

## 環境及社會責任報告

### ENVIRONMENTAL AND SOCIAL RESPONSIBILITY REPORT

本報告旨在對本集團在環境、社會責任兩個主要範疇的理念、管治、實踐和績效與利益相關方進行公開溝通，以及回應關注問題。

#### 編製基礎

本報告主要參照上市規則附錄二十七《環境、社會及管治報告指引》之原則及條文編製。

#### 報告範圍

本報告包含截至二零二零年十二月三十一日止年度的統計及資料，以及以二零一八年、二零一九年十二月三十一日止年度比較數據為主，以本集團的97條水泥粉磨線、46條熟料生產線及60座混凝土攪拌站為主要匯報範圍。除另有說明外，本報告基本不包含本集團的聯營公司及合營公司。

#### 董事對環境、社會及管治事宜的監管

本公司秉持「為客戶提供優質產品及服務，推動行業創新，引領綠色發展，實現基業長青」的企業使命，將社會責任融入企業經營，從股東、員工、客戶、合作夥伴和社區等利益相關方角度出發，積極推動社會責任工作的開展。

本集團著重社會責任能力建設，持續關注國際及國內社會責任發展趨勢及關注熱點。我們不時組織董事及相關員工開展社會責任內部培訓，積極參與第三方諮詢機構舉辦的環境、社會及管治研討會，及時了解聯交所的匯報指引和行業最新動向，提升社會責任建設能力。

This report aims to enhance open communications with and address the issues concerned by our stakeholders on the Group's philosophy, governance, implementation and performance on the two main scopes of environmental and social responsibilities.

#### BASIS OF PREPARATION

This report is prepared mainly with reference to the principles and provisions of the Environmental, Social and Governance Reporting Guide set out in Appendix 27 of the Listing Rules.

#### SCOPE OF REPORT

This report mainly includes the statistics and information for the year ended 31 December 2020, as well as comparative data for the years ended 31 December 2018 and 2019. The main scope of report covers 97 cement grinding lines, 46 clinker production lines and 60 concrete batching plants of the Group. Unless otherwise stated, this report does not cover the Group's associates and joint ventures.

#### DIRECTORS' OVERSIGHT OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE ISSUES

By upholding the corporate mission "to provide customers with quality products and services, promote innovation and lead green development in the industry, thereby building an everlasting business", the Company has assimilated social responsibility into corporate operations. We proactively advance the launch of social responsibility work from the perspectives of stakeholders including shareholders, employees, customers, partners and the community.

With the focus on building capability in social responsibility, the Group continuously pays attention to the international and domestic development trends and popular topics on social responsibility. We periodically organize internal trainings on social responsibility for Directors and relevant employees, and actively participate in environmental, social and governance seminars held by third-party consulting agencies to keep abreast of the reporting guide of the Stock Exchange and the latest industry trends and to enhance capability in building social responsibility.

本集團在執行董事率先帶領推動、以及董事局的監督和支持下，積極推動社會責任履責。為積極履行企業社會責任、切實推進責任實踐等相關工作的開展，本公司成立「企業文化與社會責任指導委員會」，負責本公司社會責任戰略方向的領導、推進、決策等主要工作。該委員會由總裁擔任主任職務，受董事局委派，負責管理本集團社會責任各方面工作的實施情況。為使社會責任融合於業務當中，並實現跨部門、跨大區執行，該委員會的成員由負責本集團管理和日常業務重要決策的各總部部室、各大區主管擔任。同時，該委員會下設專門工作小組，編製社會責任報告。上述組織安排為本公司開展社會責任工作，有效推動責任管理、踐行和融合奠定紮實的基礎。

此外，本集團EHS組織體系執行「三級管控」原則，由總部、大區、基地的各級EHS組織機構組成。各級EHS組織機構包括EHS委員會、EHS監督管理部門和EHS保障部門：總部的EHS管理委員會主任由本公司總裁擔任，總部設有EHS部，任命首席安全環保官；大區、基地分別設有EHS部或EHS辦，由大區、基地負責人直接管理。本集團致力完善EHS責任制度，各總部部門、大區及基地簽署《EHS承諾書》或《EHS責任書》，並將相關制度納入年度業績考核。

The Group proactively expedited the fulfillment of social responsibility through the initiative of the Executive Director and with the oversight and support of the Board. In order to actively fulfil corporate social responsibility and launch the firm implementation of relevant works on responsibility practice, the Company established the “Corporate Culture and Social Responsibility Steering Committee”, which is responsible for the leadership, promotion and decision-making and other main works of the Company’s strategic directions with respect to social responsibility. The Chief Executive Officer serves as the President of the committee, who has been delegated by the Board to manage the implementation of all aspects of the Group’s work on social responsibility. The heads of all functional departments at headquarters and all major operating regions responsible for principal decision-making of management and day-to-day business of the Group serve as members of the committee to achieve the integration, cross-functional and cross-regional implementation of social responsibility into the business. At the same time, the committee established a specific working group to prepare the social responsibility report. Such organizational arrangements have laid a solid foundation for the Company to launch its social responsibility work and to effectively promote the management, practice and integration of responsibility.

Besides, the principle of “Three-tiered Management and Control” has been implemented in the Group’s EHS organizational system at each level, which comprises the EHS organizational institutions of headquarters, major operating regions and production plants. EHS organizational institutions at each level includes the EHS Committee, the EHS Supervision and Management Department and the EHS Supporting Department. The EHS Management Committee at headquarters is chaired by the Chief Executive Officer of the Company. The headquarters set up the EHS Department and appointed the Chief Safety and Environmental Officer. EHS departments or EHS offices are set up at our major operating regions and production plants respectively under the direct management of persons in charge of corresponding major operating regions and production plants. The Group was dedicated to improving the EHS accountability policies. All departments at headquarters, major operating regions and production plants entered into the “Letter of EHS Undertaking” or the “EHS Responsibility Pledge”, and relevant policies had been incorporated in the annual performance appraisal.



在「企業文化與社會責任指導委員會」的全力協助下，總裁負責審視並向董事局匯報本集團的社會責任方針、策略及表現，藉以監管本集團對社會責任議題的管理。此外，在總裁的領導下，本公司審計部定期組織開展風險評估工作，由總部各部室、各大區圍繞本公司戰略規劃方向、結合公司業務發展，對來年及中長期可能面臨的全域性、系統性風險（含環境、社會及管治風險）進行研判，並擬定高風險事宜的應對舉措。審計部向總裁和審核委員會匯報風險管理工作成果，其後審核委員會將向董事局提出合適建議。於二零二零年，經董事局層面參與的環境、社會及管治事宜包括：參與重要性議題分析，審閱重要性議題分析結果、風險管理報告、環境及社會責任報告等。

With the full assistance of the “Corporate Culture and Social Responsibility Steering Committee”, the Chief Executive Officer is responsible for reviewing and reporting to the Board on the Group’s approach, strategy and performance of social responsibility throughout the year so that the Board could oversee the Group’s management of social responsibility issues. In addition, under the leadership of the Chief Executive Officer, the Internal Audit Department of the Company shall hold and roll out risk assessments on a regular basis, during which all functional departments at headquarters and all major operating regions will carefully study the global and systemic risks (inclusive of environmental, social and governance risks) potentially faced in the coming year and medium to long term upon overall consideration of the strategic planning directions of the Company and in combination with corporate business development. Response measures are then formulated for high-risk issues. The Internal Audit Department shall report the achievements in risks management work to the Chief Executive Officer and the Audit Committee. Thereafter, the Audit Committee shall make appropriate recommendations to the Board. In 2020, the following environmental, social and governance issues were engaged at Board level: participation in the materiality assessment, review of the findings on the materiality assessment, the risks management report, the Environmental and Social Responsibility Report, etc.

## 重要性議題分析

### 利益相關方參與

本公司積極關注政府及監管機構、股東及投資者、客戶、員工、供應商及合作夥伴、社區、媒體等利益相關方的訴求與期望，持續探索與各利益相關方有效的溝通方式，通過信息發佈、信息報送、專題匯報、股東會議、參觀考察、公益活動、開放日、員工活動、公司網站、官方微信公眾號等渠道或方式，及時、準確、嚴謹地披露本公司業績、相關動態等信息，及時傳播本公司理念及履責實踐，在增進利益相關方對本公司的了解和支持的同時，聽取來自內外部利益相關方的合理意見和建議，不斷改善企業經營管理方式，提升本公司的競爭力。

## MATERIALITY ANALYSIS

### Engagements with Stakeholders

The Company is proactively concerned with the aspirations and expectations of our stakeholders such as government and regulatory bodies, shareholders and investors, customers, employees, suppliers and partners, community and media. We continue to explore effective means of communications with each stakeholder through various channels and means including information publication, information reporting, special presentations, shareholders’ meetings, site visits, community activities, open days, staff activities, the Company’s website and official WeChat public account for the disclosure of the Company’s results performance and relevant activities in a timely, accurate and rigorous manner as well as timely propagation of the Company’s philosophy and practice of responsibility fulfilment. While enhancing stakeholders’ understanding on and support to the Company, the Company also listen to the reasonable opinions and suggestions from internal and external stakeholders for the continuous improvement of corporate operational management methods and improvement on the Company’s competitiveness.

序號 No.	利益相關方類別 Types of Stakeholders	訴求與期望 Aspirations and Expectations	溝通與回應 Communications and Responses
1	政府及監管機構 Government and regulatory bodies	<ul style="list-style-type: none"> <li>依法規範經營 Regulated operations according to laws</li> <li>安全環保 Safety and environmental protection</li> <li>職業健康 Occupational health</li> <li>本地經濟發展 Local economic development</li> <li>就業稅收 Employment and tax income</li> </ul>	<ul style="list-style-type: none"> <li>嚴格執行國家政策 Strict implementation of national policies</li> <li>堅持安全生產、推動綠色發展 Insistence on production safety and promoting green development</li> <li>加強職業健康防護 Reinforcement on protection of occupational health</li> <li>積極參與地方建設，提供就業機會 Proactive participation in local construction and providing employment opportunities</li> <li>遵守法律法規、及時繳納稅費 Compliance with laws and regulations, timely payment of taxes</li> <li>及時、準確報送企業信息 Timely and accurate submission of corporate information</li> </ul>
2	股東及投資者 Shareholders and investors	<ul style="list-style-type: none"> <li>企業價值 Corporate value</li> <li>轉型創新 Transformation and innovation</li> <li>公司治理 Corporate governance</li> <li>可持續發展 Sustainable development</li> <li>風險管理 Risks management</li> <li>合規管理 Compliance management</li> </ul>	<ul style="list-style-type: none"> <li>提升企業經營管理水平、業績及資產價值 Enhancing standards of corporate operation, results and asset value</li> <li>轉型創新，提升企業競爭力 Transformation with innovation for enhancing corporate competitiveness</li> <li>規範董事局建設，完善科學、高效的治理體系 Standardizing construction of the Board, and perfecting scientific and effective governance system</li> <li>關注環境及社會影響，採取相應舉措，完善相關信息披露及溝通 Paying attention to environmental and social impacts, adopting corresponding measures, and improving relevant information disclosure and communications</li> <li>提升防範化解重大風險的能力 Enhancing the strength of preventing and solving substantial risks</li> <li>建立合規管理體系，完善合規審查機制，開展商業行為守則宣貫 Construction of compliance management system, improving compliance review mechanism, and rolling out propagation of code of business conduct</li> <li>組織股東大會、投資者推介會、業績發佈會、路演等投資者活動，按要求發佈本公司公告、定期報告 Holding investor activities including general meetings, investors meetings, results presentations, roadshows, etc., and publication of announcements and regular reports of the Company according to requirements</li> </ul>
3	客戶 Customers	<ul style="list-style-type: none"> <li>產品質量 Product quality</li> <li>客戶服務 Customer service</li> <li>客戶權益 Rights and interests of customers</li> <li>創新 Innovation</li> </ul>	<ul style="list-style-type: none"> <li>全方位保障產品質量 Comprehensive guarantee of product quality</li> <li>建立健全客戶服務體系、完善客戶意見反饋及投訴處理機制、開展客戶滿意度調研 Establishing sound customer service system, improving mechanism for customer feedback and complaint handling, and launching surveys on customer satisfaction</li> <li>履約及保障客戶信息安全，加強客戶管理體系建設 Upholding and protecting security of customer data, and strengthening the construction of customer management system</li> <li>推動產品和技術創新 Encouraging innovation of products and technology</li> </ul>



序號 No.	利益相關方類別 Types of Stakeholders	訴求與期望 Aspirations and Expectations	溝通與回應 Communications and Responses
4	員工 Employees	<ul style="list-style-type: none"> <li>員工權益 Rights and interests of employees</li> <li>薪酬福利 Remuneration and benefits</li> <li>職業成長 Career development</li> <li>員工關愛 Care for employees</li> <li>健康安全 Health and safety</li> </ul>	<ul style="list-style-type: none"> <li>堅持平等僱傭準則，保障員工合法權益 Adhering to the principle of equal employment and protecting the legal rights and interests of employees</li> <li>召開職工代表大會，建立員工交流平台 Holding employees' congress and construction of communications platform for employees</li> <li>制定有競爭力的薪酬福利體系，完善各項福利待遇 Formulating competitive remuneration and benefits systems, and improving various benefits and treatment</li> <li>開展員工培訓及評優選先活動，完善激勵及晉升機制 Launching staff training, and perfecting incentives and promotion mechanism</li> <li>開展員工活動，關愛困難員工 Organizing staff activities and care for employees in need</li> <li>關注職業健康和心理健康，改善工作環境及組織氛圍 Care for occupational health and mental health, and improving working environment and ambience of the organization</li> </ul>
5	供應商及合作夥伴 Suppliers and partners	<ul style="list-style-type: none"> <li>及時履約 Punctual fulfillment of agreements</li> <li>誠信廉潔 Integrity and probity</li> <li>平等互惠 Equality for mutual benefit</li> <li>合作共贏 Cooperation for mutual gain</li> <li>行業進步及轉型升級 Advancement, transformation and upgrade of the industry</li> </ul>	<ul style="list-style-type: none"> <li>加強採購訂單管理，重視合同履約 Strengthening the management of procurement orders and strong emphasis on fulfillment of agreements</li> <li>開展常態化廉潔教育，實施陽光採購 Launching regular probity education and adopting "Sunshine Procurement"</li> <li>加強交流與合作、構建有效的合作機制與平台 Strengthening communications and cooperation, building effective cooperation mechanisms and platforms</li> <li>開展定期會晤、互訪及拜訪交流 Launching regular meetings, mutual visits and exchanges</li> <li>參與行業標準制定及技術研究 Participating in the formulation of industry standards and technological research</li> </ul>
6	社區 Community	<ul style="list-style-type: none"> <li>安全、健康及生態環境 Safety, health and ecological environment</li> <li>和諧社區 Harmonious community</li> <li>公益活動 Community activities</li> <li>當地就業及經濟發展 Local employment and economic development</li> </ul>	<ul style="list-style-type: none"> <li>強化安全生產管理，綠色生產、綠色辦公，提高能源、資源綜合利用效率 Reinforcement of production safety management, green production and green office to increase the composite utilization efficiency of energy and resources</li> <li>建設綠色工廠、推廣協同處置項目 Construction of green factories and promotion of co-processing projects</li> <li>積極參與社區共建 Active participation in mutual community construction</li> <li>積極參與扶貧、公益慈善活動及社會志願活動 Active participation in poverty alleviation, community charitable activities and social volunteer activities</li> <li>支持當地教育事業、校園招聘與社會招聘 Support for local education business, campus recruitment and community recruitment</li> </ul>
7	媒體 Media	<ul style="list-style-type: none"> <li>依法合規 Abiding by laws and compliance</li> <li>資訊披露 Information disclosure</li> <li>經營業績 Operational results</li> <li>健康及安全 Health and safety</li> <li>可持續發展 Sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>及時準確披露企業資訊 Timely and accurate disclosure of corporate information</li> <li>接受媒體監督，暢通對外發佈渠道，積極與媒體溝通、及時回應 Welcoming supervision by media, smooth channels of external publication for proactive communications with and timely response to the media</li> </ul>

## 重要性議題識別

通過宏觀政策及行業政策法規分析、國內外權威社會責任標準研究、水泥行業優秀報告對標比較，並參考聯交所《環境、社會及管治報告指引》、全球報告倡議組織《可持續發展報告標準》、中國社會科學院《中國企業社會責任報告指南 (CASS-CSR4.0)》、中國水泥協會《水泥企業社會責任準則》、《水泥企業社會責任報告編寫指南》、《水泥企業社會責任評價指標體系》，本公司逐步加強對重大環境、社會及管治議題的管理，並識別了6個責任領域共33項重要性議題。

## 重要性議題優次排序

為進一步提升重大環境、社會及管治議題的針對性，二零二零年，本公司專門制定中英文版重要性議題調查問卷，通過郵件推送、點對點邀請、官方微信公眾號推送等方式廣泛了解內外部利益相關方對各項重要性議題的關注程度。本公司共計回收有效問卷2,086份，根據問卷調查結果，從「對本公司發展的重要性」和「對利益相關方的重要性」兩個維度進行重要性議題優次排序，製作重要性議題矩陣，並經董事局、高級管理層、外部專家對重要性議題及優次排序結果的審閱和建議，確認利益相關方關注度高、與本公司可持續發展密切相關的核心重要性議題，作為重點披露內容。

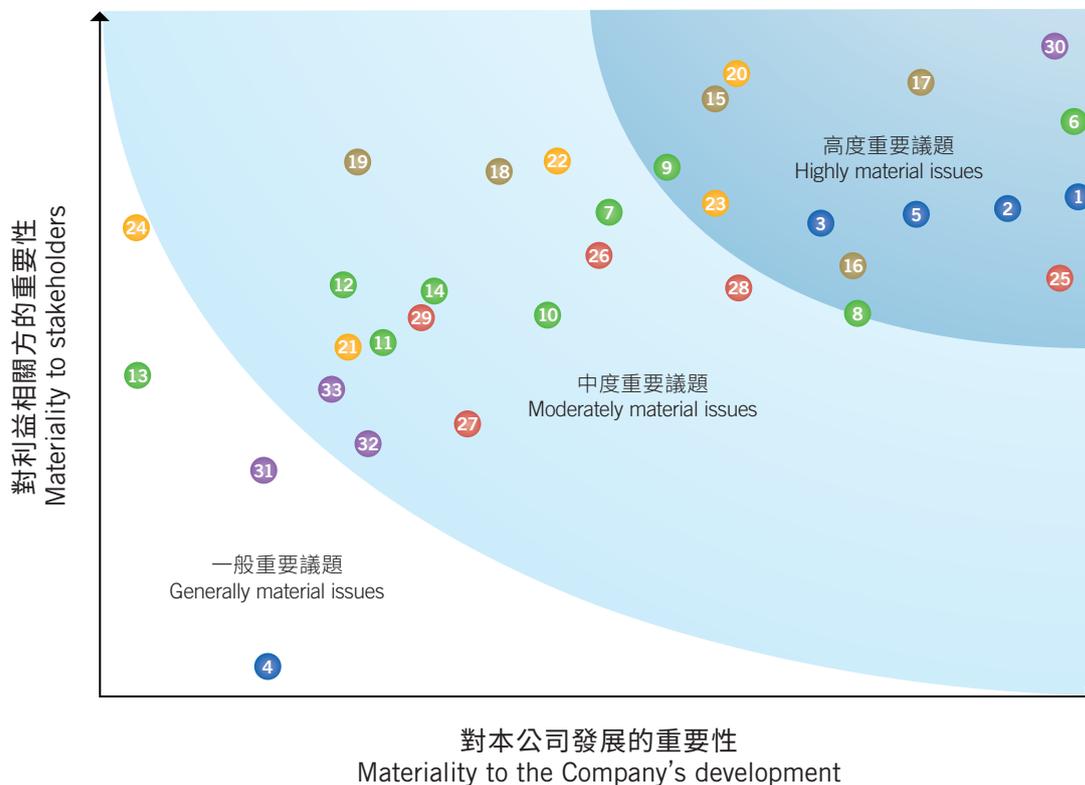
## Identification of Material Issues

The Company gradually strengthened the management of environmental, social and governance issues, and identified 33 material issues from 6 scopes of responsibilities through analysis on macro policies and industry policies and regulations, research on the domestic and international authoritative social responsibility standards, benchmarking comparison with excellent reports in the cement industry, and with reference to “Environmental, Social and Governance Reporting Guide” of the Stock Exchange, “GRI Sustainability Reporting Standards” of Global Reporting Initiative, “Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR4.0)” of Chinese Academy of Social Sciences, “Guidance on Social Responsibility of Cement Enterprise”, “Guidance on Social Responsibility Reporting of Cement Enterprise” and “Social Responsibility Evaluation Index System of Cement Enterprise” of China Cement Association.

## Prioritization of Material Issues

In order to further enhance the specificity of material environmental, social and governance issues, in 2020, the Company specifically prepared survey questionnaire of material issues in both Chinese and English, which were sent through emails, peer-to-peer invitations and official WeChat public account to extensively understand the degree of concerns of internal and external stakeholders on each material issue. The Company collected a total of 2,086 valid questionnaires. Based on the survey results, we assessed the priority of material issues from the two dimensions of “materiality to the Company’s development” and “materiality to stakeholders”, and prepared the materiality assessment matrix. Upon the review and recommendation by the Board, the senior management and external consultants on the material issues and their prioritization results, the core material issues closely related to sustainable development of the Company which highly concerned stakeholders were confirmed as the key disclosure contents.





責任領域 Scopes of Responsibilities	序號 No.	重要性議題 Material Issues
經濟 Economic	1	管理效益、經營業績及企業價值 Managerial efficiency, operational results and enterprise value
	2	公司治理與風險管理 Corporate governance and risk management
	3	誠信經營及反腐倡廉 Integrity management and promotion of anti-corruption
	4	股東與投資者權益 Rights and interests of shareholders and investors
	5	高質量發展與轉型升級 Promoting high-quality development, transformation and upgrade
環境 Environment	6	可持續發展 Sustainable development
	7	能源及資源管理 Energy and resources management
	8	環境管理體系 Environmental management systems
	9	污染物、廢棄物管理 Pollutant and waste management
	10	協同處置 Waste co-processing

責任領域 Scopes of Responsibilities	序號 No.	重要性議題 Material Issues
	11	生態多樣化及綠色礦山建設 Ecological diversification and green mine construction
	12	碳排放及氣候變化 Carbon emissions and climate change
	13	環保公益與綠色辦公 Charity events for environmental protection and green offices
	14	清潔技術及綠色建築機遇 Clean technology and opportunities in green building
員工 Employees	15	員工薪酬福利 Compensation and benefits of employees
	16	員工發展與培訓 Development and training of employees
	17	員工職業健康 Occupational health of employees
	18	員工權益 Rights and interests of employees
	19	員工關愛 Care for employees
客戶 Customers	20	產品及服務質量管理 Product and service quality management
	21	知識產權管理及科研成果轉化 Management of intellectual property rights and transformation of achievements in scientific research into practical applications
	22	產品及服務創新 Product and service innovation
	23	客戶權益及滿意度 Rights, interests and satisfaction of customers
	24	倡導可持續消費 Promoting sustainable consumption
伙伴 Partners	25	誠信合規採購 Integrous and compliant procurement
	26	供應鏈責任管理 Supply chain responsibility management
	27	供應商及其他伙伴權益 Rights and interests of suppliers and other partners
	28	資源共享、共同成長 Resources sharing and mutual growth
	29	行業交流與發展 Communications with industry players to foster industry development
公共 Public	30	安全生產 Production safety
	31	社區共建 Mutual community building with society
	32	扶貧濟困與慈善公益 Poverty alleviation and community charity
	33	投資與帶動就業 Investment in and drive for employment



## 環境

本公司積極履行企業公民的社會責任，嚴格遵循國家、行業、地方相關法律法規要求，持續開展污染物、廢棄物、碳排放、能源及資源管理，積極應對氣候變化，並通過協同處置項目、綠色礦山建設等工作推動綠色生產，助力環保轉型，實現企業的可持續發展。

### 1、 污染物管理

本集團嚴格遵守有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物產生的法律及規例，其中包括但不限於：《中華人民共和國環境保護法》、《中華人民共和國大氣污染防治法》、《中華人民共和國水污染防治法》、《中華人民共和國固體廢物污染環境防治法》、《中華人民共和國環境噪聲污染防治法》、《中華人民共和國土壤污染防治法》、《中華人民共和國環境保護稅法》、《中華人民共和國環境影響評價法》、《水泥工業大氣污染物排放標準》、《水泥窯協同處置固體廢物污染控制標準》。

## ENVIRONMENT

The Company proactively fulfils its social responsibilities as a corporate citizen. In strict compliance with the relevant requirements of national, industrial and local laws and regulations, we continuously launch management on pollutant, waste, carbon emissions, energy and resources management, and proactively respond to climate change. We implement green production and support transformation of environmental protection through waste co-processing and green mine construction, thereby achieving sustainable corporate development.

### 1. POLLUTANT MANAGEMENT

The Group strictly complies with the laws and regulations relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste, including but not limited to: the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, the Law of the People's Republic of China on Prevention and Control of Water Pollution, the Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste, the Law of the People's Republic of China on Prevention and Control of Environmental Noise Pollution, the Law of the People's Republic of China on Prevention and Control of Soil Pollution, the Environmental Protection Tax Law of the People's Republic of China, the Environmental Impact Assessment Law of the People's Republic of China, the Emission Standard of Air Pollutants for Cement Industry, and the Standard for Pollution Control on Co-Processing of Solid Wastes in Cement Kiln.

本集團嚴格參照環境相關法律法規要求，設立《華潤水泥管理手冊》「EHS管理篇」及健全監控環境管理體系，下發有關協同處置項目污染物排放監測管理的明確要求。本集團的卓越運營管理評價體系基於行業對標或內部對標結果設定目標值，對各水泥生產基地在環境、健康和 safety 等方面進行全面評價，從而提升管理水平，推動企業的可持續發展。

本集團的主要產品為水泥、熟料及混凝土，生產製造過程中主要產生的排放物為氮氧化物、二氧化硫、顆粒物等。本集團積極推動綠色生產，目前，所有水泥生產基地取得污染物排放許可證，以及配套純低溫餘熱發電設備、脫硝系統及袋式除塵器。

本集團設有環境污染物排放總部監控平台，實現總部對所有生產線污染物排放情況的即時監控，通過平台及時提醒、督促生產基地對異常數據進行核查，進一步提升污染物排放的風險管理能力。本集團為持續提升清潔化生產水平，樹立遵紀守法、和諧社區的良好企業形象，防控環保風險，自二零一九年起主動向社區全面公示所有生產線污染物排放實時數據，主動接受社會各界的監督。

With strict reference to relevant requirements on environmental laws and regulations, the Group had established the “EHS Management Series” of the “Management Manual” of the Company and sound environmental management system, and issued definite requirements on the monitor and management of pollutant emissions relating to co-processing projects. The Group’s appraisal system for excellent operational management sets targets based on the results of industry benchmarking or internal benchmarking. Comprehensive appraisal on the environment, health and safety aspects of every cement production plant is conducted, which enhances the management standard and fosters corporate sustainable development.

During the production and manufacturing process of our main products (namely, cement, clinker and concrete), the Group mainly emits pollutants including nitrogen oxides, sulphur dioxide and particulate matters. The Group proactively promotes green production. Currently, all of our cement production plants have obtained permits for pollutant emissions, and have been equipped with pure low-temperature residual heat recovery generation systems, denitration systems and bag filters.

The Group has a platform at headquarters to monitor the emissions of environmental pollutants, thereby achieving the headquarters’ real-time monitor on pollutant emissions of all production lines. The risk management capability on pollutant emissions has been further enhanced by timely reminders to urge production plants to verify abnormal data through the platform. Since 2019, the Group had taken the initiative to be subject to scrutiny from all sectors of the society by spontaneously making full disclosure on real-time pollutant emissions data of all production lines in order to continuously improve the standards of clean production, build an excellent corporate image of strict legal compliance and harmonious community, prevent and control risks of environmental protection.



目前本集團各生產基地的氮氧化物、二氧化硫及顆粒物平均排放濃度均低於國家污染物排放標準限值，同時，本集團不斷尋求減排新技術，努力提升環保技術水平和管理水平。本集團目標至二零二五年，所有水泥生產基地窯頭窯尾煙氣的氮氧化物排放濃度達100毫克／立方米以下、二氧化硫排放濃度達50毫克／立方米以下、顆粒物排放濃度達10毫克／立方米以下。基於現有設施，目標至二零二五年，氮氧化物、二氧化硫、顆粒物的排放量較二零一五年分別下降63%、57%、41%。

在氮氧化物減排方面，本集團在山西長治市的水泥生產基地成功利用分級燃燒技術，氮氧化物排放濃度降至100毫克／立方米以下；本集團積極開展智能高效選擇性非催化還原脫硝（heSNCR）+分級燃燒和選擇性催化還原脫硝（SCR）超低排放技術研究，計劃二零二一年在貴州金沙、廣西陸川試點heSNCR技術，在廣西南寧、山西長治試點SCR技術，並計劃在「十四五」期間推廣應用，進一步降低氮氧化物排放濃度，逐步實現所有生產線氮氧化物排放濃度低於100毫克／立方米。

在二氧化硫減排方面，本集團根據各生產線實際運行需要選擇應用脫硫技術，達標排放。截至二零二零年十二月底，建成3套濕法脫硫系統及11套複合脫硫系統。海南昌江水泥基地擬實施濕法脫硫擴容升級改造，廣西合浦水泥基地擬實施濕法脫硫技術，進一步降低二氧化硫的排放濃度。

Currently, the average emission concentrations of nitrogen oxides, sulphur dioxide and particulate matters of each production plant of the Group are lower than the national standard limits of pollutant emissions. Meanwhile, the Group had been continuously seeking new technology of emission reduction and enhancing technological standards and management standards of environmental protection. The Group targets that, by 2025, the emission concentrations of nitrogen oxides, sulphur dioxide and particulate matters shall fall below 100 mg/m<sup>3</sup>, 50 mg/m<sup>3</sup> and 10 mg/m<sup>3</sup> respectively from exhaust gases of kiln heads and kiln rears of all cement production plants. Based on the existing facilities, we aim at reducing the emissions of nitrogen oxides, sulphur dioxide and particulate matters by 63%, 57% and 41% respectively by 2025 as compared with 2015.

In terms of emission reduction of nitrogen oxides, the Group successfully used the multi-level combustion technology at the cement production plant in Changzhi City, Shanxi, which had reduced the emission concentration of nitrogen oxides to below 100 mg/m<sup>3</sup>. The Group had proactively launched the research on intelligent ultra-low emissions technology of highly effective selective non-catalytic reduction denitration (heSNCR) + multi-level combustion and selective catalytic reduction denitration (SCR). In 2021, the Group plans to roll out pilot work of heSNCR technology in Jinsha, Guizhou and Luchuan, Guangxi, as well as pilot work of SCR in Nanning, Guangxi and Changzhi, Shanxi. It is also planned that the application of the technologies will be promoted during the “Fourteenth Five-Year” period to further reduce the emission concentration of nitrogen oxides, thereby achieving emission concentration of nitrogen oxides of below 100 mg/m<sup>3</sup> for all production lines.

In terms of emission reduction of sulphur dioxide, in order to achieve emissions at target levels, the Group selectively applied desulphurization technology according to the actual needs of operation of each production line. As of the end of December 2020, the Group completed the construction of 3 sets of wet-process desulphurization systems and 11 sets of composite desulphurization systems. The cement production plant in Changjiang, Hainan will implement upgrade and transformation to increase the capacity of wet-process desulphurization and the cement production plant in Hepu, Guangxi will implement wet-process desulphurization, which will further reduce the emission concentration of sulphur dioxide.

在顆粒物減排方面，本集團持續在各基地推廣窯尾顆粒物新型超低排放高溫濾袋技術，截至二零二零年底，已在廣東封開、惠州，廣西平南、武宣、富川，福建曹溪、永定等17個水泥生產基地應用，顆粒物排放濃度均降至10毫克／立方米以下，遠低於國家特別排放限值，實現顆粒物超低排放。另外，本集團持續開展水泥包裝系統的技術升級，推廣自動插袋技術和自動裝車技術應用，截至二零二零年底，廣東廉江，廣西南寧、田陽、上思，貴州安順水泥生產基地已完成水泥包裝系統的技術升級，進一步改善水泥包裝、裝車工作環境，提高裝備自動化水平及有效減少顆粒物排放，本集團計劃在「十四五」期間完成其餘水泥生產基地的推廣及覆蓋。

截至二零二零年底，本集團位於廣西田陽、南寧、平南、武宣、貴港、雲南鶴慶的水泥生產基地獲列入國家級綠色製造名單中的綠色工廠，位於廣西上思、陸川、合浦，福建龍岩、雁石、曹溪、永定以及貴州金沙的水泥生產基地獲列入省級或自治區級綠色製造名單中的綠色工廠。

In terms of emission reduction of particulate matters, the Group continuously promoted the technology of new-type bag filters in high temperature for ultra-low emissions of particulate matters at kiln rear. As of the end of 2020, it had been applied at 17 cement production plants including those located in Fengkai and Huizhou of Guangdong, Pingnan, Wuxuan and Fuchuan of Guangxi, Caoxi and Yongding of Fujian. The emission concentrations of particulate matters had been reduced to below 10 mg/m<sup>3</sup>, which are far lower than the national special emission limits for achieving ultra-low emission of particulate matters. In addition, the Group continued to launch the technological upgrade of cement packaging systems and promote the application of automatic bagging technology and automatic loading technology. As of the end of 2020, the cement production plants at Lianjiang of Guangdong, Nanning, Tianyang and Shangsi of Guangxi, and Anshun of Guizhou had completed the technological upgrade of cement packaging systems. This had further improved the working environment of cement packaging and loading, raised the standard of equipment automation and effectively reduced emission of particulate matters. The Group plans to complete the promotion and coverage at remaining cement production plants during the “Fourteenth Five-Year” period.

As of the end of 2020, the cement production plants located in Tianyang, Nanning, Pingnan, Wuxuan and Guigang of Guangxi, and Heqing of Yunnan had been included as green factories in the register of national-level Green Manufacturing. The cement production plants located in Shangsi, Luchuan and Hepu of Guangxi, Longyan, Yanshi, Caoxi and Yongding of Fujian, and Jinsha of Guizhou were included as green factories in the registers of provincial-level or AR-level Green Manufacturing.



截至二零一八年、二零一九年、二零二零年十二月三十一日止年度，本集團水泥生產基地主要排放口的污染物排放數據載列如下：

Data of pollutants emitted from the major discharge outlets of the Group's cement production plants for the years ended 31 December 2018, 2019 and 2020 is set out as follows:

		二零二零年 (噸) 2020 (tons)	二零一九年 (噸) 2019 (tons)	二零一八年 (噸) 2018 (tons)
氮氧化物排放量	Emission of nitrogen oxides	<b>36,194</b>	37,584	39,822
二氧化硫排放量	Emission of sulphur dioxide	<b>1,646</b>	1,824	2,352
顆粒物排放量	Emission of particulate matters	<b>1,777</b>	2,083	2,361

截至二零一八年、二零一九年、二零二零年十二月三十一日止年度，本集團水泥生產基地主要排放口的污染物平均排放濃度以及國家相關標準對標載列如下：

The average emission concentrations of pollutants emitted from the major discharge outlets of the Group's cement production plants for the years ended 31 December 2018, 2019 and 2020 as well as the benchmarks of relevant national standards are set out as follows:

		水泥工業大氣污染物 排放標準 (GB 4915-2013) Emission Standard of Air Pollutants for Cement Industry (GB 4915-2013)		本集團水泥生產基地 主要排放口的 污染物平均排放濃度 Average emission concentrations of pollutants emitted from the major discharge outlets of the Group's cement production plants		
		一般排放限值 (毫克/ 立方米) Ordinary emission limits (mg/m <sup>3</sup> )	特別排放限值 (毫克/ 立方米) Special emission limits (mg/m <sup>3</sup> )	二零二零年 (毫克/ 立方米) 2020 (mg/m <sup>3</sup> )	二零一九年 (毫克/ 立方米) 2019 (mg/m <sup>3</sup> )	二零一八年 (毫克/ 立方米) 2018 (mg/m <sup>3</sup> )
氮氧化物	Nitrogen oxides	400	320	<b>197</b>	240	254
二氧化硫	Sulphur dioxide	200	100	<b>10</b>	13	18
顆粒物	Particulate matters	30	20	<b>7</b>	9	11

## 2、 碳排放管理

中國政府提出力爭於二零三零年前二氧化碳排放達到峰值的目標，以及在二零六零年前努力爭取實現碳中和的願景，本集團將配合國家政策，根據自身實際情況，研究制定碳排放中長期規劃目標，大力推進綠色低碳和可持續發展，助力國家碳達峰及碳中和目標的達成，為環境治理作出積極貢獻。

在「十四五」期間，本集團將積極通過降低能耗、試點新技術及新工藝、開發低碳產品等方式降低碳排放。

本集團正在開展替代熟料(如煨燒黏土)及替代燃料(如生物質燃料、工業廢棄物等)等新技術及新工藝的應用研究。二零二零年，本集團使用電石渣作為石灰石替代材料，實現碳減排。此外，本集團計劃開展二氧化碳捕集等技術的研究和利用工作，為未來進一步推廣奠定基礎。

低碳產品方面，本集團正在開展低碳膠凝材料的開發及應用，同時在福建及海南積極推廣核電水泥、道路水泥及高貝利特水泥，降低二氧化碳排放。與普通水泥熟料相比，核電水泥、道路水泥、高貝利特水泥的噸熟料二氧化碳排放量分別減少約1.5%、1.6%、2.2%。截至二零二零年底，本集團位於廣東羅定，廣西武宣、田陽、南寧、貴港、平南、合浦，雲南鶴慶生產基地的多項水泥及熟料產品已通過低碳產品認證。

## 2. MANAGEMENT OF CARBON EMISSIONS

The Chinese government proposes to strive for the target of peaking carbon dioxide emissions before 2030 and achieving the vision of carbon neutrality before 2060. The Group will complement the national policies, research and formulate plans for medium to long-term targets of carbon emissions based on its own actual circumstances, and vigorously promote green low-carbon and sustainable development to assist China in achieving the targets of peaking carbon dioxide emissions and carbon neutrality and to make positive contributions to environmental treatment and management.

During the “Fourteenth Five-Year” period, the Group will actively reduce carbon emissions through reduction of energy consumption, pilot trial of new technologies and new techniques, and development of low-carbon products.

The Group has been working on the applied research of new technologies and new techniques for alternative clinker (such as calcined clay) and alternative fuel (such as biomass fuel and industrial waste). In 2020, the Group used carbide slag as alternative materials to limestone to achieve reduction of carbon dioxide emissions. In addition, the Group plans to launch technological research and application of carbon dioxide capture to lay the foundation for further promotion in the future.

In terms of low-carbon products, the Group has been launching the development and application of low-carbon cementitious materials and proactively promoting cement for nuclear power plants, cement for roads and high-belite cement in Fujian and Hainan at the same time to reduce emission of carbon dioxide. As compared with ordinary cement and clinker, carbon dioxide emissions per ton of clinker from cement for nuclear power plants, cement for roads and high-belite cement decrease by approximately 1.5%, 1.6% and 2.2% respectively. As of the end of 2020, various cement and clinker products of the Group's production plants located in Luoding of Guangdong, Wuxuan, Tianyang, Nanning, Guigang, Pingnan and Hepu of Guangxi, and Heqing of Yunnan had passed the low-carbon product certification.



本集團積極跟進並落實國家碳排放政策，同時積極參加行業組織的碳排放相關會議和全國碳市場建設測試活動，為未來全國碳市場統一作準備。本集團於廣東的8家工廠、福建的5家工廠均完成二零一九年度碳排放權配額的清繳。此外，本集團持續按《中國水泥生產企業溫室氣體排放核算方法與報告指南》完成二零二零年度碳排放量的統計。二零二零年，本集團的溫室氣體排放量為59,605,000噸二氧化碳當量，其中範圍1溫室氣體排放量為58,247,000噸二氧化碳當量，範圍2溫室氣體排放量為1,358,000噸二氧化碳當量。

### 3、 能源及資源管理

本集團嚴格遵守有關能源及資源管理的法律及規例，其中包括《中華人民共和國節約能源法》、《中華人民共和國礦產資源法》、《中華人民共和國資源稅法》。本集團設有能源管理系統及《節能減排監督管理》制度，對生產過程中資源消耗量進行統計，用於評估生產基地的運營表現，提高能源及資源利用率和經濟效益。此外，本集團亦持續推動節約能源工作，通過對標世界一流企業找差距，將持續開展新技術、新裝備、新材料和創新成果推廣、應用，涉及能源的節約和循環利用、節能環保技術投資、減排技術改造及研發與創新等。

The Group proactively follows up and executes the national policies for carbon emissions, and actively participates in meetings of industrial institutions relevant to carbon emissions and trial activities for the construction of national carbon market in preparation for the future unification of national carbon market. 8 factories in Guangdong and 5 factories in Fujian of the Group had settled the carbon credit quota for 2019. Besides, the Group continued to complete the calculation of quantity of carbon emissions for 2020 in accordance with the “Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Cement Enterprises”. In 2020, the greenhouse gases emissions of the Group were 59,605,000 tons of carbon dioxide equivalent, among which, greenhouse gases emissions (scope 1) were 58,247,000 tons of carbon dioxide equivalent and greenhouse gases emissions (scope 2) were 1,358,000 tons of carbon dioxide equivalent.

### 3. ENERGY AND RESOURCES MANAGEMENT

The Group strictly abides by the relevant laws and regulations on energy and resources management, including the Energy Conservation Law of the People's Republic of China, the Mineral Resources Law of the People's Republic of China and the Law on Resource Tax of the People's Republic of China. The Group has an energy management system and the policy “Supervision and Management of Energy Saving and Emission Reduction”. All resources consumed during production process are measured for the assessment of operational performance of the production plant in order to enhance the utilization rates of energy and resources as well as economic benefits. In addition, the Group persistently encourages energy saving. Room for improvement is found by benchmarking with global first-class enterprises. We continued to roll out the promotion and application of new technology, new equipment, new materials and innovative achievements, saving and recycled use of energy, investment of environmental protection technologies for energy saving, technological upgrade on emission reduction, R&D and innovation.

節能降耗方面，本集團所有水泥熟料生產基地均配套餘熱發電系統，二零二零年，餘熱發電量約為2,090,400,000千瓦時，佔本集團生產水泥產品所需電耗約32.2%。本集團持續推進精益管理，推動節能降耗技改項目，通過綜合利用粉煤灰、煤矸石或電石渣等當地資源優勢，通過熱值貢獻或改善熟料易燒性，實現資源綜合利用，降低煤耗；同時通過推廣高效節能風機、節能空壓機、鼓風機等技術降低電耗。

本集團自二零一二年以來已全面推廣使用助磨劑，使用水泥助磨劑可減少水泥生產過程中的熟料和電力消耗，並使水泥質量保持穩定。二零二零年，使用助磨劑令本集團平均噸水泥工序電耗下降2.0千瓦時，熟料消耗下降3.8%，全年節約電力能源約160,000,000千瓦時，減少熟料消耗量約3,100,000噸，有助減少二氧化碳排放。

本集團積極推動數字化轉型，與西門子合作在廣西田陽區的水泥生產基地試點建設數字化智能工廠，一期工程於二零二零年七月上線運行。項目建成將有助提升工廠生產效率。此外，本集團計劃在廣東封開縣的水泥生產基地，圍繞EHS、運營、生產、設備、質量、礦山及物流等方面開展智能製造建設，打造「燈塔工廠」。同時，本集團積極推廣水泥窯協同處置項目，利用生活垃圾、市政污泥、工業危險廢物的熱值替代部份燃料，減少煤耗和碳排放。

In terms of energy saving and consumption reduction, all the cement and clinker production plants of the Group are equipped with residual heat power generation systems. In 2020, approximately 2,090.4 million kwh of electricity was generated from residual heat, representing approximately 32.2% of the Group's electricity consumption required for production of cement products. The Group continuously implements lean management and technological upgrade projects for energy saving and consumption reduction. Composite utilization of resources and reduced coal consumption had been achieved through composite utilization of local resources such as fly ash, coal gangue or carbide slag, through contribution of heat value or improvement of clinker combustibility. Electricity consumption had been reduced at the same time by promoting the technologies of highly effective energy-saving fans, energy-saving air compressors and air blowers.

The Group had fully promoted the use of grinding aids since 2012. Use of grinding aids for cement could reduce consumption of clinker and electricity during the process of cement production and maintain stable quality for cement. In 2020, the use of grinding aids reduced the average consumption of electricity resources of the Group by 2.0 kwh per ton of cement produced and clinker consumption decreased by 3.8%. Throughout the year, approximately 160.0 million kwh of electricity was saved and clinker consumption decreased by approximately 3.1 million tons, which was conducive to reducing carbon dioxide emissions.

The Group proactively promotes digital transformation. In cooperation with Siemens, a pilot intelligent manufacturing factory is being constructed at the cement production plant in Tianyang District, Guangxi. Phase 1 of the project commenced operation in July 2020. Completion of the project construction will be conducive to enhancing production efficiency of the factory. In addition, the Group plans to commence the construction of intelligent manufacturing centred on the aspects of EHS, operation, production, equipment, quality, mines and logistics to create a "lighthouse factory" at the cement production plant in Fengkai County, Guangdong. Meanwhile, the Group actively promotes co-processing projects by use of cement kilns, which makes use of the heat value of municipal solid waste, urban sludge and hazardous industrial waste to replace some of the fuel, thereby reducing coal consumption and carbon emissions.



在「十四五」期間，本集團計劃升級「二代水泥」技術，如使用高能效預熱預分解先進燒成技術、第四代篅式冷卻機、高性能隔熱材料、立磨節能技術等，實現能源使用效益的提升。此外，本集團計劃於廣西平南縣的水泥生產基地開展富氧燃燒新技術研發，通過提高燃燒效率，實現節能減排。本集團目標至二零二五年，噸熟料標準煤耗、噸熟料綜合電耗、噸PO42.5水泥工序電耗較二零一五年（107.6公斤、55.1千瓦時、31.2千瓦時）分別下降5%、10%和16%。

本集團積極宣導節約用水、循環用水。在水泥生產基地持續開展工業廢水、生活污水、初期雨水收集回用的全面綜合治理，參考國家一級排放標準制定了嚴格的生活污水處理工序和指標：以分類收集、分質處理、分段回用為設計原則，通過預處理、生化法等工藝處理生活污水，通過預處理（混凝沉澱）、深度處理（砂濾、膜處理等）等工藝處理工業廢水，最終實現廠區雨汙分流，生活污水、工業廢水經處理達標後全部回用於廠區，達到廢水零排放。繼位於廣西南寧及廣東封開的水泥生產基地試點後，二零二零年完成了廣西平南等7個水泥生產基地的推廣實施，在穩定運行前提下，實現了廢水零排放及水資源綜合利用的目標，未來將逐步推廣至本集團其他水泥生產基地。在混凝土攪拌站，通過推廣應用泥漿壓濾機，提高廢水回收利用，截止二零二零年底，本集團位於中國內地的混凝土攪拌站全面實現廢水零排放目標。本集團主要運營區域均不處於水資源稀缺地區。

During the “Fourteenth Five-Year” period, the Group plans to upgrade the “second-generation cement” technology for achieving enhancement of energy efficiency, such as by the use of advanced combustion formation technology with energy-efficient pre-heating and pre-decomposition, the fourth-generation grate cooler, high-performance heat insulating materials, energy saving technology for vertical grinding, etc. Furthermore, the Group plans to roll out R&D on the new technology of oxygen-enriched combustion at the cement production plant in Pingnan County, Guangxi, to achieve energy saving and emission reduction by increasing combustion efficiency. The Group aims to reduce standard coal consumption per ton of clinker by 5%, consolidated electricity consumption per ton of clinker by 10% and electricity consumption per ton of PO42.5 cement processed by 16% respectively by 2025 as compared with 2015 (107.6 kg, 55.1 kwh and 31.2 kwh).

The Group actively promotes conservation and recycling of water. We continuously initiate the comprehensive composite treatment and management on the recovery and recycled use of industrial wastewater, domestic wastewater and initial rainwater at our cement production plants. Strict procedures and standards for treatment of domestic wastewater were formulated with reference to national first-class emission limits: design principles of collection by type, treatment by quality and multi-phase recycled use were adopted to treat domestic wastewater with techniques such as pre-treatment and biochemical methods and to treat industrial wastewater with techniques such as pre-treatment (coagulation-sedimentation) and intensive treatment (sand filtration, membrane processes, etc.), which finally achieved separation of rainwater and wastewater in the factory zones. Treated domestic wastewater and industrial wastewater which meet the standards are fully recycled for use in factory zones, and zero discharge of wastewater is fulfilled. Following the pilot trial at the cement production plants located in Nanning, Guangxi and Fengkai, Guangdong, promotion and implementation at 7 cement production plants including Pingnan, Guangxi had been completed in 2020. The goals of zero discharge of wastewater and composite utilization of water resources had been achieved under the condition of stable operation. It will be gradually promoted at other cement production plants of the Group in the future. As of the end of 2020, the Group's concrete batching plants located in the Chinese Mainland had fully achieved the goal of zero discharge of wastewater through promoting the application of slurry filter press at concrete batching plants to recover and recycle more wastewater. The major operating regions of the Group are not located in districts of water scarcity.

二零二零年，本集團的水資源消耗量<sup>1</sup>約31,392,000噸，其中生產水泥及熟料的水資源消耗量約29,831,000噸，密度為346.7公斤／噸水泥產量；生產混凝土的水資源消耗量約1,561,000噸，密度為120.2公斤／方混凝土產量。

#### 4、 廢棄物管理

本集團的所有熟料生產線在物料處理、輸送過程中均採用全封閉式運送，各轉運點配置除塵器收集顆粒物，以減少揚塵。本集團將高效袋式除塵器收集的粉塵應用於原料、半成品、成品中，循環利用生產過程中產生的廢棄物。礦區採用無廢或少廢工藝，對剝離土、夾石等無害廢棄物全部綜合利用，實現廢渣零排放。對於廢鐵、廢皮帶等，交由有資質的第三方機構回收使用。二零二零年，本集團的無害廢棄物產生量為153,514噸，無害廢棄物處理量為139,296噸，處理率約90.7%。

在有害廢棄物方面，本集團遵循「無害化、減量化、資源化」原則，將生產製造過程產生的廢油充分循環利用為機械及其他傳動設備潤滑，最大限度減少危廢產生量。對於廢油桶及無法再利用的廢油等其他危險廢物，嚴格執行國家法律法規要求，由原生產商回收或委託有資質的第三方機構進行回收或處理。二零二零年，本集團的有害廢棄物產生量為440噸，有害廢棄物處理量為390噸，處理率約88.7%。

<sup>1</sup> 統計範圍為本集團付費的購水量。

In 2020, water consumption of the Group<sup>1</sup> was approximately 31,392,000 tons, among which, water consumption for the production of cement and clinker was approximately 29,831,000 tons and intensity was 346.7 kg per ton of cement produced; water consumption for the production of concrete was approximately 1,561,000 tons and intensity was 120.2 kg per m<sup>3</sup> of concrete produced.

#### 4. WASTE MANAGEMENT

Fully enclosed delivery is adopted during materials treatment and delivery process at all the clinker production lines of the Group. Each transit point had been equipped with filters to collect particulate matters and minimize dust scattering. The Group applies the dust collected by highly effective bag filters in our raw materials, semi-finished products and finished products in order to recycle the solid waste generated during the production process. Waste-free or less-waste technology has been adopted at mining areas. To achieve zero discharge of waste residue, non-hazardous wastes such as stripped soil and stones are all compositely utilized. Scrap iron and scrap leather belts are recycled and used by qualified third-party institutions. In 2020, non-hazardous wastes produced by the Group amounted to 153,514 tons, 139,296 tons of non-hazardous wastes were processed, and the processing rate was approximately 90.7%.

Regarding hazardous wastes, the Group adequately recycles the waste oil generated in the production process for lubrication of mechanical and other conveying equipment in accordance with the “hazard-free, mass-reducing and recyclable” principle to minimize the production of hazardous wastes. Other hazardous wastes such as oil barrels and non-recyclable waste oil are recycled by the original manufacturers, or recycled or handled by entrusted qualified third-party institutions in strict compliance with the requirements of national laws and regulations. In 2020, hazardous wastes produced by the Group amounted to 440 tons, 390 tons of hazardous wastes were processed, and the processing rate was approximately 88.7%.

<sup>1</sup> The data covers purchased water.



## 5、 氣候變化

中國政府積極應對氣候變化，二零二一年一月，中國生態環境部發佈《關於統籌和加強應對氣候變化與生態環境保護相關工作的指導意見》，提出將應對氣候變化作為美麗中國建設重要組成部份，系統謀劃中長期生態環境保護重大戰略，同時推動鋼鐵、建材、有色、化工、石化、電力、煤炭等重點行業提出明確的達峰目標並制定達峰行動方案，加快全國碳排放權交易市場制度建設、系統建設和基礎能力建設，充分利用市場機制控制和減少溫室氣體排放。《碳排放權交易管理辦法（試行）》於二零二一年二月一日開始實施，進一步明確溫室氣體重點排放單位、碳排放配額分配和清繳方式等，有助於規範全國碳排放權交易及相關活動。

二零二零年，本公司識別氣候變化帶來的主要風險及機遇，並制定應對氣候變化的有效戰略舉措，未來將持續進行評估和檢討，強化管理成效。

## 5. CLIMATE CHANGE

The Chinese government proactively responds to climate change. In January 2021, the Ministry of Ecology and Environment of China issued the “Guiding Opinions on Organizing and Strengthening Relevant Works of Responding to Climate Change and Ecological Environmental Protection”, which proposed that responding to climate change will become an important constituent for the construction of a beautiful China and systematically blueprinted major strategies for ecological and environmental protection in the medium to long term. It also gives impetus to key industries including steel, building materials, non-ferrous metals, chemicals, petrochemicals, power and coal industries to set specific targets and formulate action plans for peaking carbon emissions, accelerate the construction of policies, systems and fundamental capability for the national carbon emissions trading market, and control and reduce greenhouse gases emissions by fully utilizing market mechanisms. The “Administrative Measures for Carbon Emission Rights Trading (Trial)” had come into effect on 1 February 2021. It had further specified key emission units of greenhouse gases, allocation of carbon emissions quota and ways of settlement, which will be conducive to regulating national carbon emissions trading and relevant activities.

In 2020, the Company identified the major risks and opportunities of climate change, and formatted effective strategic measures to respond to climate change. In the future, we will conduct ongoing assessment and review to strengthen management effectiveness.

(i) 氣候變化風險：

(i) Risks of Climate Change:

序號 No.	風險類別 Type of Risks	風險描述 Description of Risks	應對舉措 Response Measures
1	轉型風險： 政策及法律 Transition Risks: Policies and Laws	<ul style="list-style-type: none"> <li>中國政府的碳排放相關政策、法律法規將漸趨嚴格，全國碳排放權交易市場建設正積極推進。 The Chinese government's relevant policies, laws and regulations on carbon emissions are gradually becoming stricter. The construction of national carbon emissions trading market is being proactively promoted.</li> </ul>	<ul style="list-style-type: none"> <li>計劃研究制定碳排放中長期規劃目標，並持續完善。 It is planned to research, formulate and continuously improve plans for medium to long-term targets of carbon emissions.</li> <li>計劃通過提升工藝、降低能耗，以減少溫室氣體排放，並開展替代熟料、替代燃料、二氧化碳捕捉及低碳產品等方面技術研發。 It is planned to reduce emissions of greenhouse gases by enhancing techniques and decreasing energy consumption and to roll out technological R&amp;D of alternative clinker, alternative fuel, capture of carbon dioxide and low-carbon products.</li> <li>積極為未來水泥全國碳市場統一作準備。 The Group is in proactive preparation for the future unification of national carbon market.</li> </ul>
2	實體風險： 極端天氣 Physical Risks: Extreme Weather	<ul style="list-style-type: none"> <li>極端天氣(暴雨、颱風、大雪、洪澇、高溫、嚴寒等)。 Extreme weather (rainstorm, typhoon, heavy snow, flood, high temperature, severe coldness, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>強化風險分析，組織實施重點區域隱患排查，加強災害防治的統籌協調，制定應急預案並定期組織災害安全演練，增加員工的防範意識及應變能力。 We strengthen risks analysis, organize and execute inspections of latent hazards in key regions, reinforce overall planning and coordination of disaster prevention and treatment, formulate contingency plans and regularly organize disaster safety drills to arouse the staff's precautionary awareness and resilience.</li> <li>購買保險，保障各類災害、意外所造成的人身傷害及財物損失。 Insurance is taken out to secure personal injuries and property damage caused by various disasters and accidents.</li> <li>持續拓展多個採購渠道，持續了解運營區域供電、供煤情況，保障供應。 We continue to expand multiple procurement channels and understand the situation of power supply and coal supply to secure supply.</li> <li>視天氣情況，安排貨物出廠，如遇極端天氣，停止發運，對中轉庫員工進行安全轉移、固定裝卸設備，並提前告知客戶、運輸公司合理安排車輛；協助門店客戶對貨物進行存儲轉置。 Shipping arrangement of goods is dependent on the weather conditions. During extreme weather, shipping is suspended, silo employees are relocated to safe places, loading and unloading equipment are fixed. Customers and transportation companies are also advised in advance for reasonable arrangement of vehicles. Retail customers are offered assistance on storage and transpose of goods.</li> </ul>



(ii) 氣候變化機遇：

(ii) Opportunities of Climate Change:

序號 No.	機遇類別 Types of Opportunities	機遇描述 Description of Opportunities	戰略舉措 Strategic Measures
1	政策及法律 Policies and Laws	<ul style="list-style-type: none"> <li>中國政府積極推進綠色工廠及綠色礦山建設，對水泥行業的環保要求逐步提升。 The Chinese government proactively promotes the construction of green factories and green mining, and gradually raises the requirements of cement industry on environmental protection.</li> <li>中國政府積極推進全國碳排放權交易市場建設。 The Chinese government proactively promotes the construction of national carbon emissions trading market.</li> </ul>	<ul style="list-style-type: none"> <li>持續推動節能減排，提升生產運營效率，推進資源綜合利用，長遠降低運營成本，進一步鞏固在行業中的競爭優勢。 Energy saving and emission reduction are continuously advanced to enhance efficiency of production and operation, promote composite utilization of resources, decrease operational costs in the long run and further consolidate the competitive advantages in the industry.</li> <li>積極跟進國家最新政策，適時開展碳資產管理，利用市場化手段，助力企業碳資產保值及增值。 We will actively follow up with the latest national policies to launch carbon assets management at a suitable time and achieve value preservation and value addition of corporate carbon assets by use of market means.</li> </ul>
2	產品和服務 Products and Services	<ul style="list-style-type: none"> <li>隨著中國政府推動綠色建築，客戶對低碳水泥、綠色建材產品和服務的需求將上升。 Following the Chinese government's promotion of green construction, customers' demand for low-carbon cement, green products and services for construction materials will increase.</li> </ul>	<ul style="list-style-type: none"> <li>計劃開展低碳水泥和高碳吸收混凝土技術的研發。 It is planned to roll out R&amp;D on the technology of low-carbon cement and high carbon absorbing concrete.</li> <li>按客戶個性化需求供應可靠穩定綠色建築材料。 Reliable and stable green construction materials are supplied based on customers' personalized needs.</li> <li>持續推動水泥及熟料產品的低碳產品認證。 Low-carbon product certification for cement and clinker products is persistently advocated.</li> <li>發展更環保節能的無機人造石產品。 Inorganic engineered stone products are developed for better environmental protection and energy saving.</li> </ul>
3	市場 Markets	<ul style="list-style-type: none"> <li>中國政府推動綠色建築發展，全國及地方政府陸續推出各項支持裝配式建築發展的政策，並鼓勵建築垃圾資源化利用，改善城市環境。 The Chinese government advocates green construction development. National and local governments successively launch various policies to support the development of prefabricated construction, and encourage the resourceful utilization of construction wastes to improve urban environment.</li> </ul>	<ul style="list-style-type: none"> <li>與現澆住宅建設方式相比，裝配式住宅擁有材料節約、節能等環保優勢，且有利於提升建築質量及建設效率。本公司積極推動裝配式建築項目發展。 Compared to the existing cast-in-place construction of residence, prefabricated residence has the advantages of environmental protection in terms of materials conservation and energy saving. It is also conducive to enhancing quality of buildings and efficiency of construction. The Company proactively promotes the development of prefabricated construction projects.</li> <li>本公司在海南昌江建設建築垃圾消納場項目，有助減少天然資源消耗，推動行業綠色發展。 The Company is building a construction waste disposal plant project in Changjiang, Hainan, which will help to reduce consumption of natural resources and promote green development of the industry.</li> </ul>

## 6、 綠色發展

### 協同處置

本集團積極履行社會責任，助力綠色發展，實現企業的可持續發展。依托自身技術優勢，全面推進城鄉生活垃圾、市政污泥及工業危險廢物三個領域的協同處置項目，打造完整的固廢處置解決方案。

本集團利用水泥窯協同處置<sup>2</sup>固體廢棄物，較傳統填埋方式大幅節約土地資源，減少對環境造成的危害，而且有效利用窯內高溫去除二噁英等有毒污染物，真正實現「無害化、減量化、資源化」處置，成為「城市共同體」，改善當地居民的生活環境，控制和預防各種傳染病、公害病，提高人民的健康水平。

二零二零年，本集團與環保公司合作發展協同處置項目，其中，於廣西上思縣的水泥生產基地設有100,000噸的工業危險廢物年處理能力；於福建雁石鎮的水泥生產基地設有80,000噸的工業危險廢物及20,000噸的市政污泥年處理能力。

<sup>2</sup> 利用水泥窯協同處置：在進行水泥熟料生產的同時，利用水泥窯高溫、鹼性、大容量特點，將滿足或經過預處理後滿足入窯要求的固體廢棄物投入水泥窯焚燒的處置過程。

## 6. GREEN DEVELOPMENT

### Co-Processing

The Group proactively fulfils its social responsibility in fostering green development to achieve sustainable corporate development. In reliance on our own technological advantages, we comprehensively promote co-processing projects in the three scopes of municipal solid waste, urban sludge and hazardous industrial waste to create complete solutions to solid waste processing.

Compared to traditional landfilling, co-processing<sup>2</sup> of solid waste by use of cement kilns enables the Group to substantially save land resources, reduce harm done to the environment, and eliminate poisonous pollutants such as dioxin by effective use of heat inside cement kilns, thereby truly achieving “hazard-free, mass-reducing and recyclable” processing. In the “community of shared city”, co-processing projects improve the living environment for local residents, control and prevent various infectious diseases and pollution-related public diseases, and improve the people’s healthiness.

In 2020, the Group and environmental protection companies cooperated in the development of co-processing projects, among which, the cement production plant in Shangsi County, Guangxi had annual processing capacity of 100,000 tons of hazardous industrial waste; the cement production plant in Yanshi Town, Fujian had annual processing capacities of 80,000 tons of hazardous industrial waste and 20,000 tons of urban sludge.

<sup>2</sup> Co-processing by use of cement kilns: the processing of solid wastes which meet the requirements for entering kilns, whether with or without pre-treatment, by inputting the solid wastes into cement kilns for combustion, taking advantage of the features of cement kilns including high temperature, alkalinity and large capacity, during production of cement and clinker.



截止二零二零年底，本集團共擁有10個協同處置項目。具體項目如下：

As of the end of 2020, the Group had 10 co-processing projects in total. Details of the projects are set out as follows:

項目 Project	類型 Type	年處理能力 (噸) Annual Processing Capacity (tons)	狀態 Status
廣西賓陽 Binyang, Guangxi	城鄉生活垃圾 Municipal solid waste	110,000	運營中 In operation
廣西田陽 Tianyang, Guangxi	城鄉生活垃圾 Municipal solid waste	180,000	運營中 In operation
雲南鳳慶 (註1) Fengqing, Yunnan (note 1)	城鄉生活垃圾 Municipal solid waste	110,000	運營中 In operation
廣西南寧 Nanning, Guangxi	市政污泥 (註2) Urban sludge (note 2)	110,000	運營中 In operation
廣州珠水 (註1) Zhushui, Guangzhou (note 1)	市政污泥 (註2) Urban sludge (note 2)	300,000	運營中 In operation
廣州越堡 (註1) Yuebao, Guangzhou (note 1)	市政污泥 (註2) Urban sludge (note 2)	300,000	運營中 In operation
海南昌江 Changjiang, Hainan	工業危險廢物 Hazardous industrial waste	30,000	運營中 In operation
廣西上思 (註3) Shangsi, Guangxi (note 3)	工業危險廢物 Hazardous industrial waste	100,000	試運營 In trial operation
福建雁石 Yanshi, Fujian	工業危險廢物 Hazardous industrial waste	80,000	建設中 Under construction
	市政污泥 Urban sludge	20,000	建設中 Under construction
雲南彌渡 Midu, Yunnan	城鄉生活垃圾 Municipal solid waste	110,000	試運營 In trial operation

註：

notes:

1. 位於聯營及合營公司的水泥生產基地。

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

2. 南寧項目處置含水率80%的濕污泥，珠水項目處置含水率40%以下的乾污泥，越堡項目應急處置廣州市含水率40%以下的乾污泥。

2. The Nanning project co-processed wet sludge of 80% moisture content. The Zhushui project co-processed dry sludge of below 40% moisture content. The Yuebao project co-processed dry sludge of below 40% moisture content in Guangzhou City on an urgent basis.

3. 上思項目於二零二一年一月開始試運營。

3. Shangsi project commenced trial operation in January 2021.

截至二零一八年、二零一九年及二零二零年十二月三十一日止年度，本集團水泥生產基地（不含聯營及合營公司）的協同處置量數據載列如下：

Data of waste co-processed by the Group's cement production plants (exclusive of our associates and joint ventures) for the years ended 31 December 2018, 2019 and 2020 is set out as follows:

		二零二零年 (噸) 2020 (tons)	二零一九年 (噸) 2019 (tons)	二零一八年 (噸) 2018 (tons)
城鄉生活垃圾	Municipal solid waste	183,100	162,700	166,000
市政污泥 (80%含水率)	Urban sludge (with 80% moisture content)	52,800	56,500	49,300
工業危險廢物	Hazardous industrial waste	6,100	7,200	8,700

此外，二零二零年四月，本集團取得海南昌江建築垃圾資源化利用特許經營許可，建設建築垃圾消納場項目，設計年處置建築垃圾約250,000噸，配套混凝土年產能約300,000立方米，機制砂及碎石年產能約1,150,000噸。項目於二零二零年七月起開工建設，計劃二零二一年底前竣工投產。該項目符合本公司產業一體化的發展戰略，建成後將有助改善當地城市環境，促進節能減排，減少天然資源消耗，推動行業綠色發展。

In addition, in April 2020, the Group obtained a franchise license for the resourceful utilization of construction waste in Changjiang, Hainan to build a construction waste disposal plant project with design annual processing capacity of approximately 250,000 tons of construction waste, and complemented with annual production capacities of approximately 300,000 m<sup>3</sup> of concrete and approximately 1,150,000 tons of manufactured sand and gravel. Project construction had commenced since July 2020, and it is planned to complete construction and commence operation by the end of 2021. The project is consistent with the Company's strategy of industrial integrative development and, upon completion of construction, will help to improve the local urban environment, foster energy saving and emission reduction, reduce the consumption of natural resources, and promote the green development of the industry.

### 資源綜合利用

本集團致力研究和探索工業廢渣在水泥生產中的應用，通過優化生料配方，開展石灰石廢石資源綜合利用項目，實現礦山廢棄資源利用的產業化，促進資源綜合利用及社會廢棄物處置的資源化，對社區環境保護作出積極貢獻。

### Composite Utilization of Resources

The Group is dedicated to research and exploration of the application of industrial waste in cement production. Through optimization of the prescription of raw materials, the project on composite utilization of limestone residue resources was launched to achieve industrialization of utilization of mining waste resources, foster composite utilization of resources and recyclability of social waste processing, which is a proactive contribution of environmental protection to the community.



截至二零一八年、二零一九年及二零二零年十二月三十一日止年度，本集團水泥生產基地的工業廢渣綜合利用量數據載列如下：

Data of industrial waste utilized by the Group's cement production plants for the years ended 31 December 2018, 2019 and 2020 is set out as follows:

	二零二零年 (千噸) 2020 (‘000 tons)	二零一九年 (千噸) 2019 (‘000 tons)	二零一八年 (千噸) 2018 (‘000 tons)
工業廢渣綜合利用量    Quantity of industrial waste utilized	21,010	21,080	21,840

## 7、綠色礦山建設

本集團高度重視礦山治理工作，以生態、環保、安全、資源集約利用為工作主線，確立科學規劃、合理開採、節約資源、促進人與自然和諧發展，以及綠色生態型、環境友好型礦山企業的工作思路，將礦山恢復納入生產運營及長期發展規劃。

針對新項目，本集團必須開展項目環評，並在開發建設過程中盡量避免對生態造成破壞。礦山閉坑前，嚴格按申請辦理採礦許可證時編製並經相關自然資源主管部門批准的《礦山地質環境保護與恢復治理方案》及《土地復墾方案》，對礦山環境進行治理與恢復。

本集團積極落實中國國土資源部發佈的《全國礦產資源規劃》和國家六部門聯合印發的《關於加快建設綠色礦山的實施意見》，根據中國自然資源部發佈的《水泥灰岩綠色礦山建設規範》開展綠色礦山建設。在復綠上，積極引進「生物多樣性」概念，種植多類植物並搭配合理，使礦區綠化與周邊自然環境和景觀相協調。

## 7. GREEN MINE CONSTRUCTION

The Group places strong emphasis on treatment and management of mines. Ecology, environmental protection, safety and intensive utilization of resources are the primary focus of our work. We confirm the work approach of scientific planning, reasonable mining, resources conservation, promotion of harmonious development between human beings and the nature as well as green, ecologically and environmentally friendly mining enterprise. Restoration of mines is included in the production, operation and long-term development plans of the Group.

Environmental assessments must be conducted by the Group for new projects and damages on the ecology in the course of development and construction are avoided to the greatest possible extent. Before closure of a mine, the Group would undergo treatment, management and restoration of the environment at the mine in strict compliance with the “Project of Mining Geo-Environmental Protection and Integrated Renovation” and the “Land Rehabilitation Plans” formulated at the time of applying for the mining permits and approved by relevant competent authorities of natural resources.

The Group proactively implements the “National Mineral Resources Plan” issued by the Ministry of Land and Resources of China and the “Implementation Opinions on Accelerating the Construction of Green Mines” jointly issued by six national departments, and initiated the construction of green mines according to the “Green Mine Construction Specification of Cement Limestone” issued by the Ministry of Natural Resources of China. In terms of ecological restoration, the concept of “biodiversity” has been actively introduced by planting various vegetations with reasonable mix and match for a coordinated landscape of the greengreened mining area and the surrounding natural environment.

截至二零二零年底，本集團完成礦山復綠面積累計共約2,490,600平方米（二零一九年度：約2,228,700平方米）。

As of the end of 2020, the Group had completed ecological restoration of its mines with a cumulative area of approximately 2,490,600 m<sup>2</sup> (approximately 2,228,700 m<sup>2</sup> in 2019).

截至二零二零年底，本集團27個水泥熟料生產基地中共有16個基地的22座礦山被列入省級或自治區級綠色礦山，其中9個基地的10座礦山通過了國家級綠色礦山遴選。

As of the end of 2020, a total of 22 mines at 16 plants among 27 cement and clinker production plants of the Group had been included as provincial-level and AR-level green mines, among which, 10 mines at 9 plants had passed the selection of national-level green mines.



華潤水泥（貴港）有限公司礦山通過國家級綠色礦山遴選  
*The mine of China Resources Cement (Guigang) Limited passed the selection of national-level green mines*

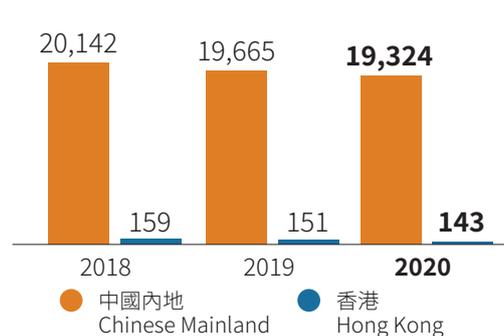
## 員工

本集團視員工為企業生存和發展最寶貴的資源，為員工提供、創造廣闊的發展平台和施展個人才華的機會。

### 1、一般資料

於二零二零年十二月三十一日，本集團共聘用19,467名僱員（於二零一九年十二月三十一日：19,816名），均為全職僱員。按地區及性別劃分的僱員明細載列如下：

#### 按地區劃分的僱員 Employees by geographical region



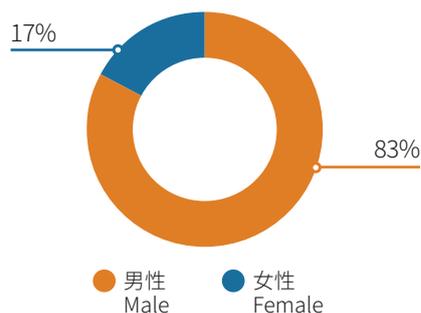
## EMPLOYEES

The Group regards our employees as the most valuable resources for our corporate survival and development. We provide and create a broad career development platform and opportunities for the employees to display their individual talents.

### 1. GENERAL INFORMATION

As at 31 December 2020, the Group employed a total of 19,467 employees (19,816 as at 31 December 2019), all of whom are full-time. A breakdown of our employees by geographical region and gender is set out as follows:

#### 二零二零年按性別劃分的僱員 Employees by gender in 2020



按職能劃分的僱員明細載列如下：

A breakdown of our employees by function is set out as follows:

		於十二月三十一日		
		二零二零年	二零一九年	二零一八年
		As at 31 December		
		2020	2019	2018
管理層	Management	391	402	393
財務、行政及其他	Finance, administration and others	2,498	2,485	2,648
生產人員	Production staff	11,198	11,627	11,753
技術人員	Technical staff	4,517	4,420	4,618
營銷人員	Sales and marketing staff	863	882	889
總計	Total	19,467	19,816	20,301

按年齡劃分的僱員明細載列如下：

A breakdown of our employees by age is set out as follows:

		於十二月三十一日		
		二零二零年	二零一九年	二零一八年
		As at 31 December		
		2020	2019	2018
29歲及以下	29 or below	<b>2,439</b>	3,023	3,648
30至39歲	30 to 39	<b>8,395</b>	8,450	8,635
40至49歲	40 to 49	<b>6,731</b>	6,697	6,524
50歲及以上	50 or above	<b>1,902</b>	1,646	1,494
總計	Total	<b>19,467</b>	19,816	20,301

在391名高中級管理人員中，89%為男性及11%為女性，78%持有大學或以上學位，19%曾接受大專教育，且其平均年齡約為47歲（於二零一九年十二月三十一日分別為402名、89%、11%、76%、21%、46歲）。

Among our 391 senior and middle-level managerial staff, 89% are male and 11% are female, 78% possess university degrees or above, 19% have received post-secondary education and the average age of managerial staff is approximately 47 (402, 89%, 11%, 76%, 21%, 46 respectively as at 31 December 2019).

於二零二零年十二月三十一日，員工整體流失率為5.8%，其中，男性、女性員工的整體流失率分別為5.6%、6.8%；29歲以下、30至39歲、40至49歲、50歲以上員工的整體流失率分別為12.7%、4.6%、3.4%、11.2%；中國內地、香港員工的整體流失率分別為5.7%、17.3%。

As at 31 December 2020, the overall employee turnover rate was 5.8%, among which, the overall turnover rates of male and female employees were 5.6% and 6.8% respectively; the overall turnover rates of employees aged below 29, 30 to 39, 40 to 49 and 50 or above were 12.7%, 4.6%, 3.4% and 11.2% respectively; and the overall turnover rates of the Chinese Mainland and Hong Kong employees were 5.7% and 17.3% respectively.

## 2、 員工權益

本集團嚴格遵守《中華人民共和國勞動法》、《中華人民共和國勞動合同法》、《中華人民共和國社會保險法》、《中華人民共和國婦女權益保護法》、《中華人民共和國未成年人保護法》、《職工帶薪年休假條例》、《工傷保險條例》、《女職工勞動保護特別規定》、《未成年工特殊保護規定》及《禁止使用童工規定》等法律法規，堅持平等僱傭的準則，反對一切因性別、年齡、地域、學歷、宗教、國籍、種族、性取向、殘疾與否等不同而存在的歧視行為，反對強迫勞動、超時工作，反對騷擾虐待，切實維護員工權益，支持最低收入，確保員工在招聘、勞動、薪資、培訓、晉升、補償、休假等方面享受公平待遇。截至二零二零年底，少數民族員工比例為21.1%，殘疾人僱傭人數為42人。

本集團堅持合法用工，反對使用童工或強制勞工，依據《中華人民共和國刑法》、《中華人民共和國勞動法》、《中華人民共和國未成年人保護法》、《未成年工特殊保護規定》及《禁止使用童工規定》，嚴格審查應聘員工年齡，不聘用未滿16歲的未成年人，對年滿16歲但未滿18歲的未成年員工採取特殊勞動保護措施，不以暴力、威脅或者限制人身自由的方法強迫他人勞動，保護其合法權益及健康。員工入職時必須如實申報個人信息，入職後必須按照公司有關制度要求開展工作，如持假證件、謊報個人信息、工作造假等一經發現，本集團將按規章制度相關要求處理，情節嚴重、影響惡劣的或按照相關法律規定處理。

## 2. RIGHTS AND INTERESTS OF EMPLOYEES

The Group is in strict compliance with laws and regulations including the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China, the Social Insurance Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Women's Rights and Interests, the Law of the People's Republic of China on the Protection of Minors, the Regulations on Paid Annual Leave of the Employees, the Regulations on Work-Related Injury Insurances, the Special Rules on the Labour Protection of Female Employees, the Provisions for Special Protection of Under-Aged Labour and the Provisions on Prohibition of Using Child Labour. By adhering to the principle of equal employment, we prohibit all discrimination due to differences in gender, age, territory, education, religion, nationality, race, sexual orientation and disability. We also oppose forced labour, overtime work, harassment and abuse. We effectively protect the rights and interests of employees, support the minimum wage, and ensure that employees enjoy fair entitlements in terms of recruitment, labour, salary, training, promotion, compensation and rest periods. As of the end of 2020, 21.1% of employees were of ethnic minorities and 42 employees had disabilities.

The Group insists on legal use of labour and prohibits employment of child and forced labour. We strictly check the age of applicants, never employ minors aged below 16, adopt special labour protective measures for minor workers aged above 16 but below 18, and never force others to work by means of violence, threats or restrictions on their physical freedom, in order to protect their legal rights, interests and health pursuant to the Criminal Law of the People's Republic of China, the Labour Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Minors, the Provisions for Special Protection of Under-Aged Labour and the Provisions on Prohibition of Using Child Labour. Employees must truthfully provide their personal data at commencement of employment, and must start to work in accordance with the requirements of relevant policies after commencement of employment. Cases of holding forged identification documents or providing false personal data or false work experience, once found, will be handled according to the relevant requirements of the Group's policies. Serious cases with detrimental effects might be handled according to relevant legal requirements.

我們注重員工的多元化，結合崗位要求及人才供需特點確定對應的選拔渠道，招聘渠道包括校園招聘、社會招聘、內部招聘等。招聘過程中一視同仁，基於崗位要求進行招聘，不設置針對性條件。本集團按照勞動合同法要求，遵循公正平等、協商一致的原則，與員工簽訂勞動合同，明確勞資雙方的權利和義務。我們不斷完善及時有效的協商溝通機制和渠道，積極推進民主管理，暢通員工意見反饋渠道，員工可通過員工代表大會、信訪舉報電話、信訪舉報郵箱、OA論壇等多元化渠道實時反饋意見和訴求；在制定涉及員工切身利益相關制度和政策時，廣泛徵求員工意見和建議。

### 3、員工薪酬福利

我們主要根據僱員個人業績表現與工作經驗，結合內部公平性及市場競爭力給予薪酬待遇，其中包括基本工資、績效獎金、津貼及其他員工福利。本集團不斷優化、完善員工薪酬管理機制，以問題為導向，建立工資總額與人效、利潤等指標掛鈎的聯動模式；開展薪酬分析、薪酬外部對標和內部調研，設計科學合理的調薪機制，解決內部公平性問題；強化業績導向和利潤貢獻的獎金分配機制，體現全員效益共享，提升員工積極性，吸引和保留優秀人才和核心崗位人員。

We put strong emphasis on the diversity of our employees. Corresponding selection channels are confirmed having regard to requirements of the roles and features of supply and demand of talents. Our recruitment channels include campus recruitment, social recruitment, internal recruitment, etc. The recruitment process is equal and impartial based on requirements of the roles without any pertinent conditions. Abiding by the principles of fairness, equality and negotiation for unanimous consensus, the Group enters into employment contracts with employees in accordance with the requirements of labour law to specify the rights and obligations of both employers and employees. We continuously improve the timely and effective mechanism and channels for negotiation and communication to actively promote democratic management. Smooth feedback channels are opened for employees to provide real-time feedback opinions and aspirations through diversified channels such as employees' congress, whistle-blowing hotlines, whistle-blowing emails and OA forum. Opinions and suggestions from employees are extensively sought when formulating systems and policies involving vital interests of employees.

### 3. COMPENSATION AND BENEFITS OF EMPLOYEES

We offer our employees remuneration packages mainly on the basis of individual results performance and work experience and also having regard to internal fairness and market competitiveness, including basic wages, performance related bonuses, allowance and other staff benefits. Using issues as guidance, the Group continuously optimizes and improves the staff remuneration management mechanism. An interrelated mode had been established to link the total salaries with indicators such as staff performance and profits. Remuneration analysis, benchmarking with external salaries and internal research studies were done for designing scientific and reasonable remuneration adjustment mechanism to solve the issues of internal fairness. Bonus allocation mechanism had become more results-oriented and contributory from profits in order to reflect the mutual sharing of all-staff benefits, enhance the enthusiasm of employees, attract and retain excellent talents and employees in core roles.



本集團持續優化和落實員工的各項福利待遇，按時足額為內地員工繳納「五險一金」，為香港員工繳納強積金；持續為員工提供有針對性的體檢套餐，繼續為員工及其兩位直系親屬購買商業保險並提高保額標準，做好員工關懷和完善員工保障。我們反對任何形式的強制勞動，在法定年假的基礎上設置公司年假，提供加班調休和值班調休政策保障員工休息。新增彈性工時制，一定程度提高作息的靈活性。

本集團為員工創造廣闊的發展平台和施展個人才華的機會，積極優化高中級管理人員崗位職級體系，優化人才成長路徑；組織優秀高中級管理人員進行跨單位、跨業態、跨區域交流，以擴大專業視野、錘煉商業思維、提升管理技能；高度重視年輕高中級管理人員選拔及培養工作，形成約佔本公司高中級管理人員數量三分之一的優秀年輕高中級管理人員人才庫（139人），並配套設計了正職高中級管理人員培養項目和優秀年輕高中級管理人員培養項目，加速高中級管理人員的成長，推進人才梯隊建設。修訂專業技術類人才任職標準體系，開發了技能類人才任職標準，定期開展任職評價；大力開展技能實操培訓、技術大比武、技能競賽等「卓越工匠」系列項目，積極培養「知識型、技能型、創新型」人才，為推進本集團高質量發展提供人才保障。

The Group continued to optimize and offer various benefits and entitlements to its employees. Timely and full contributions to the “Five Social Insurances and One Housing Fund” and the Mandatory Provident Fund are made for Mainland employees and Hong Kong employees respectively. Targeted body check packages were continuously provided to employees. Commercial insurances were continuously taken out for employees and their two close family members and levels of sums assured were raised, which offered good care for employees and improved protection to employees. We oppose any form of forced labour, implement annual leave on top of statutory annual leave, offer holiday adjustment policies for overtime work and duty shift to secure adequate resting period for employees. Flextime was newly adopted to increase the flexibility for break times to a certain extent.

The Group creates a broad career development platform and opportunities for the employees to display their individual talents. We proactively optimized the system for ranking the roles of senior and middle-level managerial staff to create a better growth path for talents. Cross-unit, cross-business and inter-regional exchanges were organized for excellent senior and middle-level managerial staff to broaden professional horizon, sharpen business acumen and polish managerial skills. Keen attention was paid to select and cultivate young senior and middle-level managerial staff. A talent pool with 139 excellent young senior and middle-level managerial staff was formed, which represented approximately one-third of the Company's senior and middle-level managerial staff. A complete set of cultivation projects for official senior and middle-level managerial staff and cultivation projects for excellent young senior and middle-level managerial staff had been designed to accelerate the growth of senior and middle-level managerial staff and promote the construction of talent ladders. The appointment standard system for professional technical talents was modified to develop the standards for appointment of technical talents, and job appraisal was conducted on a regular basis. We vigorously organized a series of “Excellent Craftsmen” programmes such as vocational practical skill training, technology competitions and talent shows to actively cultivate “knowledgeable, skillful and innovative” talents in order to ensure the secured supply of talents for the Group's high-quality development.

## 4、 員工發展與培訓

人才是企業發展的重要資源，本集團高度重視人才隊伍建設，持續完善人才發展機制，設立專業培訓學院。二零二零年，本集團重構人才培訓體系，進一步釐清培訓項目體系、培訓課程體系、培訓管理體系，將企業戰略發展、組織能力建設和員工成長需求與人才培養工作相結合，保障人才梯隊建設。根據《華潤水泥培訓管理制度（暫行版）》，本集團每年基於公司戰略規劃、業務主題、管理主題等組織培訓，對培訓需求進行調研及分析，從而制定培訓計劃。

在線下培訓方面，分不同層級交付管理類、專業類、技能類培訓，開展各種職業技能競賽、知識競賽，多種形式推進員工培訓工作。通過內部講師進階賦能培訓，打造優秀內部講師和精品課程，提升培訓質量。二零二零年，線下培訓時間約94,000小時，線下培訓員工約1,500人。

在疫情影響下，本集團大力推動員工培訓線上化。推動線上學習資源庫的建設，內部自主開發創新類、通用類、專業類微課280餘門，累計新上線100餘門在線課程，其中疫情防控、復工復產類專題課程5門。推動線上培訓新技術的運用，開展疫情防控類、管理類、網信安全類、商業行為守則類、財務類等專題線上學習63次、線上考試1,482次；開展直播培訓15場、優秀管理案例展播18場。二零二零年，約1,000,000人次登錄華潤大學移動學習應用程式，線上培訓時間約187,000小時，線上培訓員工約19,400人。

## 4. DEVELOPMENT AND TRAINING OF EMPLOYEES

Talent is an important resource for corporate development. The Group puts very strong emphasis on building teams of talents, continuously improves the mechanism for talent development and establishes professional training colleges. The Group restructured the talent training system in 2020 to further define the systems for training projects, training programmes and training management. Corporate strategic development, construction of organizational capability and employees' needs for growth were integrated into talent cultivation to secure the construction of talent ladders. Pursuant to the "Training Management Policy (Interim Version)" of the Company, the Group organized trainings each year based on the Company's strategic planning, business themes and management themes. Research and analysis on training needs would be conducted to formulate training plans.

Regarding offline training, staff training was initiated in multiple formats. Training on management, profession and skills was delivered to different levels of employees. Various vocational talent shows and knowledge competitions were organized. Excellent internal lecturers and elite programmes had been created for enhanced quality on training through the advanced empowerment training of internal lecturers. In 2020, approximately 1,500 participants attended offline training for a total duration of approximately 94,000 hours.

Affected by the epidemic, the Group vigorously launched more online staff training. The construction of online learning resources database was advanced. Over 280 mini-courses by innovation, general and professional categories were self-developed internally and a total of over 100 online courses were newly uploaded, among which, there were 5 special-themed courses on epidemic prevention and control, resumption of operation and production. Online training on the application of new technology was also initiated. 63 special-themed online training sessions on epidemic prevention and control, management, cyber-security, code of business conduct and finance, as well as 1,482 online examinations, were organized. Live streaming webcasts of 15 training sessions and 18 presentations of excellent management cases were launched. In 2020, there were approximately 1.0 million logins on the mobile learning application of China Resources University, the total duration of online training was approximately 187,000 hours, and approximately 19,400 employee participants were in attendance of the online training.



二零二零年，本集團與員工發展相關的線上及線下總培訓時間約281,000小時，按二零二零年受訓人員總數計算，人均受訓時間約14.5小時。其中，男性、女性員工的人均受訓時數分別為14.5小時、14.6小時；管理層、財務、行政及其他、生產人員、技術人員、營銷人員的人均受訓時數分別為40.2小時、18.5小時、7.4小時、28.3小時、11.6小時。

根據本集團內部人力資源系統統計，截至二零二零年十二月三十一日止年度，總體受訓人員百分比為99.5%（二零一九年：97.3%），按性別及職能劃分的受訓百分比明細載列如下：

In 2020, the total duration of online and offline training relating to the Group's staff development was approximately 281,000 hours and the average training duration per employee was approximately 14.5 hours, calculated from the total number of employees trained in 2020. Among which, the average training durations per male and female employees were 14.5 hours and 16.5 hours respectively, and the average training durations per employee from management, finance, administration and others, production staff, technical staff and sales and marketing staff were 40.2 hours, 18.5 hours, 7.4 hours, 28.3 hours and 11.6 hours respectively.

According to the statistics of the Group's internal human resources system, 99.5% of our employees were trained for the year ended 31 December 2020 (97.3% in 2019). Percentage breakdown of employees trained by gender and function are set out as follows:

		於十二月三十一日		
		二零二零年	二零一九年	二零一八年
		2020	2019	2018
		As at 31 December		
男性	Male	99.5%	98.1%	99.3%
女性	Female	99.5%	93.7%	99.2%
管理層	Management	96.9%	97.5%	99.7%
財務、行政及其他	Finance, administration and others	99.9%	97.9%	99.5%
生產人員	Production staff	99.5%	96.8%	99.1%
技術人員	Technical staff	99.6%	99.6%	99.6%
營銷人員	Sales and marketing staff	99.9%	90.5%	99.3%



「未來之星」-2020年華潤集團新員工訓練營水泥營  
"Future Star" – the 2020 cement boot camp of China Resources New Employee Orientation



廣西2020年度「卓越工匠」設備檢修技能大賽  
The 2020 "Excellent Craftsmen" skills competition on inspection and repairs of equipment held in Guangxi

## 5、 員工關愛

本集團致力提升員工工作環境和組織氛圍，開展員工生日會、節日慶祝活動、體育活動、攝影大賽和讀書月活動等有益員工身心健康的集體活動，進一步提高了員工的凝聚力和歸屬感。

本集團一向重視員工關懷，定期走訪慰問困難員工及家屬，在節日送上問候與祝福，了解他們實際困難與需求，關心及跟進其生活改善的情況，體現公司人文關懷的精神。二零二零年，用於關愛及幫助困難病患員工的「華潤水泥感恩之心基金」，共籌得本集團及員工的捐款約人民幣775,000元，資助困難員工共約人民幣1,199,000元。

## 5. CARE FOR EMPLOYEES

The Group is dedicated to enhancing the working environment and team ambience for its employees. Various group activities were organized for better physical and mental wellness of our employees, such as staff birthday parties, festival celebrations, sports activities, photography competitions and reading month activities, which had further enhanced our staff's cohesion and sense of belonging.

The Group has always paid keen attention to caring for employees. We regularly visit employees in need and their families with solicitude, and send regards and blessings to these employees during festivals in order to understand their practical difficulties and needs, care for and follow up with the improvement on their living conditions, and reflect our corporate spirit of humanity and care. In 2020, the Group and its employees donated a total amount of approximately RMB775,000 to the "China Resources Cement Gratitude Fund", which aims at caring for and helping the employees in need and illness. Employees in need were subsidized with a total amount of approximately RMB1,199,000.



「潤豐杯」第四屆籃球賽海南大區決賽  
Finals of the fourth "Runfeng Cup" basketball tournament in the Hainan Region



## 6、 職業健康與安全生產

本集團嚴格遵守《中華人民共和國安全生產法》、《中華人民共和國礦山安全法》及《中華人民共和國職業病防治法》，並制定《華潤水泥管理手冊》「EHS管理篇」及相關制度規範，嚴格執行、監控及持續完善員工職業健康及安全管理體系，維持相關方健康安全政策與員工一致，加大相關方安全管理，積極開展監督檢查工作。本集團的健康安全目標是死亡事故為零、重傷事故為零、確診職業病為零。二零二零年，本集團頒佈執行《EHS事故事件責任追究制度（2020版）》，持續完善EHS責任考核制度，各大區、部門及基地均簽署《EHS承諾書》，並對16個基地進行安全方面的第三方評估。截至二零二零年底，本集團共有EHS專職管理人員280人，其中專職安全管理人員200人（含註冊安全工程師66人）。

## 6. OCCUPATIONAL HEALTH AND PRODUCTION SAFETY

The Group is in strict compliance with the Production Safety Law of the People's Republic of China, the Law of the People's Republic of China on Safety in Mines and the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, and promulgated the "EHS Management Series" in the "Management Manual" and other relevant policies and regulations of the Company for stringent implementation, monitor and continuous improvement on the staff occupational health and safety management system to ensure that the health and safety policies of counterparties remain consistent with those of employees, reinforce safety management on counterparties and proactively launch supervisions and inspections. The Group's health and safety targets are zero fatality, zero serious personal injury and zero confirmed case of occupational disease. In 2020, the Group promulgated and implemented the "Policy for Accountability of EHS Incidents and Events (2020 Edition)". Our EHS accountability appraisal policies were continuously improved. All major operating regions, departments and production plants had entered into the "Letter of EHS Undertaking". Third-party assessments with respect to safety were conducted at 16 plants. As of the end of 2020, the Group had a total of 280 specialized EHS management personnel, among which, 200 were specialized safety management personnel (including 66 registered safety engineers).

自二零二零年初起，新型冠狀病毒疫情蔓延全球，本集團把員工的生命安全和身體健康放在首位，及時、主動了解和學習國家、各地政府的新型冠狀病毒疫情防控政策、制度、要求，積極應對疫情，成立疫情防控領導小組和工作小組，針對性制定並發佈《突發公共衛生事件綜合應急預案（2020版）》、《辦公室疫情防控應急處置方案》、《辦公室人員復產復工安全方案》、《深圳總部疫情防控期間返崗復工隔離實施方案》等防控制度，確保防控工作有序開展。

按當地政府要求，本集團做好重點疫區人員排查、防控工作，持續向員工提供口罩、醫用酒精等防疫物資，定期對辦公室、通勤車等進行嚴格環境衛生消殺，有效防止病毒傳播風險，並要求外省市返崗復工員工執行24天隔離，同時關心愛護隔離員工，提供必要的生活用品等援助和服務，幫助其安心渡過隔離期。

Since the beginning of 2020, the novel coronavirus epidemic had spread globally. The Group placed the lives, safety and physical health of our employees as the first priority, took the initiative to understand and study the policies, systems and requirements of the national and various local governments in a timely manner, and proactively responded to the epidemic by establishing a leading group and a working group on epidemic prevention and control. Targeted policies for prevention and control, including the “Comprehensive Emergency Plan for Public Health Outbreak Incidents (2020 Edition)”, the “Emergency Handling Proposal for Office Epidemic Prevention and Control”, the “Proposal for Resumption of Production and Operation of Office Staff” and the “Proposal of Shenzhen Headquarters for Implementing Quarantine for Resumption of Operation During the Period of Epidemic Prevention and Control”, were formulated and issued to ensure the orderly execution of work in prevention and control.

According to the requirements of the local government, the Group accomplished the work for screening employees from key epidemic areas, as well as epidemic prevention and control. We continuously provided anti-epidemic materials such as masks and alcohol for medical use to employees and strictly disinfected the working environment including offices and commuter vehicles to effectively prevent the risks of virus spreading. Employees who returned to work from other provinces and cities for resumption of operation were required to quarantine for 24 days. At the same time, we cared for quarantined employees by providing all the necessary daily necessities, assistance and services to help them smoothly pass the quarantine period at ease.



為確保滿足復工復產需求，本集團明確防疫人員職責和辦公防疫要求，在深圳總部設定臨時隔離點，做好辦公室復工前檢查，購買疫情防控物資。同時，本集團對人力資源相關政策作出調整，落實「彈性工時」、「輪班制」、「移動打卡」、錯峰用餐等舉措，減少人員滯聚。疫情防控工作小組製作並下發《新型冠狀病毒疫情防控制期返崗安全培訓》材料，以線上線下不同渠道多形式開展防疫知識和返崗安全防控制要求宣傳培訓。疫情防控期間，各水泥生產基地陸續組織落實密系統等檢修安全工作及消防安全專項檢查。復工復產備案完成後，本集團按計劃逐步安排員工返崗，生產經營活動自四月份以來已恢復正常。

### 職業健康

本集團嚴格遵守《中華人民共和國職業病防治法》，針對性制定了《職業健康管理規定》。目前，OHSAS 18000職業健康安全體系覆蓋率100%，員工健康體檢率100%。

本集團各基地結合實際情況繼續深化落實粉塵治理成果，並推動自動化包裝、裝車技改工作。本集團已於多個水泥生產基地完成水泥包裝系統的技術升級，未來將逐步推廣至其他水泥生產基地；鼓勵各基地採用降噪新技術，降低現場噪聲危害，並取得一定成效。

In order to meet the requirements for resumption of operation and production, the Group specified the duties and responsibilities of anti-epidemic staff and anti-epidemic requirements at work, set up temporary quarantine locations for the Shenzhen headquarters, performed checks on the offices prior to resumption of operation, and purchased anti-epidemic materials. At the same time, the Group made adjustments to the human resources policies and executed the measures of “flexitime”, “shift system”, “mobile clock-in” and off-peak meal time to reduce staff gatherings. The working group on epidemic prevention and control prepared and issued the materials of “Safety Training on Return to Work During the Period of Prevention and Control on the Novel Coronavirus Epidemic”, and rolled out promotion and training on anti-epidemic knowledge and safety requirements for return to work through various online and offline channels and in multiple formats. During the period of epidemic prevention and control, each cement production plant successively organized safety works on inspections and repairs of kiln systems and special inspections on fire safety. Upon completion of procedures for resumption of operation and production, the Group arranged for employees to return to work according to the plan. Production and operation activities had returned to normal since April.

### Occupational Health

The Group is in strict compliance with the Law of the People’s Republic of China on the Prevention and Treatment of Occupational Diseases, and had formulated the targeted “Rules of Occupational Health Management”. Currently, the coverage rates of the OHSAS 18000 Occupational Health & Safety Management System and staff body checks are both 100%.

Each plant of the Group persistently deepened the achievements for dust treatment and management and rolled out technological upgrade for automatic packaging and loading upon integrating their actual situation. The technological upgrade for cement packaging had completed at various cement production plants of the Group, and will be gradually promoted to other cement production plants in the future. Each plant is encouraged to adopt new technology for noise reduction, which effectively minimizes the hazard of on-site noise.

本集團圍繞以「職業健康保護 • 我行動」為主題，通過職業衛生研討會、主題報告會、員工座談會、知識講座、知識競賽等系列活動，廣泛宣傳職業病防治法律知識、防治技術和健康工作方式理念，提高各級管理者的法律責任意識和廣大員工的自我防護意識。

## 安全管理

本集團建立安全生產事故隱患排查治理長效機制，持續加強控股、大區、基地等多層次安全隱患排查、監督與治理，防止和減少人身傷害事故，保障員工生命和財產安全。年內，本集團員工因工傷損失工作日數為6,670日<sup>3</sup>。年內，本集團啟動安全生產專項整治三年行動實施方案，制定隱患治理計劃，對隱患持續跟蹤，並將整改完成情況納入年度考核，以提高整體安全管理水平。

本集團致力於安全生產標準化建設，不斷加強基礎管理和創新管理模式，提升總體安全管理水平。截至二零二零年底，本集團28個水泥生產基地（含粉磨站）通過了國家安全生產標準化一級企業現場評審，21家水泥生產基地的石灰石礦山通過了國家安全生產標準化二級企業評審，並在廣西田陽、南寧、貴港、上思、平南，雲南鶴慶和貴州金沙的水泥生產基地開展安全生產標準化一級礦山創建諮詢工作。

Through series of activities around the theme of “Protection of Occupational Health – I Take Action” including occupational health seminars, keynote presentations, staff forums, lectures and knowledge competitions, the Group extensively propagated the legal knowledge for prevention and treatment of occupational diseases, preventive technology and healthy workstyle concepts to arouse the awareness of managers at each level on legal responsibilities and the self-protection awareness of all staff.

## Safety Management

The Group had established long-term effective mechanism for the inspection, treatment and management of latent hazards of production safety incidents. Multi-level inspections, supervision, treatment and management of latent safety hazards were continuously reinforced at headquarters, major operating regions and production plants to prevent and minimize incidents of personal injuries and secure the safety of our employees' lives and properties. During the year, there were 6,670 lost days due to work injury of employees of the Group<sup>3</sup>. During the year, the Group commenced three-year action plan for special rectification of production safety, which formulated plans for treatment and management of latent hazards, continuously followed up on latent hazards and incorporated the status of completing rectifications into annual appraisal for raising the overall standards of safety management.

The Group is committed to production safety standardization and raising the overall standards of safety management through continuous improvement on fundamental management and innovative management models. As of the end of 2020, 28 cement production plants (inclusive of grinding stations) of the Group had passed the on-site assessments as the First-Class Enterprise in National Production Safety Standardization and the limestone mines of 21 cement production plants have passed the assessments as the Second-Class Enterprise in Safety Standardization. Consultancy work for the construction of First-Class Mines of Production Safety Standardization commenced at the cement production plants in Tianyang, Nanning, Guigang, Shangsi and Pingnan of Guangxi, Heqing of Yunnan and Jinsha of Guizhou.

<sup>3</sup> 根據《企業職工傷亡事故分類標準》，一名員工死亡損失工作日以 6,000個工作日計算。

<sup>3</sup> According to the “Classification for Casualty Accidents of Enterprise Staff and Workers”, each one fatality is counted as 6,000 lost days.



本集團開展年度卓越運營管理評價監督考核，先後安排安全環保專家39人次，參加14批次年度卓越運營管理評價，共評價水泥（粉磨站）基地34個，混凝土基地站點55個。本次評價發現，各基地逐步重視安全管理智能化工作，充分利用視頻監控等手段提高安全管理水平，在檢維修管理、堆場管理、粉塵治理等方面有所提升及改善，未來將著力提高相關方安全管理水平。

### 安全檢查

年內，本集團開展EHS調研檢查、專項檢查，共檢查基地34個，包括水泥基地、混凝土基地、裝配式建築及骨料等業務；開展專項監督檢查及EHS管理體系內部審核工作，對廣東大區、廣西大區等單位EHS工作開展情況進行審核檢查，深挖管理問題原因，促進完善管理制度，規範管理流程，加強安全風險管理，推動安全管理提升。全年各大區、基地共開展綜合大檢查1,169次，專項檢查1,067次。

### 安全培訓

本集團積極落實安全培訓工作，結合線上及線下培訓方式，將安全應急演練視頻置入本集團線上學習平台華潤大學學習系統中，鼓勵員工自主學習。二零二零年，本集團員工安全培訓累計約347,000學時，相關方培訓累計約69,000學時；同時創建在線安全測試，於十二月組織全體員工開展「華潤水泥健康安全測試」，有效提高員工安全意識，創造安全氛圍，提升健康安全管理水平。

The Group launched annual evaluation and supervision appraisal for excellent operational management. 39 safety and environmental protection experts were successively arranged to participate in 14 batches of annual appraisal for excellent operational management. A total of 34 cement (grinding stations) plants and 55 concrete batching plants were evaluated. These assessments found that every plants had gradually put strong emphasis on the intelligentization work of safety management and raised the safety management standards by full use of various means such as video surveillance. The management aspects of inspections and repairs, storage yards and dust emissions had been enhanced and improved. We will focus on raising the safety management standards of counterparties in the future.

### Safety Inspections

During the year, the Group conducted EHS research study inspections and special inspections on 34 plants, covering cement plants, concrete plants, the businesses of prefabricated construction and aggregates. Special supervision inspections and internal audit on EHS management system were conducted to review and check the execution of EHS works of units in Guangdong and Guangxi and drill comprehensively on the reasons for management issues, which had enhanced improvement on management systems, standardized management process, strengthened safety risk management and promoted better safety management. Throughout the year, 1,169 large-scale comprehensive inspections and 1,067 special inspections were done in all major operating regions and production plants.

### Safety Training

The Group actively implemented safety training and combined online and offline training methods. Videos of safety emergency drills were uploaded on the Group's online learning platform at the learning system of China Resources University to encourage our staff to self-study. In 2020, the aggregate duration of safety training for the Group's staff amounted to approximately 347,000 hours, whereas that for counterparties amounted to approximately 69,000 hours. At the same time, online safety tests had been created. "Health and Safety Tests" of the Company was organized for all employees in December, which had effectively enhanced the employees' safety awareness, created safety ambience and raised the management standards of health and safety.

## 安全創新

本集團積極推動EHS管理要素全面運用，促進EHS管理系統化，初步形成具有水泥行業特色的實踐方法；推進堆場智能化管理工作，位於廣東羅定和廣西南寧的水泥生產基地物料堆場車輛智能化安全預警系統項目建設完成；逐步推廣可視隔離開關箱，降低安全風險，進一步提高設備本質安全水平；在廣東江門、廣西南寧混凝土生產基地試點推進混凝土車輛、泵車駕駛室智能監控系統項目，進一步加強駕駛安全監管監控，提升本質安全水平；推廣混裝炸藥爆破作業，已有11個基地礦山使用現場混裝炸藥開展爆破作業，有9個礦山持續保持混裝炸藥量使用率達90%以上，提升礦山爆破本質安全水平。

## 安全活動

本集團開展豐富多樣的安全活動，以推動全員參與安全管理，提升企業安全文化，將安全管理理念深入員工、家庭及社會。年內，本集團組織開展應急演練1,228次，18,665人次參加；安全開放日34場次，2,451人次參加；安全警示教育13,816人次，舉辦知識競賽80場次，3,964人次參加；舉辦交通安全活動104場，4,941人參加。

## Safety Innovation

The Group has preliminarily formed a practice method with the features of cement industry to proactively advocate the full application of EHS management elements and encourage systemization of EHS management. We actively promoted the intelligent management of storage yards. The projects of intelligent safety alert systems for vehicles in materials storage yards completed construction at the cement production plants located in Luoding, Guangdong and Nanning, Guangxi. Visible and isolated switch boxes were gradually promoted to reduce safety risks and further increase the intrinsic safety standards of equipment. Concrete production plants in Jiangmen, Guangdong and Nanning, Guangxi had advanced the pilot project for intelligent supervision and control system of concrete vehicles and cabs of pump trucks to further strengthen supervision and control on safe driving and raise the intrinsic safety standards. Blasting of mixed explosives was promoted. The mines of 11 plants had been using on-site mixed explosives to initiate blasting. 9 mines had maintained a consistent utilization rate of mixed explosives at above 90%, which had increased the intrinsic safety standards of mine blasting.

## Safety Activities

The Group organized a wide variety of safety activities to promote all-staff participation in safety management, arouse corporate safety culture and implant the concept of safety management in staff, families and society. During the year, the Group organized 1,228 emergency drills with 18,665 participants in attendance, 34 sessions of safety open days with 2,451 participants in attendance, safety alert education sessions with 13,816 participants in attendance, 80 sessions of knowledge competitions with 3,964 participants in attendance, and 104 sessions of traffic safety activities with 4,941 participants in attendance.





二零二零年華潤水泥(南寧)有限公司廣西礦山爆破事故應急救援演練  
Emergency drill for mine blasting incidents in Guangxi by China Resources Cement (Nanning) Limited in 2020

## 相關方管理

本集團根據《相關方安全管理制度(試行)》加強相關方的安全管理，工程建設項目承包商、設備維護檢修方、交通運輸商、勞務承攬方、供應商、廢棄物處置方、承租方、技術服務方等均納入相關方的範疇。本集團對相關方實行分類分級管理，風險較高的相關方作業實行告知、備案及定期監管機制。合同簽署前，本集團會審查、驗證相關方的安全資質，把安全要求寫入合同，在簽署合同的同時，須簽署安全協議。相關方進廠前，本集團將確定防護用品、安全施工方案、應急救援方案等，進場時所有人員均須參加入廠前安全培訓及場地安全培訓，以保障相關方的安全與健康。

## 客戶

本集團以客戶至上為原則，秉承誠實守信的核心價值觀，嚴守商業道德，竭誠為客戶提供優質服務。通過加強客戶溝通，悉心維護客戶和消費者權益，滿足並超越客戶期望，提升客戶滿意度。

## Management of Counterparties

The Group reinforced safety management on counterparties in accordance with the “Policy for Safety Management on Counterparties (Trial)” of the Company. Contractors of construction projects, service providers for maintenance and repairs of equipment, transportation providers, headhunters, suppliers, waste handlers, tenants and technical service providers are all included in the scope of counterparties. The Group manages counterparties on the basis of classification and levels. Counterparties working at higher risk are subject to the mechanism of advanced notice, filing of cases and regular monitoring. The Group would review and verify the safety qualifications of each counterparty prior to signing a contract with it. Safety requirements would be incorporated in the contract, and the counterparty would have to enter into a safety agreement simultaneously. Before a counterparty may enter our factories, the Group would confirm the protective gears, safety method statement and contingency rescue plans. Upon entering the site, all personnel are required to attend pre-entrance safety training and site safety training to secure the safety and health of the counterparties.

## CUSTOMERS

We wholeheartedly provide quality service to our customers based on the customer-oriented principle, whilst upholding the core values of honesty and trustworthiness and strictly abiding by business ethics. By improving communications with customers and taking the utmost care of the rights and interests of our customers and consumers, we have met or even exceeded our customers' expectations for enhancing our customer satisfaction.



## 1、 質量管理

本集團嚴格遵守《中華人民共和國產品質量法》，另外，《華潤水泥管理手冊》「質量管理篇」對生產流程各細節管理均有清晰及嚴格要求，內容涵蓋原料管理、煤炭管理、生料及熟料管理等質量標準，《華潤水泥助磨劑管理辦法》、《華潤水泥煤炭採樣制樣管理標準》規範進廠原燃材料的質量驗收和使用，化驗室設備維修保養、檢定要求、操作指引、環境配置、檔案紀錄亦一概標準化列入管理手冊。本集團旗下生產基地全部通過ISO 9001：2015質量管理體系認證、ISO 14001：2015環境管理體系認證、OHSAS 18001：2007職業健康安全體系認證，覆蓋率100%。

年內，本集團在福建、雲南、貴州、山西等使用地採煤的水泥生產基地推廣煤炭測氫儀及稱量管理系統，進一步提升煤炭檢測能力，規避煤炭驗收風險；在廣西南寧、合浦，山西長治、福龍水泥生產基地完成標準化實驗室創建，進一步提升了質量控制水平。

## 1. QUALITY MANAGEMENT

The Group is in strict compliance with the Product Quality Law of the People's Republic of China. In addition, pursuant to the "Quality Management Series" in the "Management Manual" of the Company, there are clear and stringent requirements on managing every detail of production process, including the management quality standards of materials, coal, raw materials and clinker. The "Management Measures for Grinding Agents" and the "Management Standards of Coal Sampling and Preparation" of the Company standardize the quality acceptance inspection and use of incoming raw fuel materials. Repairs and maintenance, inspection requirements, operating guidance, environmental configuration and filing records of laboratory equipment are all standardized and covered in the management manual. All production plants of the Group had passed the ISO 9001:2015 Quality Management System Certification, ISO 14001:2015 Environmental Management System Certification and OHSAS 18001:2007 Occupational Health & Safety Management System Certification. Coverage rate was 100%.

During the year, the Group promoted hydrogen gauge and weighing management system of coal at the cement production plants which used coal mining in Fujian, Yunnan, Guizhou and Shanxi, which had further enhanced the capability on coal inspection and minimized the risks of acceptance inspection of coal. The construction of standardized laboratories was completed at the cement production plants in Nanning and Hepu of Guangxi, Changzhi and Fulong of Shanxi, which had further enhanced the standard of quality control.

本集團持續開展質量提升行動，於二零二零年每個季度持續推進水泥、混凝土質量專項抽查，內容涵蓋水泥、混凝土進廠原材料及成品，強化對生產線各環節原材料的驗收和產品質量的管控。二零二零年每季度，對本公司和競品水泥進行水泥性能和質量控制指標進行對比，將評比結果反饋生產相關部門，改進本公司產品的不足之處，提升產品競爭力。本集團與國家水泥質量監督檢驗中心合作，持續推動質量檢測水平不斷提高，在二零二零年國家水泥質量監督檢驗中心組織的水泥化學分析大對比比賽中，廣東惠州水泥生產基地榮獲「砼燦杯」全國第十七次水泥化學分析大對比特等獎，這是惠州基地連續四次榮獲水泥企業特等獎。

本集團已建立覆蓋原材料、過程控制、產品出廠、售後的全生產流程質量控制體系，嚴格按原材料輔助材料標準、工藝標準、半成品標準、產成品標準、包裝標準、檢驗標準等標準組織生產，環環控制投入各工序物料的質量，24小時對熟料、水泥的生產過程進行監督檢測，實行全面質量管理。本集團依托完整有效的質量管理體系對產品質量進行管理和評價，將生產過程及產品的關鍵質量指標納入大區、基地業績考核範疇，以績效管理不斷推動各單位的質量建設，為消費者提供優質產品。本集團還通過開展多項精益改善項目，持續提升質量、工藝等方面的管理水平。

The Group continuously takes action for quality enhancement. Special sample checks on quality of cement and concrete were being performed in every quarter of 2020, covering incoming raw materials and finished products of cement and concrete, to strengthen acceptance inspections of raw materials throughout the process of production lines and management and control of product quality. In every quarter of 2020, comparison on the Company's and competitors' cement was done in terms of cement performance and quality control indicators, and the comparative results were feedbacked to relevant production departments for improving the shortcomings of the Company's products and raising product competitiveness. In cooperation with the National Quality Supervision and Testing Center for Cement, the Group persistently drove for continuous improvement on standards of quality supervision and testing. In the Large-Scale Comparison Competition on Cement Chemical Analysis held by the National Quality Supervision and Testing Center for Cement in 2020, our production plant in Huizhou, Guangdong was awarded the grand prize of "Concrete Glorious Cup" in the seventeenth national large-scale comparison on cement chemical analysis. This was the fourth consecutive time that our Huizhou plant had won the grand prize for cement enterprises.

The Group had established a system for quality control throughout the whole production process covering raw materials, process control, product delivery and after-sales service, which organized production in strict compliance with standards including those for auxiliary materials of raw materials, techniques, semi-finished products, finished products, packaging and inspection. Quality of input materials was controlled in every connected step of production. The production process of clinker and cement was supervised and tested on a 24-hour basis for implementing comprehensive quality management. The Group relies on a comprehensive and effective quality management system to manage and evaluate the quality of our products. Key quality indicators of production process and products had been incorporated into the scope of performance appraisal of the major operating regions and production plants as a continuous drive for better quality across all units through performance management, so as to provide consumers with products of excellent quality. The Group also continuously enhances its management standards in terms of quality and techniques through the implementation of various lean improvement projects.



本集團的質量檢定過程如下：

The Group's process of quality check is as follows:

#### 質量計劃

- 根據市場需求生產水泥產品，合理安排混合材資源。
- 每批進廠原材料檢測。
- 對生產基地原材料資源質量情況進行普查，建立完善的資源檔案。

#### Quality Planning

- To produce cement products according to market demand, and reasonably arrange resources of mineral admixture.
- To test each batch of incoming raw materials.
- To carry out general surveys on the quality of raw material resources at the production plants, and build a comprehensive record of resources.

#### 質量控制

- 質管部24小時對熟料、水泥的生產過程進行監督檢測。
- 生產過程層層把關，實行質量考核。

#### Quality Control

- To supervise and test the production process of clinker and cement on a 24-hour basis by quality management department.
- To monitor each step throughout the production process, and implement quality assessments.

#### 質量保證

- 與國家水泥質量監督檢驗中心合作，對比驗證。
- 每年組織兩次從原料到產品全覆蓋的質量專項抽查，重點排查和治理氯離子、六價鉻、放射性等毒害物質。

#### Quality Assurance

- To conduct comparative tests in cooperation with the National Quality Supervision and Testing Center for Cement.
- To conduct special sample checks on quality with full coverage from raw materials to products twice every year, and focus on investigation, control and management of toxic substances including chloride ions, hexavalent chromium and radioactive substances.

## 質量改進

- 市場調研，為生產提供前端服務。
- 根據客戶使用反饋，不斷改善產品。
- 技術研發中心開展創新研究。

本集團設有質量事故管理標準，對事故作出判定，提供不合格產品處理方案、賠償標準、召回機制及處理流程等。當發現並經確認不合格產品出廠或產品在使用過程中出現嚴重質量問題，須立即通知相關客戶停用或隔離該批次產品，組織對該批次未使用產品進行召回，同時對客戶損失進行確認和賠償；並組織對質量事故進行調查分析，制定整改措施及責任認定，並對整改效果進行確認。

截至二零一八年、二零一九年及二零二零年十二月三十一日止年度，本集團並無已售或已運送產品因安全與健康理由而須回收。

## 2、知識產權

本集團高度重視知識產權保護，積極開展知識產權保護工作，全面貫徹實施本公司《知識產權管理制度》，並有效執行本公司的《專利管理制度》和《品牌維權指引》，不斷提升知識產權運營能力，增強本公司品牌軟實力。

## Quality Improvement

- To conduct market research for providing front-end services for production.
- To continuously improve the products based on customers' feedback after use.
- To roll out innovative research at the Technology Research and Development Centre.

The Group had set up standards for managing quality incidents, which identify and diagnose the incidents, provide solutions to handle substandard products and offer compensation standards, recall mechanism and process flow. Once discovered and confirmed that substandard products have left our factories or there are serious quality issues in the process of using the products, we would immediately inform the relevant customers to stop using or isolate that batch of products, organize recall on that batch of products if unused, confirm and compensate damages to customers. We will also conduct investigation and analysis on the quality incidents, formulate rectification measures and account for responsibilities, and verify the rectification results.

No products sold or shipped were subject to recalls for safety and health reasons for the years ended 31 December 2018, 2019 and 2020.

## 2. INTELLECTUAL PROPERTY RIGHTS

The Group pays keen attention to the protection of intellectual property rights by proactively initiating protection on intellectual property. The "Policy on Management of Intellectual Property Rights" of the Company had been fully and thoroughly implemented. The "Policy on Management of Patents" and the "Guidelines for Brand Protection" of the Company were effectively implemented to continuously enhance the operational strength of intellectual property and strengthen the soft power of the Company's brand.



在商標管理與保護方面，持續推進「潤豐」商標、「王牌工匠」等商標在境內外開展的註冊、確權及保護工作，繼續授權各大區及合資公司使用本公司「潤豐」商標和「金羊」商標，收集本公司重要商標在水泥行業、銷售區域內的使用情況，全面配合行政機關開展商標維權打假行動。二零二零年，各大區未發生由行政機關或司法機關進行查處的假冒偽劣案件及事件。同時，為進一步滿足本公司轉型創新的管理要求，自二零二零年五月啟動新材料業務的商標註冊工作，逐步推進本公司新業務的知識產權建設。

在專利管理、挖掘與創新方面，二零二零年，本集團首次將專利技術納入卓越運營管理評價體系，突出體現本公司專利技術的戰略價值，專利申請數量呈顯著上升趨勢。於二零二零年十二月底，本集團共持有專利證書200項，其中發明專利28項，實用新型專利172項。

### 3、 客戶服務及權益

二零二零年，各大區客服及銷售團隊組織經銷商、下游門店、關鍵使用者等客戶群體展開《水泥基礎知識》、《水泥使用規範》、《品牌知識》、《關鍵用戶座談會》等培訓交流活動，加深客戶對本公司品牌的認知，提高客戶黏性。

In terms of management and protection of trademarks, we launched onshore and offshore work on the registration, right confirmation and protection of trademarks including “Runfeng” and “Wang Pai Gong Jiang”. We continuously authorized all major operating regions and joint ventures to use the Company’s trademarks including “Runfeng” and “Jin Yang”, collected information on the use of the Company’s important trademarks in the cement industry and sales regions, and fully cooperated with the administrative authorities in the defense of our trademark rights and crackdown on counterfeit goods. In 2020, there was no occurrence of counterfeit cases and events in all major operating regions which involved investigation of the administrative authorities or the judiciary. Meanwhile, we had been working on trademark registration for the new materials business since May 2020 to further meet the Company’s management requirements for transformation and innovation and gradually advance the construction of intellectual property of the Company’s new businesses.

Regarding the management, discovery and innovation of patents, in 2020, the Group included patent technology into the appraisal system for excellent operational management for the first time to highlight the strategic value of the Company’s patent technology. The number of patent applications showed a significant upward trend. As of the end of 2020, the Group held 200 patent licenses, including 28 inventions and 172 utility models.

### 3. CUSTOMER SERVICE AND RIGHTS AND INTERESTS OF CUSTOMERS

In 2020, our customer service, sales and marketing teams in all operating regions organized training and sharing activities on “fundamental knowledge on cement”, “user guide of cement”, “brand knowledge” and “forums for key users” for customer groups including dealers, downstream shops and key users to deepen customers’ recognition on the Company’s brand and increase customer stickiness.

為提升客戶服務滿意度，本集團加強客戶回訪，提升服務質量，重點跟蹤產品指標波動、包裝袋質量問題、客戶對產品生產與發運的訴求與建議等，並根據反饋意見制定整改計劃，持續跟進整改進度，推動產品及服務改善。本集團收到客戶投訴後均在24小時內響應，並由大區客服、水泥生產基地質管部、銷售人員等專人負責處理，投訴處理率達100%。

本集團將客戶信息納入公司核心商業秘密範疇，依據本公司的《保密工作管理規定》及《商業秘密管理辦法》等相關管理要求，嚴格保密客戶信息及獨立建檔，由專人負責信息的收集、歸檔、更新，並設定相應的信息查詢和導出權限，確保客戶信息安全。

本集團執行《信息安全管理辦法》等管理標準，並優化更新《網絡安全技術規範》等技術細則，按照藍圖規劃穩步推進防禦能力建設，安全管理和技術防護並重。年內，本集團強化信息系統縱深防禦能力，加強數據傳輸和終端數據保護，並開展網絡安全攻防演練，提升網絡安全風險識別和應急處置能力；開展災難備份數據有效性核驗和恢復演練，保障業務及客戶數據安全可用。年內，本公司未發生網絡安全事件或侵犯客戶隱私權利的案例。

To enhance the customer satisfaction level, the Group strengthened customer visits, enhanced product quality, and focused on following up with the issues on fluctuations of product indicators and quality of packaging bags as well as customers' aspirations and suggestions on production and delivery of products. Rectification plans were formulated based on the feedback comments and progress of rectifications was continuously followed up to promote improvements on products and services. The Group designated staff from the customer service department in our major operating regions, the quality management department of our cement production plants and sales personnel to handle our customers' complaints within 24 hours, and had achieved a handling rate of 100%.

The Group treats customer data as core trade secrets. Customer data is in strict confidence and independent files pursuant to the relevant management requirements including the "Regulations on Managing Confidentiality Work" and the "Management Measures on Trade Secrets" of the Company. Designated staff are in charge of data collection, filing and update. We also set up corresponding access rights for inquiry and export of data to ensure security of customer data.

The Group implemented management standards including the "Measures on Cyber-Security Management", optimized and updated technical specifications including the "Regulations on Cyber-Security Technology" to steadily advance the construction of protection capability according to the blueprint plans with balanced emphasis on security management and technical protection. During the year, the Group strengthened the width and depth in protection capability of information system, reinforced protection on data transmission and terminal data, and conducted drills of cyber-security attack and defense to enhance identification of cyber-security risks and capability on emergency handling. We also rolled out checks on effectiveness and recovery drills of disaster back-up data to secure safe and useable data of business and customers. During the year, there was no occurrence of cyber-security incidents or cases of breach of customers' privacy rights.



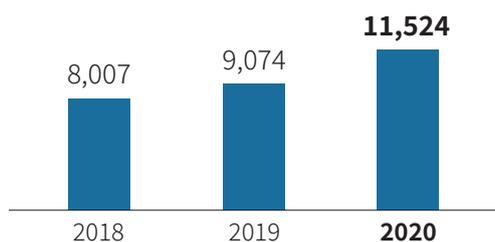
## 供應鏈

本集團建立透明、動態和可追溯的供應鏈，致力於打造高效的採購管理體系，並注重採購合規性管控。

### 1、 供應商一般資料

根據本集團供應商關係管理系統統計，本集團供應商數目及按地區劃分的供應商明細載列如下：

#### 供應商數目 Number of suppliers



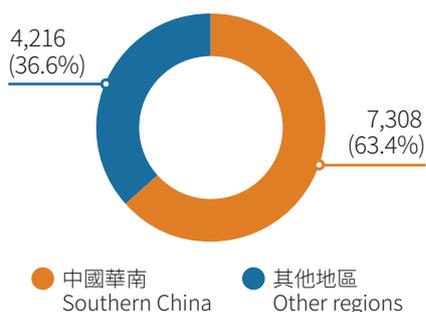
## SUPPLY CHAIN

The Group had established a transparent, dynamic and traceable supply chain. We are dedicated to creating an effective procurement management system and focus on the management and control of procurement compliance.

### 1. GENERAL INFORMATION OF SUPPLIERS

According to the statistics of the Group's supplier relationship management system, the number of suppliers and a breakdown of suppliers by geographical region are set out as follows:

#### 二零二零年按地區劃分的供應商數目 Number of suppliers by geographical region in 2020



## 2、供應鏈責任管理

本集團致力於構建「開放、協作、共贏」的供應鏈生態系統，將誠信合規經營理念融入到企業文化與業務發展中，將商業道德、規範管理、安全環保、員工健康安全、數據隱私等理念推廣至供應鏈上下游企業，攜手共進，共同打造可持續發展能力。通過制定和實行本公司的《採購管理制度》、《供應商管理辦法》、《合同管理制度》，規範招採程序，提升公開招標比例，建立可持續供應商准入及評價指標體系，規範供應商開發、選擇、合作、評價等全過程，針對在本集團所轄基地廠區內有作業行為的供應商，還需嚴格開展《相關方安全預評價》，以確保供需雙方的員工安全。在合同履約過程中，要求供應商簽署並嚴格執行《安全環保協議》、《陽光宣言》，提升企業效益的同時也提高供應商的整體質量。本集團高度重視與合作夥伴培養共同的價值觀，通過加大對供應商開展的國家法律法規、《華潤集團商業行為守則》、採購管理制度等培訓力度，幫助供應商提升合規意識及社會責任，從而增強供應鏈的整體競爭力。

## 2. SUPPLY CHAIN RESPONSIBILITY MANAGEMENT

The Group is devoted to building an “open, collaborative, win-win” supply chain ecosystem. We incorporate concepts of integrity and compliant operation into corporate culture and business development, and promote concepts of business ethics, standardized management, safety and environmental protection, employee’s health and safety, and data privacy to upstream and downstream enterprises along the supply chain to grow hand in hand together and mutually create the capability of sustainable development. Tender procurement process had been standardized and the proportion of public tender increased through formation and implementation of the “Policy on Procurement Management”, the “Measures on Supplier Management” and the “Policy on Agreement Management” of the Company. Sustainable system for indicators of admission and evaluation of suppliers was established to regulate the whole process of development, selection, cooperation and evaluation of suppliers. Suppliers which had operating behaviors in the factories of the Group’s plants were further required to strictly complete the “Safety Pre-Assessment on Counterparties” to ensure the safety of the employees of both parties. During the process of fulfilling the agreements, suppliers were required to sign and strictly implement the “Safety and Environmental Protection Agreement” and the “Sunshine Declaration”, which enhanced corporate profitability whilst improving the overall quality of suppliers. The Group pays keen attention to cultivating shared values with partners through reinforcing suppliers’ training on national laws and regulations, the “China Resources Group Code of Business Conduct” and procurement management policies. These are conducive to arousing the compliance consciousness and social responsibility of our suppliers and strengthen the overall competitiveness of the supply chain.



本集團嚴格遵從公開、公平、公正原則，通過供應商關係管理系統實施採購，實現從准入、合作、評價、退出的全生命週期供應商管理，通過供應商准入、評價體系進行即時、動態管理，持續優化供應商管理制度，規範供應商考察報告，明確關聯企業管理要求，不斷優化供應商結構。本集團以市場和需求為導向，深入開展市場調研，分析採購需求，指導採購決策，選擇資質齊全、環保達標、注重安全管理等符合國家政策要求的合作方；發揮技術與業務的融合作用，推進性價比採購，降低物資消耗成本；踐行公開、競爭性採購理念，持續提高招標佔比，通過核查關聯關係杜絕供應商圍標串標行為，努力打造公平公正的競爭環境，促進供應商良性競爭。

本集團通過加大尋源範圍，挖掘和培育潛在供應商，通過供應商准入不斷充實合格供應商庫；優秀供應商在符合目標成本的前提下優先採購；對待整改供應商及時跟蹤待整改問題，給予相應協助，限期核查整改結果；對不合格的供應商及時移除合格供應商庫，實行動態管理機制；若出現供應商涉及違規或不誠信行為等情形將列入供應商黑名單庫。

In strict compliance with the principles of openness, fairness and impartiality, the Group implemented procurement through the supplier relationship management system, achieved full-lifecycle supplier management on admission, cooperation, evaluation and exit, continued to optimize the supplier management system, standardized supplier examination reports, specified the management requirements for associated enterprises, and persistently optimized the supplier structure through the real-time and dynamic management on admission and evaluation of suppliers. Driven by market forces and demand, the Group conducted in-depth market research and analysis on procurement needs for guidance in the decision making on procurement. We select counterparties which are consistent with the requirements of national policies, have complete qualifications, comply with environmental protection standards, and concern safety management. We unleash the integrative effect of technology and business for promoting procurement of good value for money to reduce the costs of materials consumption. In striving to build a fair and impartial competitive environment and foster healthy competition among suppliers, the Group puts the concept of open and competitive procurement into practice, continuously increases the proportion of tenders, and prevents behaviours of bid rigging and collusive bidding of suppliers by checking associated relationships.

The Group discovers and cultivates potential suppliers through expanding the scope of sourcing. More suppliers are admitted to continuously enrich the eligible supplier database. We would procure from the outstanding suppliers on a priority basis provided that their prices are consistent with our target costs. Suppliers which require rectifications would be provided with our timely follow-up on their weaknesses, offered relevant assistance and examined on their rectification results upon the deadline. Substandard suppliers would be removed from our eligible supplier database in a timely manner in executing the dynamic management mechanism. Suppliers involving violations of regulations or dishonest behaviors will be added to our blacklisted supplier database.

本集團將綠色、安全、發展要求融入供應商甄選，開發和使用節能環保的新材料、新技術；大力宣導綠色採購，推廣使用當地工業廢渣，如銅尾渣、硫鐵渣、轉爐渣、鐵合金爐渣、鉛鋅尾渣、粉煤灰等，替代原礦類資源原材料，在擴大本地化採購的同時，減少工業污染，帶動當地運輸等業務發展，為周邊居民創造新的就業環境，實現共同發展。二零二零年，廣東、廣西工業廢渣類原材料採購量達約9,500,000噸，變廢為寶的同時，大幅減少原礦類資源使用，為保護生態環境作出貢獻，充分展現本集團「綠色環保」的社會責任。

本集團持續帶動供應商成長，不定期舉辦供應商培訓活動，向供應商傳遞環保、安全、健康等方面的社會責任理念，提升供應商的社會責任意識。二零二零年八月，本集團組織開展供應商警示教育培訓，共同營造內外清正廉潔的氛圍，實現良性互動和可持續發展。各區域主要供應商均派遣代表通過線上或線下途徑參與了本次警示教育。

## 公共

### 1、誠信經營及反腐倡廉

本集團嚴格遵守《中華人民共和國刑法》、《中華人民共和國反不正當競爭法》、《中華人民共和國反洗錢法》，任何人不得利用職權索賄、受賄，以不正當手段謀取私利，不得進行勒索、欺詐及洗黑錢活動。

The Group incorporates green, safety and development requirements into supplier selection. Energy-efficient and environmentally-friendly new materials and new technology are developed and used. We vigorously advocate green procurement and promote the use of local industrial waste such as copper slag, pyrite slag, converter slag, iron ferroalloy slag, lead and zinc slag, fly ash, etc., to substitute raw mineral resources as raw materials. Industrial pollution is reduced at the same time of expanding localized procurement, driving for local business development such as transportation and creating new job environment for residents in the vicinity to achieve mutual development. In 2020, the Group's procurement of industrial waste as raw materials in Guangdong and Guangxi reached approximately 9.5 million tons. Use of raw mineral resources is substantially decreased at the same time of turning waste into treasure, which has made contribution to ecological environmental protection and fully showed the Group's social responsibility for "green environmental protection".

The Group persistently drives for the growth of suppliers by organizing training activities for suppliers from time to time to deliver social responsibility concepts in the aspects of environmental protection, safety and health and to enhance the suppliers' awareness on social responsibility. In August 2020, the Group organized alert education training for suppliers to mutually create the ambience for internal and external probity and achieve positive interaction and sustainable development. Representatives delegated by major suppliers from each region participated in this alert education by online or offline means.

## PUBLIC

### 1. INTEGRITY MANAGEMENT AND PROMOTION OF ANTI-CORRUPTION

The Group strictly complies with the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China and the Anti-Money Laundering Law of the People's Republic of China. No person is allowed to take advantage of their position to demand and receive bribery or obtain benefits by improper means. It is also forbidden to blackmail, conduct fraud or launder money.



二零二零年，本集團頒佈《規範處理處分決定執行及懲戒影響期辦法（試行）》、《信訪件和問題線索集中管理指引（試行）》等5項廉政管理制度，進一步規範紀檢工作流程。

本集團致力維護良好的企業管治，持續暢通來電、來訪、網絡等舉報渠道，鼓勵員工及與本集團有往來者（如客戶、承辦商、供應商、債權人、債務人等）對本集團內的不當行為作出舉報，對違紀違規問題嚴肅查處。

本集團一貫重視並持續強化董事及員工誠信建設和廉潔教育工作。二零二零年，本公司共組織2次董事培訓，重點講解反貪污法律、香港廉政公署發佈的《上市公司防貪系統實務指南》、《華潤集團商業行為守則》等內容；錄製放映警示教育宣傳片，召開2次警示教育大會，共1,789名高中級管理人員及敏感崗位人員參加；組織供應商、經銷商等外部客戶開展廉潔誠信宣貫，建立反腐倡廉監督聯動機制；深入開展「廉潔教育送上門」活動237場次，受眾共計7,153人次；開展日常談心談話345人次；組織全體高中級管理人員簽訂《廉潔自律承諾書》並建立400餘份廉潔檔案；出具廉潔意見回覆452人次。

截至二零一八年、二零一九年及二零二零年十二月三十一日止年度，本集團或其僱員並無涉及任何貪污訴訟案件。

In 2020, the Group promulgated 5 probity management policies including the “Measures for Regulating and Handling Decisions and Execution of Punishment and Disciplinary Impact Period (Trial)” and the “Guide for Centralized Management of Whistle-Blowing Letters and Clues to Issues (Trial)” to further regulate the workflow of discipline and inspection.

The Group is committed to maintaining sound corporate governance. We maintain smooth whistle-blowing channels including telephone hotlines, in-person visits and online reporting to encourage our employees and parties who deal with us (including customers, contractors, suppliers, creditors and debtors) to report any misconducts within the Group. All investigations on non-compliance issues are handled seriously.

The Group always places strong emphasis on and continuously strengthens the work for integrity cultivation and probity education of the Directors and employees. In 2020, the Company organized 2 training seminars for the Directors with a focus on educating the anti-corruption laws, the “Anti-Corruption Programme – A Guide for Listed Companies” issued by the Independent Commission Against Corruption of Hong Kong and the “China Resources Group Code of Business Conduct”. Promotional videos of alert education were produced and broadcast. 2 alert education meetings were held, with 1,789 senior and middle-level managerial staff and staff involved in sensitive roles in participation. Education of probity and integrity was also offered to suppliers, dealers and external customers to establish an interactive mechanism for supervising anti-corruption and advocating integrity. 237 sessions of “integrity education delivered to the door” were intensively conducted, reaching 7,153 participants in total. Daily confiding conversations were initiated with 345 staff. All the senior and middle-level managerial staff were organized to sign the “Commitment Letter on Integrity and Self-Discipline”, and over 400 probity files had been set up. 452 responses to opinions on integrity cultivation were issued.

None of the Group or its employees were involved in any corruption litigation cases for the years ended 31 December 2018, 2019 and 2020.

## 2、 社區

本集團根據《中華人民共和國慈善法》、國務院國有資產監督管理委員會關於中央企業履行社會責任、實施對外捐贈相關規定等法律法規和政策文件，以及《慈善公益活動實施細則》，持續推動慈善公益事業，開展慈善公益活動及中央企業扶貧領域監督執紀的審批、操作及問責管理，體現本集團慈善公益事業的社會效益。

招聘錄用過程中，在遵守國家法律法規的基礎上普通崗位優先招錄本集團生產基地所在地附近的本地居民，切實履行央企社會責任。

二零二零年，本集團積極響應全國疫情防控工作部署，向5家單位捐贈疫情防控資金和防疫物資約人民幣840,000元，並組織各單位採購貧困地區滯銷農產品約人民幣950,000元。

此外，本集團積極參與社區公益服務工作，通過捐贈水泥產品，幫助周邊村鎮修橋築路，改造老舊房屋，開展衛生整治活動等方式完善當地基礎設施，並為貧困地區、困難戶捐贈現金或實物解決其實際困難。本集團重視對特殊群體的關愛，定期組織各大區及生產基地（含香港部室及中港混凝土有限公司）慰問走訪周邊村鎮的敬老院、孤寡老人、嚴重智障或殘疾人士及有困難群眾，並非常關注貧困山區兒童的教育與發展，通過捐贈衣物、文具、書本、教學設備、獎助學金、開展助學公益活動，協助創造良好學習環境及氛圍。二零二零年對外捐贈數據詳載於董事局報告內慈善捐助一節。

## 2. COMMUNITY

The Group continuously promotes charitable community business according to the Charity Law of the People's Republic of China, relevant laws, regulations and policy documents issued by the State-owned Assets Supervision and the Administration Commission of the State Council regarding fulfillment of social responsibilities of state-owned enterprises and implementation of external donations, as well as the "Enforcement Regulations for Charitable Community Activities". Review, implementation and accountability management were conducted on charitable community activities, supervision and discipline of state-owned enterprise in the aspects of poverty alleviation to reflect the social benefits of the Group's charitable community business.

During the recruitment and hiring process, local residents in the vicinity of the Group's production plants will be given preference in recruitment for ordinary posts, subject to compliance with national laws and regulations, in order to fulfil the social responsibility of a state-owned enterprise.

In 2020, in proactive response to the national deployment of epidemic prevention and control, the Group donated anti-epidemic funds and anti-epidemic materials amounting to approximately RMB840,000 to 5 units, and organized all units to purchase unmarketable agricultural products amounting to approximately RMB950,000 in underprivileged regions.

Besides, the Group proactively participates in community service work. Through donations of cement products, we help neighbouring towns and villages in the construction of roads, repairs of bridges and improvement of local infrastructure through renovation and upgrade of old houses and launch of hygiene remediation activities. We also make donations in cash or in kind to underprivileged regions and families in need to solve their practical difficulties. The Group pays keen attention to caring for special groups and regularly organizes all major operating regions and production plants (including departments in Hong Kong and Redland Concrete Limited) to visit and express solicitude to elderly care institutions, the elderly without family, people with serious intellectual disabilities or the disabled, and the general public in need in the neighbouring towns and villages. We are very concerned regarding education and development for children in the underprivileged mountainous regions and help to create a better learning environment and ambience through donations of clothes, stationery, books, teaching equipment, scholarships, study grants and launch of charitable subsidized schooling. Data of external donations in 2020 is set out in the charitable donations section of the Report of the Directors.





華潤水泥(龍岩)有限公司二零二零年端午節敬老慰問活動  
China Resources Cement (Longyan) Limited expressed warm regards and solitude to the elderly during the Dragon Boat Festival in 2020



華潤水泥(武宣)有限公司安全開放日  
Safety open day of China Resources Cement (Wuxuan) Limited

附錄一：關鍵績效指標

APPENDIX 1: KEY PERFORMANCE INDICATORS (“KPI”)

		二零二零年 2020	二零一九年 2019	二零一八年 2018
<b>環境指標</b>	<b>Environmental Indicators</b>			
氮氧化物排放量 (噸) (註1)	Emission of nitrogen oxides (tons) (note 1)	<b>36,194</b>	37,584	39,822
氮氧化物排放密度 (公斤／噸熟料產量) (註1)	Emission intensity of nitrogen oxides (kg per ton of clinker produced) (note 1)	<b>0.5146</b>	0.5439	0.5715
氮氧化物平均排放濃度 (毫克／立方米) (註1)	Average emission concentration of nitrogen oxides (mg/m <sup>3</sup> ) (note 1)	<b>197</b>	240	254
二氧化硫排放量 (噸) (註1)	Emission of sulphur dioxide (tons) (note 1)	<b>1,646</b>	1,824	2,352
二氧化硫排放密度 (公斤／噸熟料產量) (註1)	Emission intensity of sulphur dioxide (kg per ton of clinker produced) (note 1)	<b>0.0234</b>	0.0264	0.0338
二氧化硫平均排放濃度 (毫克／立方米) (註1)	Average emission concentration of sulphur dioxide (mg/m <sup>3</sup> ) (note 1)	<b>10</b>	13	18
顆粒物排放量 (噸) (註1)	Emission of particulate matters (tons) (note 1)	<b>1,777</b>	2,083	2,361
顆粒物排放密度 (公斤／噸熟料產量) (註1)	Emission intensity of particulate matters (kg per ton of clinker produced) (note 1)	<b>0.0253</b>	0.0301	0.0339
顆粒物平均排放濃度 (毫克／立方米) (註1)	Average emission concentration of particulate matters (mg/m <sup>3</sup> ) (note 1)	<b>7</b>	9	11
溫室氣體排放量 (千噸二氧化碳當量) (註1)	Emission of greenhouse gases (‘000 tons of carbon dioxide equivalent) (note 1)	<b>59,605</b>	58,710	59,710
溫室氣體排放密度 (噸二氧化碳當量／ 噸熟料產量) (註1)	Emission intensity of greenhouse gases (tons of carbon dioxide equivalent per ton of clinker produced) (note 1)	<b>0.8472</b>	0.8497	0.8569
耗電量 (百萬千瓦時) (註2)	Electricity consumption (million kwh) (note 2)	<b>6,518</b>	6,426	6,500
水泥及熟料耗電量 (百萬千瓦時) (註2)	Electricity consumption of cement and clinker (million kwh) (note 2)	<b>6,489</b>	6,398	6,473
混凝土耗電量 (百萬千瓦時) (註2)	Electricity consumption of concrete (million kwh) (note 2)	<b>29</b>	28	27
噸水泥電耗 (千瓦時)	Electricity consumption per ton of cement (kwh)	<b>72.2</b>	72.9	73.0
每立方米混凝土電耗 (千瓦時)	Electricity consumption per m <sup>3</sup> of concrete (kwh)	<b>2.2</b>	2.1	2.0
耗煤量 (千噸)	Coal consumption (‘000 tons)	<b>9,943</b>	10,033	10,254
噸熟料單位煤耗 (公斤)	Unit coal consumption per ton of clinker (kg)	<b>141.3</b>	145.2	147.2
噸熟料標準煤耗 (公斤)	Standard coal consumption per ton of clinker (kg)	<b>104.4</b>	105.5	106.5
綜合能源消費量 (千噸標煤)	Consolidated energy consumption (‘000 tons of standard coal)	<b>7,917</b>	7,915	8,035



		二零二零年 2020	二零一九年 2019	二零一八年 2018
萬元產值可比價綜合能耗 (噸標煤/萬元人民幣)	Consolidated energy consumption per RMB10,000 output (ton standard coal per RMB10,000)	<b>2.60</b>	2.65	2.73
萬元增加值可比價綜合能耗 (噸標煤/萬元人民幣)	Consolidated energy consumption per RMB10,000 value addition (ton standard coal per RMB10,000)	<b>5.58</b>	5.85	6.14
包裝材料消耗量(噸) (註3)	Consumption of packaging materials (tons) (note 3)	<b>60,276</b>	63,765	70,330
包裝材料消耗密度 (公斤/噸袋裝水泥產量) (註3)	Consumption intensity of packaging materials (kg per ton of cement packed in bag) (note 3)	<b>2.08</b>	2.17	2.19
工業廢渣綜合利用量 (千噸) (註4)	Industrial waste utilized ('000 tons) (note 4)	<b>21,010</b>	21,080	21,840
城鄉生活垃圾協同處置量(噸)	Municipal solid waste co-processed (tons)	<b>183,100</b>	162,700	166,000
市政污泥協同處置量(噸) (註5)	Urban sludge co-processed (tons) (note 5)	<b>52,800</b>	56,500	49,300
工業危險廢物協同處置量(噸)	Hazardous industrial waste co-processed (tons)	<b>6,100</b>	7,200	8,700
節能減排技術改造投入 (百萬元人民幣)	Investment in technological upgrade for energy saving and emission reduction (RMB million)	<b>123</b>	120	94
環保總投入(百萬元人民幣)	Total investment in environmental protection (RMB million)	<b>441</b>	443	393
<b>社會指標</b>	<b>Social Indicators</b>			
僱員總數(人)	Total number of employees	<b>19,467</b>	19,816	20,301
中國內地僱員(人)	Number of employees from the Chinese Mainland	<b>19,324</b>	19,665	20,142
香港僱員(人)	Number of employees from Hong Kong	<b>143</b>	151	159
男性僱員(人)	Number of male employees	<b>16,187</b>	16,474	16,863
女性僱員(人)	Number of female employees	<b>3,280</b>	3,342	3,438
管理層(人)	Number of employees from management	<b>391</b>	402	393
財務、行政及其他(人)	Number of employees from finance, administration and others	<b>2,498</b>	2,485	2,648
生產人員(人)	Number of production staff	<b>11,198</b>	11,627	11,753
技術人員(人)	Number of technical staff	<b>4,517</b>	4,420	4,618
營銷人員(人)	Number of sales and marketing staff	<b>863</b>	882	889
29歲及以下僱員(人)	Number of employees aged below 29	<b>2,439</b>	3,023	3,648
30至39歲僱員(人)	Number of employees aged 30 to 39	<b>8,395</b>	8,450	8,635
40至49歲僱員(人)	Number of employees aged 40 to 49	<b>6,731</b>	6,697	6,524
50歲及以上僱員(人)	Number of employees aged 50 or above	<b>1,902</b>	1,646	1,494

		二零二零年 2020	二零一九年 2019	二零一八年 2018
總體受訓人員百分比	Percentage of employees trained	<b>99.5%</b>	97.3%	99.3%
男性受訓人員百分比	Percentage of male employees trained	<b>99.5%</b>	98.1%	99.3%
女性受訓人員百分比	Percentage of female employees trained	<b>99.5%</b>	93.7%	99.2%
管理層受訓人員百分比	Percentage of employees from management trained (%)	<b>96.9%</b>	97.5%	99.7%
財務、行政及其他受訓人員百分比	Percentage of employees from finance, administration and others trained	<b>99.9%</b>	97.9%	99.5%
生產人員受訓人員百分比	Percentage of production staff trained	<b>99.5%</b>	96.8%	99.1%
技術人員受訓人員百分比	Percentage of technical staff trained	<b>99.6%</b>	99.6%	99.6%
營銷人員受訓人員百分比	Percentage of sales and marketing staff trained	<b>99.9%</b>	90.5%	99.3%
供應商總數(個)	Total number of suppliers	<b>11,524</b>	9,074	8,007
員工工傷事故發生數(人)	Number of staff injured at work	<b>13</b>	13	9
一般及以上事故發生數(宗)	Number of incidents of general or above level	<b>1</b>	2	3
事故死亡數(人)	Fatalities	<b>1</b>	2	1
事故員工千人死亡率(‰)	Fatality rate (‰)	<b>0.051</b>	0.099	0.049
安全培訓人次	Number of participants in safety training	<b>257,902</b>	245,398	218,716
安全培訓覆蓋率(%)	Safety training coverage rate (%)	<b>100</b>	100	100
安全應急演練次數	Number of safety emergency drills	<b>1,228</b>	1,135	991
專職安全管理人員數量(人)	Number of specialized safety management personnel	<b>200</b>	192	212
安全管理人員持證人數(人)	Number of licensed safety management personnel	<b>1,943</b>	1,277	1,064
安全生產投入(百萬元人民幣)	Investment in production safety (RMB million)	<b>152</b>	156	146

註：

Notes:

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|---|---|
| <ol style="list-style-type: none"> <li>1. 統計範圍為本集團的水泥生產基地的主要排放口。</li> <li>2. 統計範圍為本集團用於生產的外購電力。</li> <li>3. 包裝材料指用於袋裝水泥的包裝。</li> <li>4. 工業廢渣統計範圍包括煤矸石、廢石、脫硫石膏、粉煤灰、高爐礦渣等。</li> <li>5. 折算為80%含水率濕污泥。</li> </ol> | <ol style="list-style-type: none"> <li>1. Scope of statistics includes the major discharge outlets of the Group's cement production plants.</li> <li>2. Scope of statistics includes the power purchased externally for production.</li> <li>3. Packaging materials refer to the packaging for cement sold in bags.</li> <li>4. Scope of statistics of industrial waste includes coal gangue, stone residue, de-sulphur gypsum, fly ash and blast furnace slag.</li> <li>5. 80% moisture content for wet sludge.</li> </ol> |
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附錄二：環境、社會及管治指  
標索引

APPENDIX 2: REFERENCE TABLE OF  
ENVIRONMENTAL, SOCIAL AND GOVERNANCE  
INDICATORS

層面 Aspect	內容 Details	頁碼 Page
<b>A 環境</b> A Environmental		
<b>A1. 排放物</b> <b>A1. Emissions</b>	<p>一般披露 General Disclosure 有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p>	66-72, 75
	<p>關鍵績效指標A1.1 排放物種類及相關排放數據。 KPI A1.1 The types of emissions and respective emissions data.</p>	70, 115
	<p>關鍵績效指標A1.2 直接(範圍1)及能源間接(範圍2)溫室氣體排放量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。 KPI A1.2 Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p>	72, 115
	<p>關鍵績效指標A1.3 所產生有害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。 KPI A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p>	75
	<p>關鍵績效指標A1.4 所產生無害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。 KPI A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</p>	75
	<p>關鍵績效指標A1.5 描述所訂立的排放量目標及為達到這些目標所採取的步驟。 KPI A1.5 Description of emission target(s) set and steps taken to achieve them.</p>	67-69, 71-72
	<p>關鍵績效指標A1.6 描述處理有害及無害廢棄物的方法，及描述所訂立的減廢目標及為達到這些目標所採取的步驟。 KPI A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.</p>	75

層面 Aspect	內容 Details	頁碼 Page
<b>A 環境</b>		
<b>A Environmental</b>		
<b>A2. 資源使用</b> <b>A2. Use of Resources</b>	一般披露 General Disclosure 有效使用資源 (包括能源、水及其他原材料) 的政策。 Policies on the efficient use of resources, including energy, water and other raw materials.	72-75
關鍵績效指標A2.1 KPI A2.1	按類型劃分的直接及/或間接能源 (如電、氣或油) 總耗量 (以千個千瓦時計算) 及密度 (如以每產量單位、每項設施計算)。 Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	115-116
關鍵績效指標A2.2 KPI A2.2	總耗水量及密度 (如以每產量單位、每項設施計算)。 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	75
關鍵績效指標A2.3 KPI A2.3	描述所訂立的能源使用效益目標及為達到這些目標所採取的步驟。 Description of energy use efficiency target(s) set and steps taken to achieve them.	72-74
關鍵績效指標A2.4 KPI A2.4	描述求取適用水源上可有任何問題, 以及所訂立的用水效益目標及為達到這些目標所採取的步驟。 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	74
關鍵績效指標A2.5 KPI A2.5	製成品所用包裝材料的總量 (以噸計算) 及 (如適用) 每生產單位佔量。 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	116
<b>A3. 環境及天然資源</b> <b>A3. The Environment and Natural Resources</b>	一般披露 General Disclosure 減低發行人對環境及天然資源造成重大影響的政策。 Policies on minimising the issuer's significant impacts on the environment and natural resources.	79-83
關鍵績效指標A3.1 KPI A3.1	描述業務活動對環境及天然資源的重大影響及已採取管理有關影響的行動。 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	79-83
<b>A4. 氣候變化</b> <b>A4. Climate Change</b>	一般披露 General Disclosure 識別及應對已經及可能會對發行人產生影響的重大氣候相關事宜的政策。 Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	76-78
關鍵績效指標A4.1 KPI A4.1	描述已經及可能會對發行人產生影響的重大氣候相關事宜, 及應對行動。 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	76-78



層面 Aspect	內容 Details	頁碼 Page
<b>B 社會</b> <b>B Social</b>		
I、僱傭及勞工常規 I. Employment and Labour Practices		
<b>B1. 僱傭</b> <b>B1. Employment</b>	<p>一般披露 General Disclosure</p> <p>有關薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.</p>	84-88, 92-93
	<p>關鍵績效指標B1.1 按性別、僱傭類型 (如全職或兼職)、年齡組別及地區劃分的僱員總數。 KPI B1.1 Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.</p>	84-85, 116
	<p>關鍵績效指標B1.2 按性別、年齡組別及地區劃分的僱員流失比率。 KPI B1.2 Employee turnover rate by gender, age group and geographical region.</p>	85
<b>B2. 健康與安全</b> <b>B2. Health and Safety</b>	<p>一般披露 General Disclosure</p> <p>有關提供安全工作環境及保障僱員避免職業性危害的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.</p>	94-101
	<p>關鍵績效指標B2.1 過去三年 (包括匯報年度) 每年因工亡故的人數及比率。 KPI B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.</p>	117
	<p>關鍵績效指標B2.2 因工傷損失工作日數。 KPI B2.2 Lost days due to work injury.</p>	97
	<p>關鍵績效指標B2.3 描述所採納的職業健康與安全措施，以及相關執行及監察方法。 KPI B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.</p>	94-101

層面 Aspect	內容 Details	頁碼 Page
<b>B 社會</b> <b>B Social</b>		
<i>I、僱傭及勞工常規</i> <i>I. Employment and Labour Practices</i>		
<b>B3. 發展及培訓</b> <b>B3. Development and Training</b>	一般披露 General Disclosure 有關提升僱員履行工作職責的知識及技能的政策。描述培訓活動。 Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	89-91
	關鍵績效指標B3.1 按性別及僱員類別(如高級管理層、中級管理層)劃分的受訓僱員百分比。 KPI B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	90, 117
	關鍵績效指標B3.2 按性別及僱員類別劃分,每名僱員完成受訓的平均時數。 KPI B3.2 The average training hours completed per employee by gender and employee category.	90
<b>B4. 勞工準則</b> <b>B4. Labour Standards</b>	一般披露 General Disclosure 有關防止童工或強制勞工的: Information on: (a) 政策;及 the policies; and (b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	86, 88
	關鍵績效指標B4.1 描述檢討招聘慣例的措施以避免童工及強制勞工。 KPI B4.1 Description of measures to review employment practices to avoid child and forced labour.	86, 88
	關鍵績效指標B4.2 描述在發現違規情況時消除有關情況所採取的步驟。 KPI B4.2 Description of steps taken to eliminate such practices when discovered.	86



層面 Aspect	內容 Details	頁碼 Page
<b>B 社會</b> <b>B Social</b>		
<i>II、營運慣例</i> <i>II. Operating Practices</i>		
<b>B5. 供應鏈管理</b> <b>B5. Supply Chain Management</b>	一般披露 General Disclosure 管理供應鏈的環境及社會風險政策。 Policies on managing environmental and social risks of the supply chain.	108-111
	關鍵績效指標B5.1 KPI B5.1 按地區劃分的供應商數目。 Number of suppliers by geographical region.	108
	關鍵績效指標B5.2 KPI B5.2 描述有關聘用供應商的慣例，向其執行有關慣例的供應商數目，以及相關執行及監察方法。 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	109-111
	關鍵績效指標B5.3 KPI B5.3 描述有關識別供應鏈每個環節的環境及社會風險的慣例，以及相關執行及監察方法。 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	109-111
	關鍵績效指標B5.4 KPI B5.4 描述在揀選供應商時促使多用環保產品及服務的慣例，以及相關執行及監察方法。 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	109-111
<b>B6. 產品責任</b> <b>B6. Product Responsibility</b>	一般披露 General Disclosure 有關所提供產品和服務的健康與安全、廣告、標籤及私隱事宜以及補救方法的： Information on: (a) 政策；及 the policies; and (b) 遵守對發行人有重大影響的相關法律及規例的資料。 compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	101-107
	關鍵績效指標B6.1 KPI B6.1 已售或已運送產品總數中因安全與健康理由而須回收的百分比。 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	105
	關鍵績效指標B6.2 KPI B6.2 接獲關於產品及服務的投訴數目以及應對方法。 Number of products and service related complaints received and how they are dealt with.	106-107
	關鍵績效指標B6.3 KPI B6.3 描述與維護及保障知識產權有關的慣例。 Description of practices relating to observing and protecting intellectual property rights.	105-106
	關鍵績效指標B6.4 KPI B6.4 描述質量檢定過程及產品回收程序。 Description of quality assurance process and recall procedures.	102-105
	關鍵績效指標B6.5 KPI B6.5 描述消費者資料保障及私隱政策，以及相關執行及監察方法。 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	107

層面 Aspect	內容 Details	頁碼 Page
<b>B 社會</b> <b>B Social</b>		
<i>II、營運慣例</i> <i>II. Operating Practices</i>		
<b>B7. 反貪污</b> <b>B7. Anti-corruption</b>	<p>一般披露 General Disclosure</p> <p>有關防止賄賂、勒索、欺詐及洗黑錢的： Information on:</p> <p>(a) 政策；及 the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer 遵守對發行人有重大影響的相關法律及規例的資料。 relating to bribery, extortion, fraud and money laundering.</p>	111-112
關鍵績效指標B7.1 KPI B7.1	於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果。 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	112
關鍵績效指標B7.2 KPI B7.2	描述防範措施及舉報程序，以及相關執行及監察方法。 Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	112
關鍵績效指標B7.3 KPI B7.3	描述向董事及員工提供的反貪污培訓。 Description of anti-corruption training provided to directors and staff.	112
<i>III、社區</i> <i>III. Community</i>		
<b>B8. 社區投資</b> <b>B8. Community Investment</b>	<p>一般披露 General Disclosure</p> <p>有關以社區參與來了解營運所在社區需要和確保其業務活動會考慮社區利益的政策。 Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.</p>	113
關鍵績效指標B8.1 KPI B8.1	專注貢獻範疇 (如教育、環境事宜、勞工需求、健康、文化、體育)。 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	113-114
關鍵績效指標B8.2 KPI B8.2	在專注範疇所動用資源 (如金錢或時間)。 Resources contributed (e.g. money or time) to the focus area.	113

