talents, and increase Hong Kong-Mainland talent exchange;
- Fulfilled central enterprise social responsibilities through continuous public welfare donations and "Gratitude Fund" assistance to enhance public sense of gain and happiness;
- Carry out the "Hundreds of Counties, Thousands of Towns, and Tens of Thousands of Villages Development Project", donate cement or funds to support infrastructure for livable villages and towns, consolidate poverty alleviation achievements and aid rural revitalization.



## Future Outlook

Beating the drum, we steer the ship steadily; raising the sails, we embark on a new journey. 2024 marks a pivotal year for CR Bldg Materials Tech, a watershed moment where we forge ahead with unwavering determination into new realms, striving for breakthrough achievements. Standing at this new historical juncture, we shall harbor a profound sense of national significance, always preserve our enterprising and innovative spirit. We will resolutely navigate through industry cycles, accelerate our transformation into new businesses, and tirelessly strive to outpace our peers. On this journey of renaissance, our steps will be resolute and our progress steady and far-reaching.

We will further solidify our foundations by firmly safeguarding our traditional business strongholds, deepen our integrated synergies, drive the sustained growth of our operations in Hong Kong operations, fortify our strategic positioning and risk resilience capabilities, and construct a healthy and green building materials ecosystem. We will propel innovation-driven development, venture into new tracks as a "national pillar", expedite the incubation of our second growth curve, and cultivate strategic emerging industries to systematically establish a presence in new arenas. We will intensify our research and development efforts, focus on "high-end, intelligent, and green" domains, Focus on "Dual Carbon" and "New Energy Materials Sector", and empower our core businesses to upgrade, enhance quality, and boost efficiency through these three transformative forces. We will facilitate green transformation by establishing ourselves as an originator of "3C" decarbonization technologies, conduct R&D and applications in low-carbon products, alternative fuels, and carbon capture, comprehensively promote the achievements of our "Lighthouse Factory" and catalyze new industries, models, and growth drivers through pioneering technologies. Exemplifying corporate responsibility, we will foster shared success with our partners, employees, and society, resolutely safeguard the rights and welfare of our employees, proactively assume the role of an industrial chain leader, put social responsibility into action, sustain our philanthropic endeavors, and collectively bask in the warmth of societal well-being.

We tribute the history, yet our true calling lies in forging new historical achievements. As vanguards in building a "technologically advanced building materials enterprise", we shall honor the sacred mission entrusted to us. United in heart and purpose, we will join forces with an unwavering sense of urgency and relentless spirit, never forget our original aspiration while striving with renewed vigor. With a righteous pursuit of innovation and a shared determination to march forward, we will press onward with courage and resilience, and collectively usher in a new era of brilliance for CR Bldg Materials Tech.

# Appendix

## Key Performance Indicators

Statistical index	unit	2021	2022	2023
Total assets	RMB million	-	71,856	72,792
Net assets	RMB million	-	45,260	45,747
Return on total assets	%	-	3.2	2.0
Return on equity	%	-	3.4	1.4
Turnover	RMB million	-	29,332	25,550
Profit before tax	RMB million	-	1,897	914
Profit for the year	RMB million	-	1,552	619
Profit attributable to owners of the company	RMB million	-	1,613	644
Equity attributable to owners of the company	RMB million	-	43,825	44,108
Earnings before interest and tax	RMB million	-	2,199	1,450
Profit margin on cost and expenses	%	-	6.8	3.6
Cost of sales	RMB million	-	24,716	21,788
Sales and distribution costs	RMB million	-	455	506
General and administrative expenses	RMB million	-	2,441	2,322
Finance expenses	RMB million	-	301	536
Ratio of value conservation and value appreciation of state-owned capital	%	-	103.2	101.0
Comprehensive strength ranking of listed cement companies in China	rank	3	4	5
Number of legal compliance training	time	-	6	23
Number of participants in legal compliance training	person-time	-	440	2,200
Number of anti-corruption training	time	398	381	373
Number of anti-corruption training	person-time	15,174	17,392	18,627
Number of corruption cases commenced or concluded	no.	0	0	0
Total R&D investment	RMB million	336	320	209
Ratio of R&D investment to operating income	%	0.89	1.03	0.76
Expenditure on industry-academia-research cooperation	RMB '0,000	693	5,515	554
Number of R&D employees	person	53	76	81
Number of innovative projects under research	item	17	21	28
Number of publications of papers, software copyrights, etc.	no.	15	33	69

Statistical index	unit	2021	2022	2023
Number of participations in the formation of new international, national or industry standards	no.	0	6	7
Number of new patent licenses	item	37	54	32
Number of patents held and patent applications	item	360	490	539
Number of invention patents held	item	32	42	59
Number of new invention patents	item	5	10	17
Significant innovation awards	no.	0	1	0
Number of transformations of scientific and technological achievements	item	-	-	0
Passing rate of product quality	%	100	100	100
Percentage of total products sold or shipped recalled for safety and health reasons	%	0	0	0
Customer satisfaction	%	97.8	97.6	98.2
Customer complaints handling rate	%	100	100	100
Number of products and service complaints	no.	58	54	25
Number of product and packaging complaints	no.	12	10	1
Contract performance rate	%	90	91	91
Number of strategic cooperation agreements executed	no.	21	14	9
Total number of suppliers	no.	10,975	12,665	18,629
Number of suppliers reviewed	no.	-	12,665	18,629
Number of suppliers whose cooperation has been suspended due to non-compliance	no.	-	17	54
Number of potential suppliers rejected for non-compliance	no.	-	48	7
Number of suppliers attending training	person	-	746	1,123
Total number of employees	person	19,491	19,046	17,939
Number of male employees	person	16,153	15,677	14,839
Number of female employees	person	3,338	3,369	3,100
Number of employees aged 29 and below	person	2,041	1,786	1,656
Number of employees aged 30 to 39	person	8,226	7,524	6,778
Number of employees aged 40 to 49	person	6,841	6,814	6,456
Number of employees aged 50 and above	person	2,383	2,922	3,049
Number of ethnic minority employees	person	4,035	3,734	3,531
Number of employees in Mainland China	person	19,337	18,702	17,596
Number of employees in Hong Kong, China	person	154	344	343
Number of employees with disabilities	person	39	50	43
Proportion of female managerial staff	%	12	13	14

Statistical index	unit	2021	2022	2023
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 healthy body check	person	19,491	19,046	17,939
Occurrence of occupational diseases	person	0	2	0
Average number of days of paid annual leave per employee	day	13.8	13.6	14.1
Total investment in staff training	RMB '0,000	825	709	891
Average investment in training per employee	RMB	423	372	497
Average training duration per employee	hour	10.7	9.5	18.9
Average training duration for male employees	hour	10.0	9.8	19.6
Average training duration for female employees	hour	14.0	10.6	21.9
Average training duration per for the management	hour	24.7	14.2	24.8
Average training duration for finance, administration and other employees	hour	17.4	11.3	22.5
Average training duration for production employees	hour	5.6	8.3	16.4
Average training duration for technical employees	hour	17.7	13.2	27.0
Average training duration for sale and marketing employees	hour	10.4	6.6	13.2
Employee training coverage	%	100	100	100
Training coverage of male employees	%	100	100	100
Training coverage of female employees	%	100	100	100
Management training coverage	%	100	100	100
Training coverage of finance, administration and other employees	%	100	100	100
Training coverage of production employees	%	100	100	100
Training coverage of technical employees	%	100	100	100
Training coverage of marketing and sales employees	%	100	100	100
Employee attrition rate	%	2.9	2.8	3.2
Employee turnover rate	%	7.0	11.7	8.8
Turnover rate of male employees	%	6.8	2.9	3.2
Turnover rate of female employees	%	7.8	3.1	4.2
Turnover rate of employees aged 29 and below	%	14.0	12.8	14.9
Turnover rate of employees aged 30 to 39	%	6.1	2.6	3.2
Turnover rate of employees aged 40 to 49	%	5.0	1.0	1.4
Turnover rate of employees aged 50 and over	%	9.7	1.3	0.9

Statistical index	unit	2021	2022	2023
Turnover rate of employees in Mainland China	%	6.8	2.7	3.1
Turnover rate of employees in Hong Kong, China	%	20.1	14.0	14.3
Investment in production safety	RMB million	210	227	299
Number of specialized safety management personnel	person	198	217	242
Number of licensed safety management personnel	person	1,254	1,316	1,380
Number of registered safety engineers	person	78	81	125
Number of participants in safety training	person-time	277,607	271,508	276,380
Duration of safety training	'0,000 hours	46.0	40.7	41.5
Safety training coverage rate	%	100	100	100
Number of safety emergency drills	time	1,333	1,711	1,778
Number of participants in emergency drills	person-time	19,455	24,721	25,495
Number of staff injured at work	no.	11	14	9
Number of incidents of general and above level	no.	0	1	3
Fatalities	person	0	1	2
Fatality rate	‰	0	0.05	0.11
Number of days lost due to work injury	day	-	6,711	16,505
Number of new recruitments	person	763	2,148	1,157
Taxation	RMB million	-	346	295
Proportion of local procurement	%	61	62	59
Charitable donations	RMB million	-	5.11	3.37
Total investment in environmental protection	RMB million	508	507	413
Investment in technological upgrade for energy-saving and emission reduction	RMB million	147	159	99
Clean energy usage	kWh	-	6,264,603	39,871,469
Consolidated energy consumption	'000 tons of standard coal	7,190	5,976	5,371
Consolidated energy consumption per RMB10,000 output	tons of standard coal per RMB10,000	2.09	2.40	2.40
Consolidated energy consumption per RMB10,000 value addition	tons of standard coal per RMB10,000	5.27	9.43	8.45
Annual energy consumption reduction	tons of standard coal	35,410.47	247,399.80	604,725.00
Electricity consumption	million kWh	6,017	5,184	4,802
Electricity consumption of cement and clinker	million kWh	5,980	5,156	4,779
Electricity consumption of concrete	million kWh	37	28	23
Electricity consumption per ton of cement	kWh	72.5	71.3	70.9

Statistical index	unit	2021	2022	2023
Electricity consumption per m <sup>3</sup> of concrete	kWh	2.6	2.8	2.8
Coal consumption	'000 tons	8,918	7,797	6,758
Unit coal consumption per ton of clinker	kg	141.4	138.7	132.1
Standard coal consumption per ton of clinker	kg	103.8	99.5	98.2
Water resources consumption	'000 tons	30,254	25,281	21,760
Water consumption per unit product of cement	tons of water consumption per ton of clinker produced	0.3558	0.3512	0.3297
Water consumption per unit of clinker	tons of water consumption per ton of clinker produced	0.4506	0.4328	0.4127
Wastewater discharge	'0,000 tons	0	0	0
Recycled water consumption	'0,000 tons	-	61,409	56,563
Proportion of recycled water consumption	%	-	-	96.3
Proportion of cement sold in bag	%	28.9	27.7	28.7
Consumption of packaging materials	ton	50,170	36,000	39,086
Consumption intensity of packaging materials	kg per ton of cement packed in bags	2.19	1.98	2.11
Greenhouse gas emissions	'000 tons of carbon dioxide equivalent	53,403.6	45,386.2	41,755.1
Greenhouse gas emission intensity	tons of CO <sub>2</sub> equivalent per ton of clinker produced	0.8470	0.8313	0.8141
Direct greenhouse gas emission	'000 tons	52,202.5	44,372.4	41,195.7
Indirect greenhouse gas emission	'000 tons	1,201.0	1,013.8	559.4
Direct greenhouse gas emission intensity	tons of CO <sub>2</sub> equivalent per ton of clinker produced	0.8279	0.8127	0.8032
Indirect greenhouse gas emission intensity	tons of CO <sub>2</sub> equivalent per ton of clinker produced	0.0191	0.0186	0.0109
Carbon emission reduction	'000 tons	6,201	8,018	3,631
Nitrogen oxides emissions	ton	30,324	25,947	22,660
Nitrogen oxides emission intensity	kg per ton of clinker produced	0.48	0.47	0.45
Average nitrogen oxides emission concentration	mg/m <sup>3</sup>	208	199	198
Sulfur dioxide emissions	ton	1,501	1,542	1,409
Sulfur dioxide emission intensity	kg per ton of clinker produced	0.02	0.03	0.03
Average sulfur dioxide emission concentration	mg/m <sup>3</sup>	10	10	13
Particulate matter emissions	ton	1,381	1,078	908
Particulate matter emission intensity	kg per ton of clinker produced	0.02	0.02	0.02
Average particulate matter emission concentration	mg/m <sup>3</sup>	6.48	5.76	5.45
Non-hazardous waste emission	ton	-	77,723.96	70,163.19
Non-hazardous waste emission intensity	kg per ton of clinker produced	-	1.38	1.40
Hazardous waste emission	ton	545	347	440

Statistical index	unit	2021	2022	2023
Hazardous waste emission intensity	kg per ton of clinker produced	-	0.0062	0.0088
Waste recycling rate	%	-	83.12	63.97
Comprehensive utilization volume of industrial waste residue	'000 tons	20,490	18,149	19,412
Co-processed volume of industrial hazardous waste	ton	19,600	30,980	32,531
Co-processed volume of urban and rural domestic waste	ton	231,162	205,877	198,073
Co-processed volume of municipal sludge (80% moisture content)	ton	521,667	632,574	640,672

## Remarks

① In order to provide more reliable and more relevant accounting information, which enables the shareholders and potential investors to have a more accurate understanding of the Company's financial results, the Company had adopted RMB as the presentation currency of its consolidated financial statements retrospectively during 2023 and the comparative figures for 2022 had been restated in RMB. Therefore this report only disclosed the financial data in RMB unit for 2022 and 2023.

② Supplier training covers responsibility training in areas such as safety management, environmental protection requirements, anti-corruption advocacy, laws and regulations.

③ The total number of employees has decreased. CR Bldg Materials Tech actively promotes the construction of intelligent factories, optimizes processes through technological transformation and measures to improve equipment operation efficiency; strives to cultivate compound skilled talents to increase the labor productivity of all employees; continuously narrows the gap from or surpasses industry benchmarks, and gradually achieved first-class labor efficiency to enhance organizational efficacy and competitiveness.

④ As the statistical caliber of investment in employee training in 2022 included travel expenses incurred therefrom, the 2022 indicator data is corrected with costs including travel expenses excluded for a unified statistical caliber (so does training expenses per employee).

⑤ Investment in technological transformation for energy conservation and emission reduction has slowed down. By mid-2023, the previous technological transformation invested by CR Bldg Materials Tech has been successively completed, achieving significant results. 30% of the production capacity has reached the national benchmark level. The investment pace in technological transformation has been controlled according to changes in the market environment and the needs for new business expansion.

⑥ The statistical scope of electricity consumption includes cement production bases, independent cement grinding stations, and domestic concrete batching plants owned by CR Bldg Materials Tech's subsidiaries. Each production base calculates the monthly purchased electricity for production based on electricity bills, which is then collected and integrated into the company's proprietary data management system.

⑦ The statistical scope of coal consumption is the cement production bases owned by CR Bldg Materials Tech's subsidiaries. The "Planning and Statistics Management Regulations of China Resources Building Materials Technology Holdings Limited (2022 Edition)" has been formulated. The statistical caliber and conversion methods for energy consumption data are uniformly implemented in accordance with "GB16780-2021 Norm of Energy Consumption per Unit Throughput of Cement Products" and "GBT27977-2022 Test and Calculation Methods of Electricity Efficiency of Cement Production".

⑧ In the 2022 Sustainability Report, the statistical caliber of the "water consumption per unit of cement product" included water consumption for concrete products, causing data distortion. To unify the statistical caliber, the water consumption for concrete products is now excluded, and the 2022 indicator data is corrected.

⑨ The statistical scope of greenhouse gas emissions is the main emission outlets of cement production bases owned by CR Bldg Materials Tech's subsidiaries. Direct greenhouse gas emission sources mainly include fuel combustion and industrial production processes; indirect greenhouse gas emission sources mainly include net purchased electricity. Greenhouse gas calculations follow the standards and methods in the Instructions for Enterprise Greenhouse Gas Emission Accounting and Reporting - Cement Clinker Production" issued by the Ministry of Ecology and Environment. The EHS Department of CR Bldg Materials Tech collects and integrates relevant annual data.

⑩ The statistical scope of nitrogen oxides, sulfur dioxide, and particulate matter emissions is the main emission outlets of cement production bases owned by CR Bldg Materials Tech. The standards, methods, assumptions and/or calculation tools, and conversion factors for pollutant emissions and intensities are derived from 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 Sources (HJ76-2017)". Each production base has installed a continuous emission monitoring system (CEMS), with monitoring data transmitted online in real-time to environmental protection authorities. The environmental protection authorities review and accept the validity of CEMS data and compare system accuracy each quarter. Through this system, real-time pollutant emissions are monitored in flue gas, pollutant emissions are calculated, and data is collected and integrated into the company's proprietary data management system.

⑪ In previous sustainability reports, the disclosed amounts of co-processed domestic waste and co-processed municipal sludge (80% moisture content) did not include data from joint ventures and associates. The 2023 Sustainability Report will further improve the statistical caliber by adding the co-processed amounts of domestic waste and municipal sludge from joint ventures and associates. To unify the statistical caliber, the relevant disposal amounts for 2021 and 2022 are now updated.

# Indicator Index

Primary Headings	Secondary Headings	Chinese Academy of Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises CASS-ESG5.0	Global Reporting Initiative (GRI Standards)	Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange Listing Rules (HKEX ESG Guide)
Report Foreword		P1.1/P1.2/P1.3	2-3/2-4	
A Letter to Stakeholders		P2.1/P2.2		
A Glimpse of CR Bldg Materials Tech	Company Overview	P4.1	2-1/2-2	
	Strategic Objectives	P4.2		
	Corporate Culture	P4.2		
	Business Areas Business Distribution Product Brands Project Cases	P4.3	2-6	
	Organizational Structure	P4.1		
	Milestones in 2023	P3.1		
	Sustainable Development Management	G2.1/G2.2/G2.3/G2.4/G2.5/ G3.1/G3.2/G3.3/G3.4/G3.5/ G3.6/G3.7/G3.8/G3.9/G3.10/ G3.11	2-14/2-16/2-17/2-22/2-23/2-24/2-29	
Polishing business philosophy in its prime	Solidify the Governance Foundation	G1.1/G1.2/G1.3/G1.4/G1.5/ G1.6/G1.7/G1.8/G1.9	2-9/2-10/2-11/2-12/2-13/2-14/2-15/2-16/2-17/2-18/2-19/2-20/2-24/2-25/2-26/2-27/201-1/201-4/205-1/205-2/205-3/207-1/207-2/207-3/207-4	B7/B7.1/B7.2/B7.3
	Protecting shareholders' rights and interests	G1.10/G1.11/G3.6/G3.7	201-1	
Crafting excellence and leading industry prosperity	Innovation Leads Development	V2.1/V2.2/V2.3/V2.4		
	Pursuing Craftsmanship and Quality	S4.1/S4.2/S4.3/S4.4/S4.5/ S4.6/S4.7/S4.8/V3.3	203-1/416-1/416-2/418-1	B6/B6.1/B6.2/B6.3/B6.4/B6.5
	Partnering for Mutual Growth	S5.1/S5.2/S5.3/S5.4/S5.5/ S5.7/V2.5/V2.6/V2.7/V2.8	2-28/204-1/206-1/308-1/308-2/407-1/414-1/414-2	B5/B5.1/B5.2/B5.3/B5.4

Primary Headings	Secondary Headings	Chinese Academy of Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises CASS-ESG5.0	Global Reporting Initiative (GRI Standards)	Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange Listing Rules (HKEX ESG Guide)
Green Building Materials that Benefit the Nation	Deepening Green Management	E1.1/E1.2/E1.3/E1.4/E1.5/E1.6/ E1.7/E1.8/E1.9	303-1/303-2	A1/A1.5/A2/A3/B5.4
	Conserving Energy and Resources	E2.1/E2.2/E2.3/E2.4/E2.5/E2.6/ E2.7/E2.9/E2.10/E2.11/E2.12/ E2.13/E2.14/E2.15	301-1/301-2/301-3/302-1/302-2/302-3/302-4/302-5/303-3/303-5	A1.1/A1.5/A1.6/A2.1/ A2.2/A2.3/A2.4
	Reducing pollutant emissions	E3.1/E3.2/E3.4/E3.5/E3.6/E3.7/ E3.8/E3.9/E3.10	303-4/305-7/306-1/306-2/306-3/306-4/306-5	A1.3/A1.4/A1.5/A1.6/A2.5
	Protecting Ecological Environment	E4.1/E4.2/E4.3/E5.2/E5.3/E5.4/ E5.5/E5.6/E5.7/V4.1/V4.2/V4.3/ V4.4/V4.5	201-2/304-1/304-2/304-3/304-4/305-1/305-2/305-4/305-5	A1.2/A3/A3.1/A4/A4.1
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Cementing Hope, Harmonizing Society	Reinforcing Safety Defenses	S3.2/S3.4/S3.5/S3.6/S3.7/S3.8/ S3.9/S3.10/S3.11/S3.12	403-1/403-2/403-7/403-8/403-9/403-10	B2/B2.1/B2.2/B2.3
	Support of regional development	V1.1/V1.2/V1.3/V1.4/V3.3	203-1/415-1	B8/B8.1/B8.2
	Building a harmonious society together	V3.1/V3.2/V3.4/V3.5/V3.6/V3.7	203-1/413-1/413-2/415-1	B8/B8.1/B8.2
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	Comments and Feedback	A5		

# Rating Report

## Rating Report for the CR Bldg Materials Tech 2023 Sustainability Report

Commissioned by China Resources Building Materials Technology Holdings Limited (hereinafter referred to as the "Company" or "CR Bldg Materials Tech"), the Chinese Corporate Social Responsibility Report Rating Expert Committee has selected a panel of experts to form the rating team (the "Rating Team") to rate the CR Bldg Materials Tech 2023 Sustainability Report (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 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 Corporate Culture and Social Guidance Responsibility, supervising the overall direction and is 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 within the industry such as product quality management, technological 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 content of the Report systematically discloses 93.26% of the core indicators in the industry from perspectives such as "polishing business philosophy in its prime", "crafting excellence and leading industry prosperity", "green building materials that benefit the nation", and "cementing hope, harmonizing society", exhibiting excellent completeness.

#### Balance (★★★★★)

The Report discloses negative data and information such as employee turnover rate, occupational disease incidents, general and higher-level accidents, and product and packaging complaints. It also briefly describes a case of handling complaint about the quality of Runfeng cement products, demonstrating excellent balance.

#### Comparability (★★★★★)

The Report discloses 3 consecutive years of comparative data for 128 key indicators such as "number of anti-corruption trainings", "R&D investment", "number of new invention patents", "electricity consumption",

"investment in technological upgrade for energy-saving and emission reduction", and "proportion of female managerial staff". It also makes horizontal comparisons for rankings such as the "5th in the China Cement Association's Comprehensive Strength Ranking of Listed Cement Companies in China" and the "13th on the China Listed Companies ESG Pioneer 100 List", exhibiting excellent comparability.

#### Readability (★★★★★)

Based on an issue-oriented framework, the Report systematically presents CR Bldg Materials Tech's fulfillment concepts, practices, and achievements in governance, innovation, environment, and society. The framework structure is clear with highlighted key issues. The "Milestones in 2023" showcases the Company's key responsibility practices for the year, responding to stakeholder expectations and demonstrating its responsibility leadership. The 20th anniversary corporate responsibility column elaborates on the Company's development journey and responsibility commitments to stakeholders. The cover design highlights the characteristics of the Company's industry, incorporates its main business and technological elements closely aligned with its responsibility philosophy, and enhances report recognition. QR codes are embedded in multiple sections to showcase outstanding responsibility management practices and strengthen the Report's communication capabilities, highlighting excellent overall readability.

#### Innovation (★★★★★)

The Report includes a "Knowledge Base" section that explains professional terminologies in detail, expanding the Report's audience reach and readability. In response to the "Emissions Peaking and Carbon Neutrality" strategy, the Company has initiated the preparation of a "CR Bldg Materials Tech Carbon Reduction Report" to enhance the depth of responsibility information disclosure. It has strengthened social responsibility management, improved its responsibility system, and conducted professional social responsibility training for senior executives to systematically improve sustainability practices, demonstrating noticeable innovation performance.

#### Overall Rating (★★★★★+)

According to the evaluation of the rating team, the CR Bldg Materials Tech 2023 Sustainability Report is awarded a "Five Star" as an excellent corporate social responsibility report.



The CR Bldg Materials Tech Sustainability Report has received the 5-star rating for 5 consecutive years, and earned the 5-star excellent rating for the first time.

### IV .Suggestions for Improvement

Further strengthen the social responsibility systems and management mechanisms to enhance the Report's process performance.

Vice Chairman of China Expert Committee on CSR Report Rating

Leader of the Rating Team

Expert of the Rating Team



Scan QR Code to View Enterprise Rating Files

Issuance Date: April 19, 2024

## Rating Report for the CR Bldg Materials Tech 2023 Sustainability Report

Commissioned by China Resources Building Materials Technology Holdings Limited (hereinafter referred to as the "Company" or "CR Bldg Materials Tech"), the Chinese Corporate Social Responsibility Report Rating Expert Committee has selected a panel of experts to form the rating team (the "Rating Team") to rate the CR Bldg Materials Tech 2023 Sustainability Report (hereinafter referred to as "the Report").

### I. Rating Basis

The rating is based on the Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 5.0) of Chinese Academy of Social Sciences and the China Enterprise Social Responsibility Report Rating Standards (2023) by the Chinese Corporate ESG Report Rating Expert Committee.

### II. Rating Process

1. The rating team reviewed and confirmed the Confirmation of Procedural and Accessibility Evaluation Data of Corporate ESG Reports and relevant supporting materials submitted by the writing 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 has established a Sustainability Development Report Compilation Committee. The Party-Mass Affairs Department serves as the functional department for report preparation, and coordinates specific work. The Board of Directors oversees the overall direction and is responsible for final review. The Report is positioned as an important tool for compliance disclosure of responsibility fulfillment, standardizing corporate governance, responding to capital market demands, strengthening stakeholder communication, promoting sustainability concepts, and enhancing brand image, with clear functional value positioning. Material topics were identified based on national macroeconomic policies, international and domestic ESG standards, industry benchmarking, the Company's development strategy, and stakeholder surveys. The Company has initiated an ESG management system and special report efforts, demonstrating leading process performance.

#### Substantiveness (★★★★★)

The Report systematically discloses key industry topics such as "improving ESG governance", "serving national strategies", "R&D and application of environmental protection technologies and equipment", "conserving energy and resources", "reducing waste emissions", "product quality management", "product innovation", "employee health and safety", "employee development and training", and "sustainable supply chain". The descriptions are detailed and sufficient, demonstrating excellent substantive performance.

#### Completeness (★★★★★)

The main content of the Report systematically discloses 91.25% of the core indicators in the industry from perspectives such as "polishing business philosophy in its prime", "crafting excellence and leading industry prosperity", "green building materials that benefit the nation", and "cementing hope, harmonizing society", exhibiting excellent completeness.

#### Balance (★★★★★)

The Report discloses negative data and information such as "number of disciplinary violations", "number of staff injured at work", "number of general and higher-level accidents", "employee mortality rate per thousand", and "number of products and service complaints". It also briefly describes a case of efficiently resolving customer complaint caused by product issues, demonstrating excellent balance.

#### Comparability (★★★★★)

The Report discloses 3 consecutive years of comparative data for 128 key indicators such as "total R&D investment", "total number of employees", "number of new patent authorizations", "total environmental investment",

and "greenhouse gas emissions". It emphasizes the use of consistent statistical disclosure methods and provides explanations for the statistical calibers and significant performance changes of core indicators such as "coal consumption" and "electricity consumption". It also makes horizontal comparisons for rankings such as the "5th in the China Cement Association's Comprehensive Strength Ranking of Listed Cement Companies in China" and the "13th on the China Listed Companies ESG Pioneer 100 List", exhibiting excellent comparability.

#### Readability (★★★★★)

The Report adopts an issue-oriented framework, combines the Company's name and industry characteristics to systematically present its responsibility concepts, practices, and achievements in environment, society, governance, and innovation. The structure is clear, noting the Company's characteristics and key issues. The "Milestones in 2023" section highlights the Company's key responsibility practices for the year, effectively responds to stakeholder expectations and demonstrates responsibility leadership. The cover design accentuates the Company's new technological positioning, incorporates elements of its main business closely aligned with its responsibility philosophy, and enhances report recognition. "Stakeholder Testimonials" corroborate the Company's responsibility achievements, and embedded QR codes extend interpretation of report content and showcase excellent ESG management practice cases, strengthening the Report's communication capabilities. Four responsibility columns are included to focus on responsibility actions from stakeholder perspectives on important topics, highlighting excellent readability.

#### Accessibility (★★★★★)

The Report is the second sustainability report published by CR Bldg Materials Tech, released on the same day as the annual report. It will be publicly available on the Company's official website, stock exchange websites, and other open channels, with dissemination through official social media accounts. The Report is available in both Chinese and English versions for online download, and an offline launch ceremony will be held, demonstrating excellent accessibility.

#### Overall Rating (★★★★★)

According to the evaluation of the rating team, the CR Bldg Materials Tech 2023 Sustainability Report is rated as "Five Star", which is an excellent ESG report.



The CR Bldg Materials Tech Sustainability Report has received the Five Star rating for the second consecutive year.

### IV .Suggestions for Improvement

1. Further strengthen the ESG management systems and mechanisms;
2. Deepen the participation of internal and external stakeholders and further enhance the process management of the report;

Vice Chairman of China Expert Committee on CSR Report Rating

Leader of the Rating Team

Expert of the Rating Team



Scan QR Code to View Enterprise Rating Files

Issuance Date: April 19, 2024

# Organizations

## Corporate Culture and Social Responsibility Guidance Committee

**Member List:** (as of April 2024)

- Director: Ji Youhong
- Deputy Director: Jing Shiqing
- Excutive Deputy Director: Li Baojun
- Members: Zheng Qinghong    Li Chuanji    Cai Xiang
- Li Wei                      Chen Anguo    Jiang Muchuan
- Chang Yang              Yin Yue

## Corporate Culture and Social Responsibility Guidance Committee Office

**Member List**

- Director: Shi Mingze
- Members: Fu Li    Lu Xiangli    Sun Xue

## Sustainability Report Compilation Committee

- Editor-in-Chief: Shi Mingze
- Deputy Editors: Wu Zepeng              Fu Li              Lu Xiangli
- Sun Xue              Xing Tao              Feng Jiayi
- Members: Huang Dinglong              Liang Qiling              Xu Lifei
- Zhu Li              Tan Xin              Yao Hongfan
- Ma Yangmingxi              Pu Chenchen              Li Xiao
- Zheng Miaomiao              Liang Chunyan              Wang Zixuan
- Wu Qin              Peng Fei              Suo Xiaonan
- Chen Xiangning              Shi Jilan              Zhou Wei
- Ma Yi              Du Hanhui              Ma Yan
- Li Kai              Lin Zongliang              Gan Weilan

# Comments and Feedback

Dear Readers,

Hello! Thank you for taking the time to read the CR Bldg Materials Tech 2023 Sustainability Report amidst your busy schedules. This is the first sustainability report publicly released by the Company after its official name change to CR Bldg Materials Tech. To continuously improve the report compilation level and enhance our responsibility fulfillment capabilities, we especially need your comments and suggestions. Please assist us by completing the relevant questions in the feedback form and provide your feedback through the following methods:

**Your Evaluation of this Report: (Please ✓ in the corresponding position)**

1. Please evaluate the extent to which this report reflects CR Bldg Materials Tech's significant impacts on the economy, society, and environment  
 Excellent    Good    Average    Poor    Not Sure
2. Please evaluate the report's response and disclosure of stakeholder concerns  
 Excellent    Good    Average    Poor    Not Sure
3. Please evaluate the clarity, accuracy, and completeness of the information, indicators, and data disclosed in the report  
 Excellent    Good    Average    Poor    Not Sure
4. Please evaluate the readability of the report's content  
 Excellent    Good    Average    Poor    Not Sure
5. Please provide an overall evaluation of the CR Bldg Materials Tech 2023 Sustainability Report  
 Excellent    Good    Average    Poor    Not Sure
6. Which aspects of the report are most satisfactory to you?

\_\_\_\_\_

7. What shortcomings do you think this report has?

\_\_\_\_\_

8. What suggestions do you have for our future releases of corporate sustainability reports?

\_\_\_\_\_

**Your Information :** Name: \_\_\_\_\_ Employer: \_\_\_\_\_

Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ Email: \_\_\_\_\_

<b>Company Address :</b>	<b>Hong Kong</b> Room 3001-05, China Resources Building, 26 Harbor Road, Wanchai, Hong Kong Tel: (852) 3118 6800 Fax: (852) 3118 6830	<b>Shenzhen</b> Unit 3001, Tower A, Kinkey 100 Building, No. 5016 Shennandong Road, Luohu District, Shenzhen Tel: (86) 0755-82691700 Fax: (86) 0755-82691777 Email: crcement@crc.com.hk
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