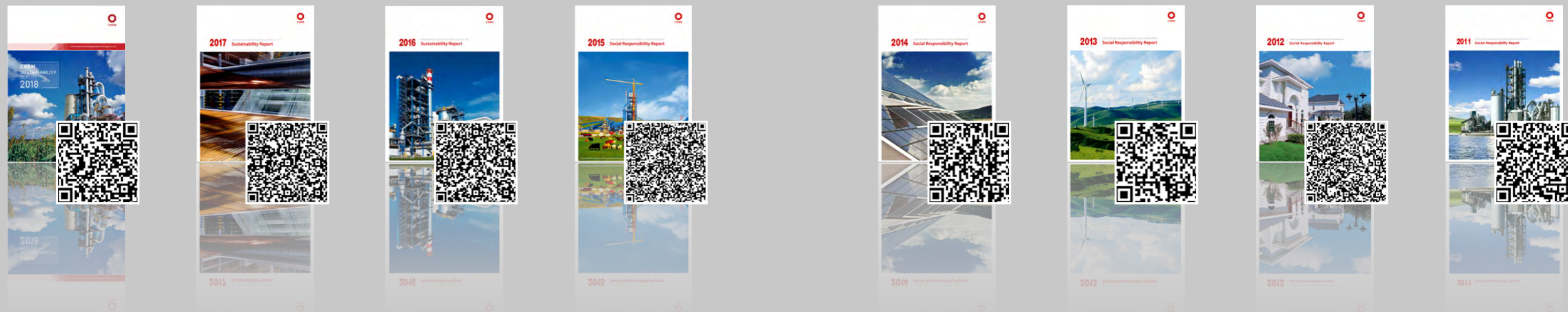


CNBM
SUSTAINABILITY
REPORT
2018



Report norms

This is the tenth sustainability report released by China National Building Material Group Co., LTD (hereinafter referred to as “CNBM”), truly reflecting CNBM’s sustainability and social responsibility performance.



Entities covered by the Report

All wholly-owned or controlled (including absolutely and relatively controlled) members of CNBM. For brevity, the terms “CNBM”, the “Group” and “we” are used in the Report to refer to China National Building Material Group Co., Ltd. (unless otherwise specified in the Report).

Period covered by the Report

January 1st to December 31st, 2018, some contents beyond

Reporting cycle

This report is an annual report.

Basis for preparation

Corporate Social Responsibility Reports in China for Nonmetal Mineral Products (CASS-CSR 4.0) issued by the Chinese Academy of Social Sciences
Guidelines for the Preparation of Corporate Social Responsibility Reports (GB/T36001-2015) issued by Standardization Administration of China
Guidelines for Sustainable

Development Reports (GRI 4.0, GRI-standards) by Global Reporting Initiative (GRI)
Social Responsibility Guide (ISO26000) issued by the International Organization for Standardization (ISO)
UN Sustainable Development Goals (SDGs) 2030

Data sources

All the information and data used herein comes from the Headquarters and member companies of CNBM. Notes have been made in the Report to indicate information from external references. Unless otherwise stated, all monetary amounts are expressed in RMB.

Quality assurance

We strive to ensure the authenticity, integrity and balance of the contents in the Report, and make breakthroughs in innovation and readability. Moreover, there are no false records, misleading statements or major omissions in this Report.

Report availability

This Report has printed and electronic versions and is mainly released to stakeholders and the public in the form of a PDF electronic document. You can request the print version via the contact information on the cover or log onto <http://www.cnbm.com.cn/EN/> to download the electronic version.



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Market Performance

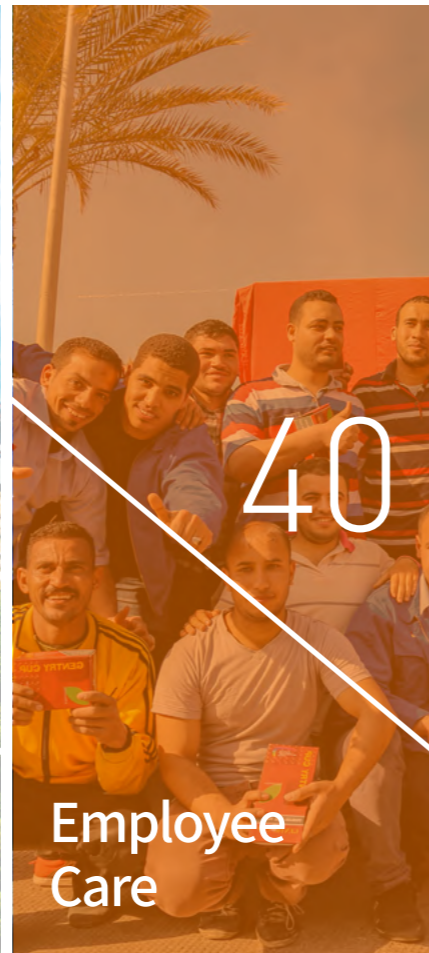
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Chairman's statement

Dreams are right ahead!



History always tells people the skills of drawing wisdom and moving forward in some special years. Looking back at our past road, comparing other people's roads and looking ahead, it can make us get a full picture where we come from and where we go.

In 1978, the spring thunder of reform and opening up awakened the Wonderful Land of China and stirred up a vibrant revival of a nation, which not only profoundly changed China, but also deeply affected the world. Also in this year, Deng Xiaoping, the chief designer of reform and opening-up, visited CNBM and gave an important instruction on "constructing a factory for new-type building materials as soon as possible". CNBM was born from opening up and technology introduction, thriving in the spring of reform.

Forty years witnessed the magnificent historical voyage and the running tide of the times. We are always striving to build a world-class building materials enterprise with global competitiveness and an investment group in the new material industry. As we know that spring is bright and autumn is fruitful. We have been running one after another, across many ditches and ridges, and over many rapids and dangerous beaches. Along the way, we have not only endured great hardships, but also enjoyed dense willow trees and bright flowers; experiencing both the vigorous movement of drastic reform and the perplexity of walking on thin ice, we have written magnificent poems with our hands from introduction to "going global", from enterprise reform and listing to industry restructuring, from following innovation to leading

innovation, from Fortune 500 to a world-class enterprise!

For forty years, we have watered a seedling with youth and now it has grown into a giant tree.

Adhering to the philosophy of opening roads on every hill and bridging on each river, we have been continuously traveling through mountains and rivers, and have created a modern management road with the CNBM characteristics. Enterprises affiliated to the Group were the earliest to be restructured and listed in the industry, and also the earliest to be listed overseas; set up high-tech enterprises to achieve curve overtaking; implemented restructuring of China National Building Materials Group Corporation and China National Materials Group Corporation

to change the development process of the whole building materials industry, affecting the pattern of the world building materials industry. At one time, when we were under great pressure to restructure South Cement, Comrade Xi Jinping, then Secretary of the Shanghai Municipal Party Committee, sent us special letter of congratulation and personally encouraged us. Today, we can proudly report to General Secretary that in 2018, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we accomplished our business tasks well by striving for organizational strength with rock-solid confidence, vigor and perseverance in accordance with the principle of "steady growth, restructuring, reform and strengthening party building", accelerating the implementation of the "cement+" strategy, further deepening the "tripartite" business pattern of cement, new materials and engineering technology services. The Group achieved 348 billion yuan in operating income, 20.66 billion yuan in profits and 76.8 billion yuan in social contributions, creating the best operating performance in history. Profits are outstanding in cement, ready-mixed concrete, fiberglass, plasterboards and other business. The merger of the China National Building Materials Group Corporation and China National Materials Group Corporation has been successfully accomplished, with the voting approval rate of shareholders over 99%, which has become a typical case in the international capital market.

Over the past 40 years, we stimulated innovative momentum and climbed depopulated peaks bravely.

Looking back on our past way, it is rich in vastness but poor in green scenery. With the spirit of courage and aggressiveness arising from reform and opening up, we have created world-class 10,000-ton cement production lines, 1,000-ton glass production lines, 60-million-square-meter plasterboard production lines and 120,000-ton tank furnace wire-drawing production lines ... In 2018, our high-performance carbon fibers, ultra-thin electronic glass, lithium battery diaphragms, silicon nitride and boron nitride industrial ceramics have achieved mass production, with the technological patents more than 10,000; one scientific research project has won Special Award of National Science and Technology Progress Award and two enterprises have won the China Industrial Award. Our scientific and technological achievements are supporting the development of the world building materials industry towards a greener, more intelligent and more beautiful direction.

Over the past 40 years, we have crossed mountains and rivers to integrate into the global market and build a common destiny.

Looking back at the changes of the world and China's vicissitudes over the past century, the policy of "opening up" is the key element to decode the prosperity and decline of our nation. No enterprise can fight alone in the great change that has not happened in the past hundred years. Inclusion, universal benefit and win-win cooperation are the right ways to go wider and wider in the world. We have experienced several developmental stages from the initial exchange with export products to the export of complete sets of equipment and technology, which accounts for 65% of the world's total, and to the implementation of the "Six-One" plan of the Group today. CNBM is emerged as comprehensive multinational company for building materials. Adhering to the three principles of win-win cooperation: making contributions to local development, cooperating with local enterprises and getting along with local residents, up to the end of 2018, we have set up 189 enterprises, covering 170 countries and regions, and have signed 71 new contracts for projects with more than 5 million US dollars overseas, which have become a gold business card for "going global" of Chinese enterprises, continuously boosting and storing energy for building a community with shared future for mankind.

Over the past forty years, we have fulfilled our goals in accordance with the new concept of development in the new era; over the past forty years, we have been striving for a high-quality future with high-quality development. Long years have witnessed our original intention; hard labors have been awarded with our vast development and success. The best commemoration on our history of struggling is to write a new glorious history; the greatest tribute to our history of struggling is to create new and greater miracles!

By 2022, we will have achieved the operating income and total profit of 500 billion and 30 billion yuan respectively and basically established ourselves as a world-class enterprise with global competitiveness.

By 2035, our operating income will have been doubled and our total profit will have reached about 50 billion yuan. Innovation, profitability, control and governance capabilities and market competitiveness will all reach the world-class level, and we will have become a world-class enterprise

with global competitiveness in an all-round way.

By 2050, our operating income will have exceeded trillions and our total profit will have exceeded hundreds of billions. We will have become a great and respected world-class enterprise.

As an old saying goes: grass and tree are prospering, spring mountains are in sight! Now, what we have to do is to strive for the goal of high-quality development and achieve the leap from big to great and from excellent to outstanding. Dreams are right ahead of us. Let's go on and on for writing a magnificent answer that is worthy of history and people again, contributing to the realization of the great rejuvenation of the Chinese nation and presenting a gift for the 70th birthday of the great motherland!

Chairman and Party Committee Secretary
Song Zhiping

About us

Company profile

China National Building Material Group Co., Ltd. (CNBM) was founded through the merger of the China National Building Materials Group Corporation and China National Materials Group Corporation .

Having integrated its scientific research, manufacturing and logistics, CNBM boasts of the largest manufacturer for building materials and an integrated service provider leading throughout the world. It has been listed in the Fortune Global 500 for eight consecutive years. As at the end of 2018, the total assets of the Group amounted to 600 billion yuan and its total number of employees was beyond 200,000. In 2018, CNBM achieved the revenue of more than 300 billion yuan. Headquartered in Beijing, CNBM controls 13 listed companies including 2 overseas listed companies. The Group can produce

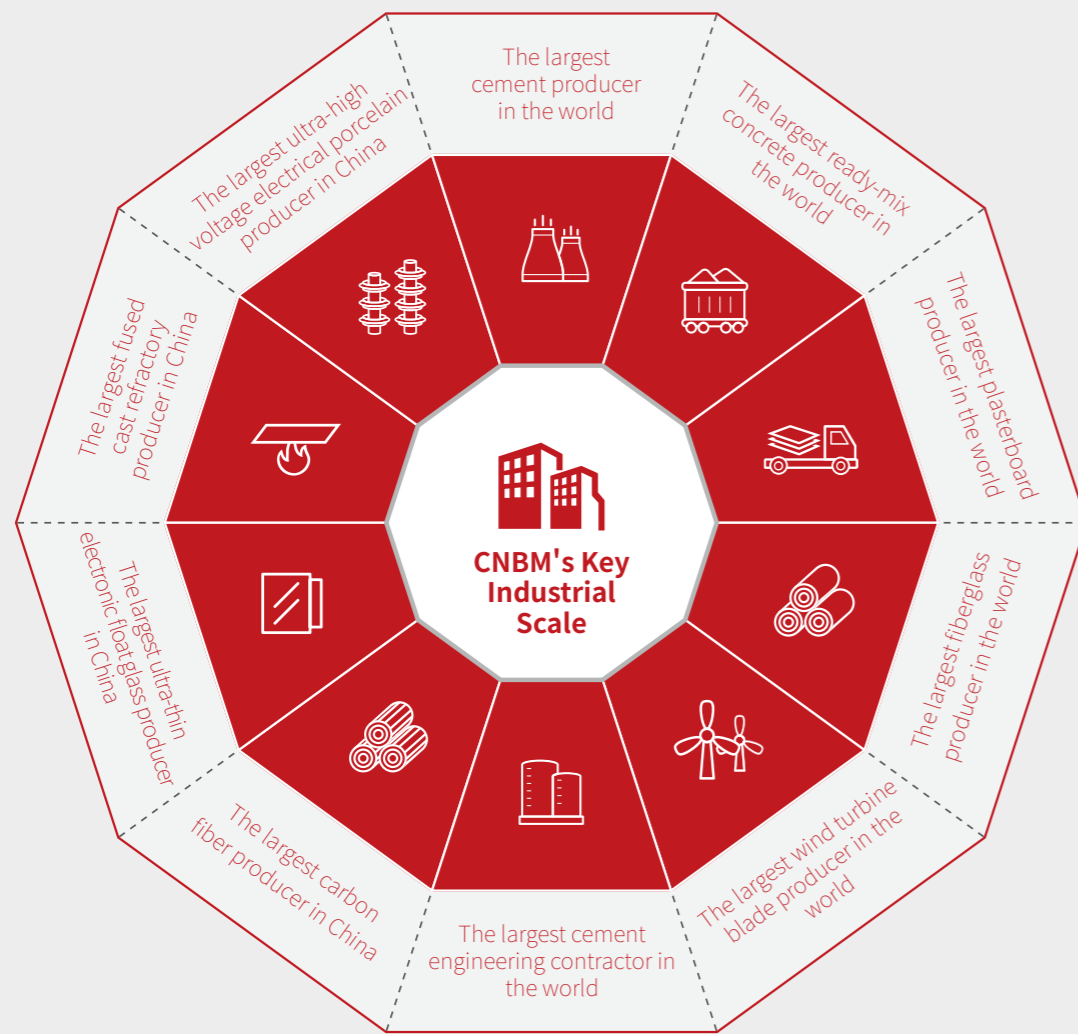
400 million tons of cement clinker, 460 million m³ of ready-mix concrete, 2.47 billion m² of plasterboard, 2.5 million tons of fiberglass and 31,500 pieces of GW-capacity wind turbine blades per year, all of which rank first in the world. It is also the No. 1 player in the international cement engineering market and international cogeneration market. CNBM also takes possession of 26 national scientific research and design institutes, 23,000 scientific R&D and technical engineering employees, 33 national industrial quality inspection centers, more than 10,000 patents, 3 national key laboratories, 8 national engineering (technology) research centers and 18 national standardization technical committees.

Corporate culture

In order to fulfill its social and economic responsibilities satisfactorily, CNBM adheres to the core values of "Innovation, Performance, Harmony and Responsibility" and the standard of conduct "humility, reverence, gratitude and decency" . At CNBM, under the people-oriented principle, we actively build a cultural environment with lenience, tolerance, flexibility, loyalty, affinity and cohesion and create an atmosphere that integrates Party culture, corporate culture, integrity culture and safety & environment-friendliness culture. In addition, as "realizing the happiness and value of

the state" is taken as a major ultimate goal, we make great efforts to cultivate 'four-meticulous' and 'five-have' cadres, and strive to bring about 'enterprise-employee co-growth' .

Corporate Culture Model of CNBM

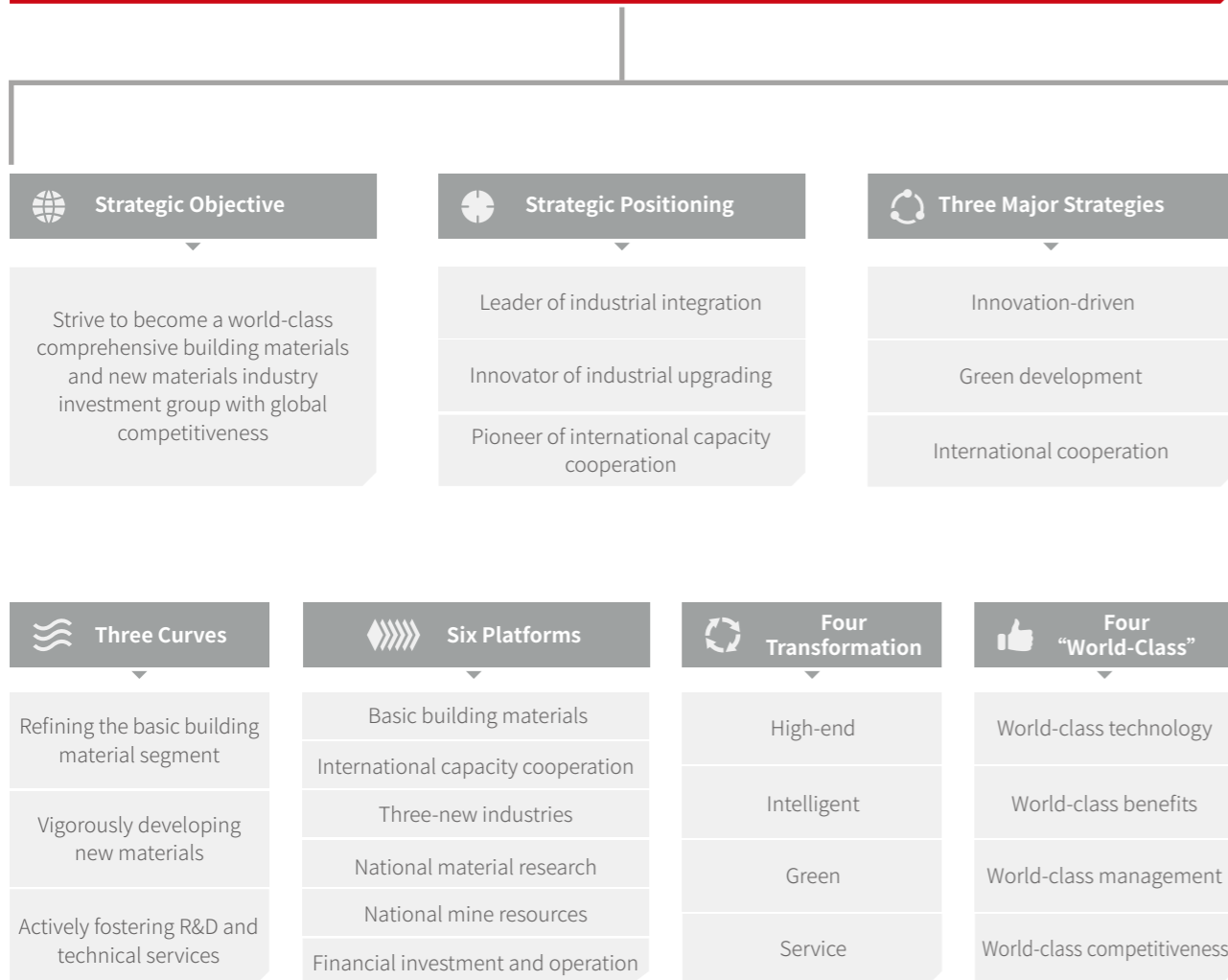


Development strategy

CNBM vigorously implements the new concept of development, forming a business pattern in which the cement, new material and engineering technical service segments constitute a tripod, and striving to become a world-class building material supplier with global competitiveness. We keep the following missions in mind: Take on heavy responsibilities and guarantee both quality and quantity in the undertakings of new-type urbanization and a new countryside with products and services; actively guide resource integration and structural adjustment in the building material industry, advocate industrial self-discipline, increase the value of the building material industry and establish win-win partnerships with other practitioners so as to

enable the healthy development of the building material industry; make great efforts to technically average up the building material industry and increase its innovation capability, boost the transformation and upgrading of the building material industry, and lead the building material industry to become resource-conservative and environmentally friendly; continuously and steadily promote the reform of CNBM in accordance with the market laws, release systems and mechanisms that meet the requirements of the market economy, and contribute passion and full efforts to the great rejuvenation of China.

Development Strategy of CNBM

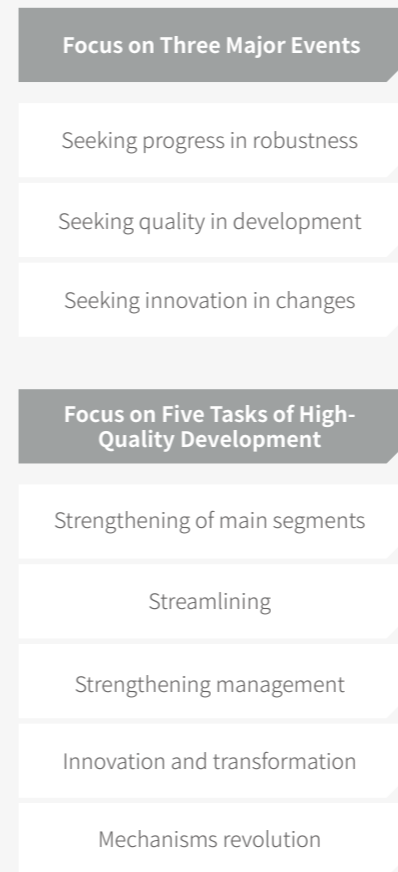


Goals and tasks

By 2022, with the operating income of 500 billion yuan and total profit of 30 billion yuan, a world-class building material supplier with global competitiveness will take shape.

By 2035, with the operating income doubled from the current level and total profit of about 50 billion yuan, CNBM will be world-class in terms of its innovation capability, profitability, governance and control capability, and market competitiveness, becoming a world-class building material supplier with global competitiveness in all aspects.

By 2050, with the operating income of over 1 trillion yuan and total profit of over 100 billion yuan, CNBM will become a great and respected world-class enterprise.



01
By 2022

Achieve the operating income of 500 billion yuan and total profit of 30 billion yuan

A world-class building material supplier with global competitiveness will take shape.

02
By 2035

Double the operating income from the current level with the total profit up to about 50 billion yuan

Create a world-class building material supplier with global competitiveness in all aspects.

03
By 2050

Achieve the operating income of over 1 trillion yuan with the total profit over 100 billion yuan

CNBM will become a great and respected world-class enterprise.

Management team

The Board of Directors has 4 special committees in accordance with the Company Law, the requirements for standard operation of the board of directors and the needs of the work and the expertise of the external directors. The committees for remuneration,

assessment, and audit and risk management are all composed of external directors.

CNBM Management Team

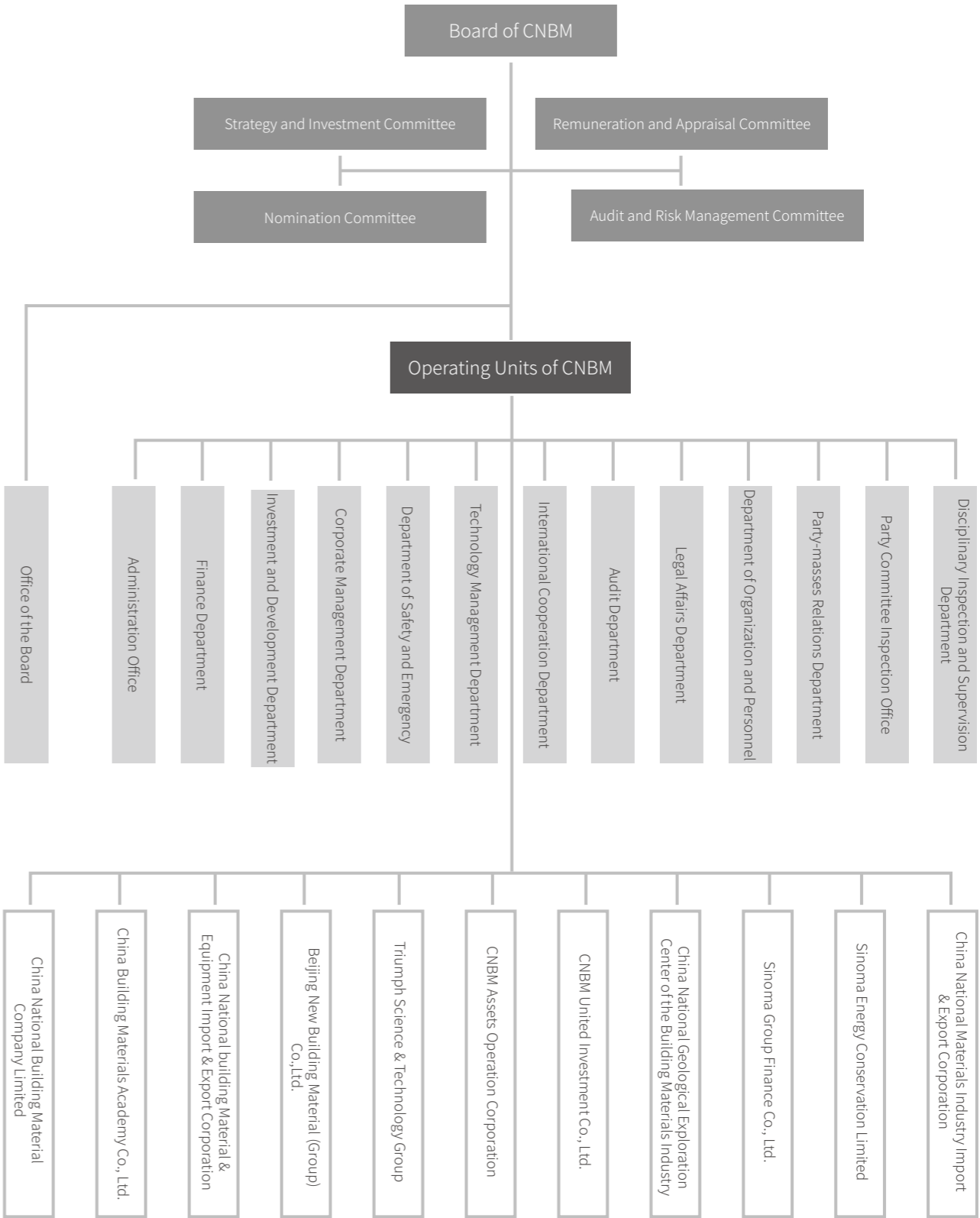
Song Zhiping Chairman and Party Committee Secretary	Liu Zhijiang Vice Chairman and Deputy Party Committee Secretary	Cao Jianglin Director, President and Party Committee Standing Member	Li Xinhua Vice Chairman and Party Committee Standing Member
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Zhao Xiaogang External Director	Chen Jinen External Director	Zhao Jibin External Director	Sha Ming External Director	Xu Lipeng External Director	Zhang Yanling External Director
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Liu Xinquan External Director	Wang Yumeng Employee Director and Trade Union Chairman
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Xu Weibing Party Committee Standing Member and Chief Accountant	Sun Lishi Deputy Party Committee Secretary	Huang Anzhong Party Committee Standing Member and Vice President	Yang Jie Party Committee Standing Member and Discipline Inspection Commission Secretary	Chang Zhangli Party Committee Standing Member and Vice President
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CNBM Governance Structure



Main businesses

1 Basic Building Materials Platform

Cement



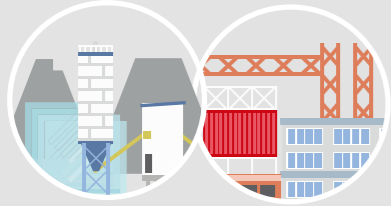
CNBM has an annual production capacity of 520 million tons of cement and 460 million m³ of ready-mix concrete, both of which rank first in the world.

Leading Enterprises

China United Cement Corporation, South Cement Company Limited, North Cement Company Limited, Southwest Cement Company Limited, CNBM Investment Company Limited, Sinoma Cement Company Limited, Xinjiang Tianshan Cement Co., Ltd., Ningxia Building Materials Group Co., Ltd., Gansu Qilianshan Cement Group Co., Ltd.

2 International Capacity Cooperation Platform

Engineering and Production Services



We have captured 65% shares of the global market in cement and glass engineering and cogeneration engineering; moreover, we are expanding our market shares in such fields as new glass, new energy, new materials, new housing and so on.

Leading Enterprises

Sinoma International Engineering Co., Ltd., China Triumph International Engineering Co., Ltd., Sinoma Energy Conservation Limited, CNBM Design & Research Institute Co., Ltd., Hefei Cement Research & Design Institute Co., Ltd., Qinhuangdao Glass Industry Research & Design Institute Company Limited

"Three-New" Industrial Platform

New Materials

Lightweight Building Materials



The annual production capacity of plasterboard is about 2.47 billion m², ranking first in the world. We have high-end brands in the international market and proprietary intellectual property rights, as well as three business sectors: wall and suspended ceiling systems, housing parts and architectural energy conservation systems, and exterior building envelope systems. We provide an application solutions package for public buildings and family housing with our complete product system.

Leading Enterprises

Beijing New Building Material Public Limited Company, Taishan Gypsum Co., Ltd.

Fiberglass



CNBM's annual production capacity of fiberglass is 2.5 million tons, ranking first in the world. We have the world's largest alkali-free tank furnace production line with an annual capacity of 120,000 tons and the proprietary intellectual property rights of such packaged technologies as alkali-free tank furnaces, medium alkali tank furnaces and the fiberglass waste silk recycling process.

Leading Enterprises

China Jushi Co., Ltd., Taishan Fiberglass Inc., Sinoma Jinjing Fiberglass Co., Ltd.

New Glass Materials



CNBM has an annual production capacity of 24,380,000 weight cases of ordinary float glass and 21,700 tons of ultra-thin float glass, ranking first in China.

Leading Enterprise

Triumph Science & Technology Group

Refractories



The annual production capacity is 450,000 tons. We have the world's largest professional fusion-cast refractory production base with an annual production capacity of nearly 40,000 tons, and an automatic unshaped refractory production line with an annual production capacity of 100,000 tons. Our products include refractories in the fusion-cast zirconia alumina and fusion-cast aluminum oxide series, as well as unshaped, basic, alumina-silica and silica refractories.

Leading Enterprise

Ruitai Materials Technology Co., Ltd.

Carbon Fiber



We have a 1,000-ton carbon fiber production line, which features the largest scale and most advanced technology in China. We have reached an annual production capacity of 13,000 tons of PAN silk and 6,000 tons of carbon fiber. We have developed the first production line in China to produce high-quality dry-jet wet spinning T700 PAN silk & carbon fiber and T800 carbon fiber good in performance. We can produce 150 - 1660 mm² carbon fiber composite core conductors for 35-1,100 KV transmission lines.

Leading Enterprises

Zhongfu Sherying Carbon Fiber Co., Ltd., Zhongfu Carbon Fiber Core Cable Technology Co., Ltd.

Wind Turbine Blades



We can produce 31,500 pieces of MW-level wind turbine blades every year, ranking first in the world, including 10 series and over 60 types of products with the categories ranging from 1.25 MW to 6.7 MW, and the blade length varying from 31m to 80m. We possess blade production bases in Yanqing of Beijing, Funing, Pingxiang, Handan, Xilinhot, Baicheng, Lianyungang, Shenyang, Jiuquan, Baotou, Hami and Guizhou, an R&D center in Germany and a national blade testing center.

Leading Enterprises

Sinoma Wind Power Blade Co., Ltd. and Zhongfu Lianzhong Composites Group Co., Ltd.

New Energy

PV Business



We have established a whole industrial chain of BIPV (Building Integrated PV) with a focus on thin-film solar products and technologies. We are committed to the integrated application of new energy materials and distributed energy, as well as carrying out the R&D and promotion of new-energy housing. We have set up a 100 MW CIGS thin-film solar cell production base and a 100 MW CdTe power generation glass production base. Moreover, we have also developed several PV power stations in China and other countries and regions.

Leading Enterprises

Triumph Science & Technology Group, China Triumph International Engineering Co., Ltd.

New Housing

New Housing

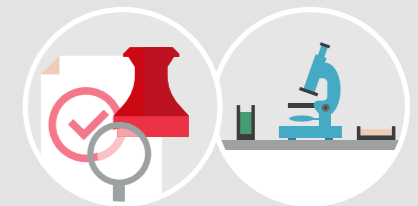


We have several product systems including steel, PC, etc. As one of the first national demonstration bases of housing industrialization and one of the first assembled building industrial bases, we have many demonstration bases of new housing production in Beijing, Sichuan, Jiangsu, Hainan, Heilongjiang, etc. We are an advocate and promoter of the new environment-friendly and energy-conservation housing industry of China.

Leading Enterprises

Beijing New Building Material (Group) Co., Ltd., China Building Materials Academy Co., Ltd., China Triumph International Engineering Co., Ltd., and China New Building Group Corporation

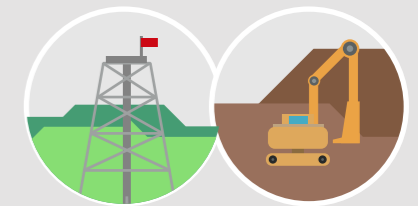
4 National Material Scientific Research Platform



Leading Enterprises

26 national scientific research and design institutes including China Building Materials Academy Co., Ltd., Tianjin Cement Industry Design & Research Institute Co., Ltd., etc.

5 National Mining Resources Platform



Leading Enterprises

China National Geological Exploration Center of the Building Materials Industry, China Non-metallic Minerals Industry Co., Ltd., South Graphite Co., Ltd.

6 Financial Investment and Operation Platform



Leading Enterprises

Sinoma Group Finance Co., Ltd., CNBM United Investment Co., Ltd.

Market Performance



In the new era, promoting high-quality development has become an inevitable requirement for enterprises to maintain healthy development. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, China National Building Material Group, grasps the new situation, and strives to build a first-class building materials enterprise in the world with global competitiveness by virtue of rock-solid confidence, vigor and perseverance in accordance with the policy of "steady growth, restructuring, reform and strengthening party construction" .

Operating income

348bn
yuan

Total profit

20.66bn
yuan

Payment of taxes

27.22bn
yuan



SDGs Respond



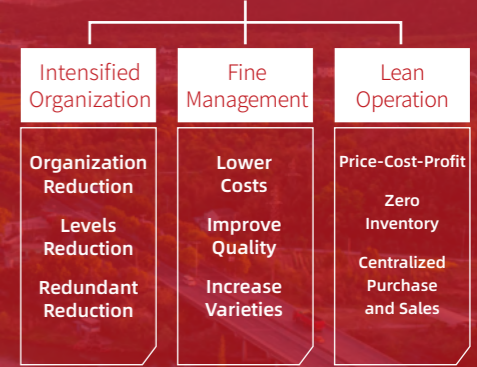
© China United Cement Corporation (Xilinhot)

“1+1>2”

From the beginning of reform and opening up to the reorganization of China National Building Materials Group Corporation and China National Materials Group Corporation, generations of CNBM staff members have dedicated themselves to pursuing their dreams with youth, striving unremittingly to build a world-class building material enterprise with global competitiveness. In 2018, the Group achieved the best operating performance in history .



Precision Management



Ⓞ Logistics Wharf Project of Huzhou South Cement Company Limited

Stabilized growth

Data Review 2018

4,809
law-abiding and compliance training sessions held and organized

150,652
person-times of employees participated in legal publicity and education activities

The legal review rates are
100%
for rules and regulations, business decision-making and business contracts.

The performance rate of economic contracts is
98%



Normative governance

Insisting on the working rule of lawful, compliant and honest operation, we have established a standard corporate governance system. As the strategic, resource and cultural center, the CNBM headquarters exercises the rights and performs the duties of the capital contributors. Its business platforms focus on their core expertise and main businesses to build up profit centers. As operating entities, the enterprises at the primary level implement strict cost control while assuring quality.



Streamlining

Adhere to lean organization. In the whole year, clean up all seven-level enterprises and realize six-level legal persons and four-level management levels; separate and handed over 153,100 “three-supply and one-management” entities (namely, water, power and heat supply and property management); deal with 34 entities in trouble.



Deleverage

In the case of 15% year-on-year increase in operating income in 2018, reduce the occupancy of “two funds” by 6.4 billion yuan at the end of the year and increase the turnover of accounts receivable and inventory by 0.8 times; let the capital expenditure focus mainly on transformation, upgrading and scientific innovation, and substantially increase investment in new materials.



Risk control

Put prevention and mitigation of major risks in a prominent position, and bring 23 fellow enterprises into the report 2018 on comprehensive risk management, basically covering the major business sectors and important key enterprises; formulate 164 internal management systems and 3 risk control plans throughout the year; carry out various forms of activities for law popularization and thoroughly implement the concept of legal system.



Strong management

We have created the profit model of “price-cost-profit”, the competition model of “coexistence and multi-win”, “six-star enterprise rules”, “eight management measures” and the working method of “increasing efficiency and reducing expenditure and consumption”. Moreover, we have put forward the “precision management” to effectively promote the high-quality development of the enterprise.



📍 Molybdenum-plating Production Line in Bengbu Design & Research Institute for Glass Industry

Structure adjustment

We constantly accelerate the transformation of the new and old kinetic energy around the “tripod” industrial structure. We thoroughly practice the “price-cost-profit” concept in the cement sector, taking the lead in eliminating low-grade cement and further accelerating transformation and upgrading; deepening and developing the strategic emerging industrial clusters, striving to build a number of high-end and sophisticated projects such as high-end carbon

fiber and intelligent glass fiber, and promoting plasterboard, glass fiber, wind power blades and new housing, etc. towards high-end development to form a pattern for stable and sustainable profits; actively developing large R&D services, cross-border e-commerce + overseas warehouses, smart industries and other manufacturing services to constantly expand scale benefits.

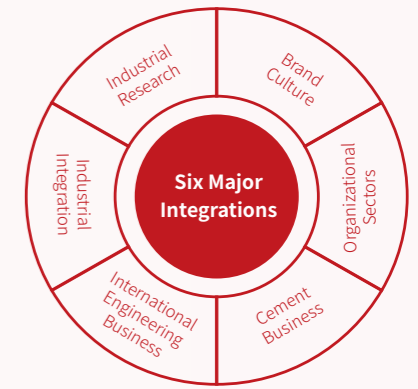
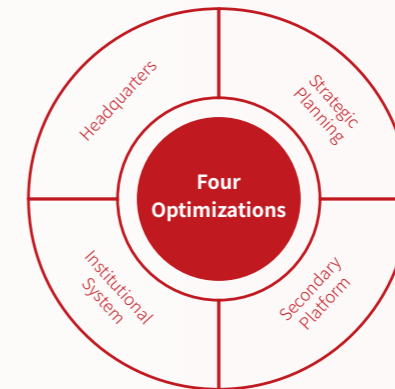
Focus on reform

In 2018, the stock exchange, as the core of the reorganization, was completed for the merger of China National Building Materials Group Corporation and China National Materials Group Corporation, the merger scheme was approved by more than 99% shareholders and 100% employees and the listing succeeded in Hong Kong, which has created an unprecedented case of reorganization in the capital market; in the Group level, the “four-optimization” scheme was

completed and the “six-integration” plan was implemented; the business sector was deeply integrated and optimized.

Sinoma blades have won the world's first IECRE Certificate for blade components

On October 17 - 19, 2018, China Wind Power 2018 (CWP2018) was held in Beijing. As the leading wind turbine blade enterprise, Sinoma Blade was invited to attend and was awarded with Sinoma 59.5D Blade IECRE Component Certificate issued by German TÜV NORD (world-famous certification authority); moreover, the certificate is the global first blade component certificate issued by the international authoritative certification system IECRE.



Tripod

Based on the target requirements of cultivating world-class enterprises with global competitiveness proposed by the 19th CPC National Congress, the Group has transformed the enterprise's extended growth into endogenous organic development and formed a "Tripod" business pattern of cement, new materials and engineering technology services.



China United Cement Corporation (Tai'an) Industrial 4.0 Intelligent Cement Factory

Continuous optimization and upgrading of cement

In 2018, the Group continued to adhere to "six unwaveringly", firmly promoted the supply-side structural reform and promoted the improvement of product standards; deeply practice the "price-cost-profit" operation principle, and consolidate the core market by retaining big customers, large projects and key projects; promote fine management, lean production, deepen benchmarking management, decrease cost and increase benefit; accelerate the development of the "cement +" model, optimize the layout of cement and commercial concrete, and expand the construction of aggregate

project; continue to strengthen mine construction and management to achieve sustainable development; carry out the intelligent demonstration lines and co-processing in cement kiln steadily. A total of 6.23 million tons of backward production capacity of cement clinker was eliminated throughout the year; the cement grinding has a backward production capacity of 12.28 million tons, which promotes the cement industry to move toward green, intelligent and artistic high-quality development.

Coordinated development of "small cement + large commercial concrete + N" industry chain in China United Cement Nanjing region

In 2018, China United Cement Nanjing region broke the "small cement" limitation and creatively launched the "cement + trade" model. Taking the commercial concrete demand as the lever, the cement base as the main body, and the self-produced cement as the adjustment, realizes the supply of cement comprehensively docking with the commercial concrete by the cement plant. The purchase price of the cement in the commercial concrete business is lower than the market price by 20 yuan/ton, thus effectively reducing the cost. During the control and shutdown of the kiln, the supply can be guaranteed, and chips are added to

winning the market of the commercial concrete, especially key projects and huge-scale projects. China United Cement Nanjing reduced the domestic sales of self-produced cement and was put on the market at a reasonable price. It controlled the cement market of 5 million tons with an annual output of 2 million tons, increased the profit and market discourse right, improved the market bargaining power and achieved double improvement in the efficiency of cement and commercial concrete.

Six "Unwaveringly"

Unwaveringly limit new capacities

Unswervingly eliminate backwardness

Unswervingly perform the off-peak production

Unswervingly promote the industry self-discipline

Unswervingly advance mergers and reorganization

Unswervingly become involved in international capacity cooperation



Take you to see the full view of integrated development of China's cement industry and the rise of CNBM in 130s

	Green	South Cement Company Limited adheres to the green development and creates an "ecological environmental protection building materials industry park", to achieve the integrated development of the whole industry chain
	Intelligent	Explore the operation of the whole industry chain of "cement + Internet + big data" and promote the "cement + internet + big data" model steadily. The intelligent production line of China United Cement Tai'an Co., Ltd. came to its unique viable birth, so it became the world's intelligent manufacturing pioneer in the cement industry
	Art	Promote the construction of an art cement factory, make the facilities of every factory the works of art and change the traditional image of the cement factory



📍 B75 blade of Lianyungang Zhongfu Lianzhong Composites Group Co., Ltd.



📍 The largest surface photovoltaic power station in England constructed by China Triumph International Engineering Co., Ltd.

- High-performance carbon fiber T1,000 Class and T700 Class realized 100-ton and 1,000-ton mass production respectively
- The carbon fiber core cable was successfully applied to 1,000 kV UHV project
- The world's thinnest 0.12mm touch glass, cadmium telluride power generation glass, high permeability photovoltaic glass, lithium battery diaphragm, silicon nitride and boron nitride high-precision ceramics realized the industrial mass production
- LZ84-6.0 blade refreshed the world record of glass fiber blade length
- The composite overwrapped pressure vessel for deep sea assisted "Exploration 1" to complete the 10,000m sea trial
- SYT49-24K high-end carbon fiber products broken through the kiloton key preparation technology
- E7, E8 and E9 series of glass fiber achieved high-efficiency industrial production of 10,000-ton tank furnace
- The Group has become the third global and the sole domestic enterprise that can conduct the large-scale batch production of hot isostatic pressing high-end silicon nitride ceramics bearing balls

Rapid development of new materials

We firmly grasp "three curves", adhere to "transformations of four modernizations", have added new material business.

Significant results in engineering services

As the global largest building materials manufacturer and engineering service provider, the overseas market share of the Group in the international cement EPC business has ranked first in the world for nine consecutive years, and glass engineering keeps its leading role in the global market share. In 2018, the Group participated in the First China International Import Expo and signed a purchase agreement of 12 billion yuan; It co-built a database with overseas companies, and the professional

strength has obtained international recognition; The engineering service sector deepened internal collaboration and jointly studied the global layout and market. The comprehensive gross margin reached the historical highest level. Sinoma International has assisted in the implementation of more than 50 domestic and international projects; Sinoma Mining Construction Co., Ltd. and South Cement Company Limited conducted the collaborative management of 13 mines; China National Geological Exploration Center of Building Materials Industry and cement enterprises signed 124 cooperation projects; The bagged cement robot loading system developed by Triumph and the intelligent production information technology of Nanjing Kisen Cement are applied in cement enterprises; The integration of industry and finance has been rapidly promoted, and the finance company has served the group fellow enterprises, saving a total of financial expenses of 110 million yuan.



View reports through scanning a QR code

Materials create a new world

Materials change the world. What will the future world become? It will have a close relationship with today's development of materials! On September 15, 2018, CCTV-2 broadcasted "Approaching the Frontier New Materials", telling the story about the R&D of new materials of CNBM!



The Group participated in the "2nd Annual Lancang-Mekong Cooperation Achievement Exhibition"

On January 10, 2018, the "2nd Annual Lancang-Mekong Cooperation Achievement Exhibition" was held in Phnom Penh, Cambodia. CNBM, the "national business card" of the building materials industry, was invited to participate in the exhibition. On the occasion of the Second Lancang-Mekong Cooperation Leaders' Meeting, Premier Li Keqiang and the leaders from many countries visited the cooperation exhibition, and visited the booth of CNBM and learned about relevant situations during the meeting. Leaders from various countries showed profound interest in the high-tech new

materials of the Group, and stopped to watch them in front of the solar panel model and the ITO electropane booth. Premier Li Keqiang also watched the PTEF garment waterproof test, seriously asked about the fabric material characteristics, and highly affirmed and praised the rapid development of carbon fiber and new ceramic materials of the Group and the international influence of cement equipment and technology.

Energy Conservation and Environmental Protection

Promoting the formation of a green development approach and lifestyle marks a profound change in our corporate development concept. We always adhere to the new development concept of "lucid waters and lush mountains are invaluable assets", support green and low-carbon new industries, develop new green environmental protection materials, develop green and clean new energy, explore new models of environmental governance, and strive to make a good ecological environment to become a supporting point for sustainable and healthy development of the group and become a growth point for the improvement of people's lives.



SDGs Respond



Investment in energy conservation and environmental protection

4.4bn
yuan

Installed capacity of the waste heat power generation system

3,078.74
MW

Solid waste consumption

99m
t

© Sinoma (Suzhou) Construction Co., Ltd.-Panorama of South African project

Green development



Yunnan Dali Villa Project of BNBM House Co., Ltd.

Green management

We regard green development as one of the three development strategies, adhere to the value ranking of "environment, safety, quality, technology and cost" and deeply implement the "Responsibility Blue Sky" action plan. In 2018, the Group invested about 4.4 billion yuan in energy conservation and environmental protection, and there were no major and more serious environmental accidents.

Green management does this



Organization institution:

Set up a leading group for energy conservation and emission reduction. The headquarter sets up a social responsibility and energy conservation and environmental protection office, and all fellow enterprises establish energy conservation and environmental protection function organizations by category and hierarchy to achieve the comprehensive coverage of the energy conservation and emission reduction management system.

Institutional system: Issue and implement 5 management systems related to energy conservation and emission reduction, standardize production and management behaviors of enterprises, formulate the classified assessment targets and assessment plans, tighten emergency report and emergency disposal barriers, and form the closed-loop management of energy conservation and environmental protection.

Fund guarantee: Incorporate the annual energy conservation and emission reduction capital investment into the comprehensive budget management system, and formulate the plan for the use of fund to ensure the implementation of technical transformation and management improvement.

Statistical system: The integrated statistical system for energy conservation and emission reduction data has run stably for 8 years. It has achieved regular collection, regular summary and regular analysis of energy conservation and emission reduction statistical indexes, established an annual report system for energy conservation and emission reduction and environmental protection investment, and improved the expenditure (input) statistics system.

Environmental protection monitoring: Establish and improve the online environmental monitoring system. Key enterprises basically establish a metrology testing system in accordance with the ISO10012 standard, so that the energy measurement management work can cover the whole process of purchase, production and sales.

Evaluation and assessment: Build a top-down energy conservation and emission reduction evaluation and assessment system, implement the combination of quantitative assessment and qualitative assessment and incorporate energy conservation and emission reduction assessment indexes into the corporate performance assessment system.

Emergency warning: Based on the Group's Emergency Management Measures for Environmental Emergencies and Measures for Administration for Emergent Environmental Incident Report, improve the risk assessment of emergent environmental incidents, improve the environmental early warning and emergency response mechanism, strengthen the environmental emergency management, standardize the emergent environmental incident report, continuously improve the level of environmental risk prevention and control, and prevent and reduce possible environmental hazards.

Technical support: Rely on national key laboratories to build a high-end major science and technology research platform; develop significant, generic and key technologies in the green development of building materials industry based on national strategies such as Blue Sky Engineering and Green Building; utilize the production and research docking advantages of the Group to promote the application, transformation and promotion of green technologies.

Information disclosure: Regularly report energy consumption and pollutant emissions to stakeholders, disclose annual energy conservation and environmental performance through annual social responsibility reports, accept the supervision of stakeholders, and reduce the negative impact of business activities of enterprises on the environment and society as far as possible.



Avancis Thin Film Solar Plant of Triumph Science & Technology Group Co., Ltd.

Risk investigation

We carry out the environmental protection fixed-point and timing inspections in key enterprises and key fields and realize working mechanisms for talking about the environmental protection at meetings and investigate and check the environmental protection on a business trip; actively implement investigations on environmental pollution sources and risk points, supervise the effective rectification of hidden dangers, and strengthen employees' environmental awareness

and emergency capacity. In 2018, a total of 2,419 pollution sources and 199 risk points were investigated, and 1,752 environmental accident emergency drills were carried out. All pollution sources and environmental risk points were in a stable and controllable state.

Technical cultivation

We accelerate the R&D of green high-quality products and technical transformation. Three new industries represented by new materials and new houses develop by leaps and bounds. We put priority on the development of waste heat power generation, desulfurization and denitrification, comprehensive utilization of industrial waste residue in the field of technology, actively build a green industry complex integrating smart houses, PV power generation and intelligent agriculture and sign a cooperation agreement for 5,000 smart houses in Spain. BNBM

has independently developed the gypsum board and high-efficiency SCR denitration and tail gas desulfurization systems have achieved near-zero emission standards; The raw material vertical mill external circulation technology of Sinoma International has realized the industrial application for the first time in China. When the production is increased by 44t/hour and NOx emission is reduced by 50%.



The employee of Taishan Fiberglass Inc. conducts the site routing inspection

"New Energy Smart House" made its debut at Solar Decathlon

The 2nd Solar Decathlon was held on August 3, 2018. China Triumph International Engineering, Wuhan University of Technology and New Jersey Institute of Technology formed the joint team of CNBM and took the "New Energy Smart House" to the contest.

"New Energy Smart House" makes full use of the Group's industrial advantages and technological advantages, is committed to achieving green, energy-saving, ecological and environmentally

friendly architectural design concepts, and comprehensively promotes the industrialization and large-scale development of new solar energy technologies and new products. The house adopts the cadmium telluride power glass independently developed by Triumph Science & Technology as the building facade, which fully integrates the production capacity with the architecture, decoration and efficacy, and truly realizes the building integrated photovoltaics. In terms of

building materials, the wall adopts new environmental protection materials produced by BNBM, which effectively reduces energy consumption and environmental pollution.



Green manufacturing



The intensive cultivation is conducted to ensure the reforestation of mines

South Cement Company Limited adheres to the concept of "lucid waters and lush mountains are invaluable assets", and promotes the reforestation of mines in the light of local conditions. The company adheres to both mining and treatment and takes a series of engineering measures such as slope cutting, degrading, leveling and integration to trim the final slope of the mine. After the design requirements of the development and utilization program are met, the anchoring, hanging nets and sloping greening projects are carried out on the slope steps and slope surface in accordance with the Geological Environment Treatment and Land Reclamation Plan. After the mixed materials are mixed well in proportion, the dry materials are sent to the nozzle by a jet pump and an air compressor, and are mixed with a proper quantity of water at the

nozzle and then they are sprayed on the slope surface and the iron net. The spraying thickness is 15cm on average; The slope surface after spray seeding should be covered with plastic sunshade net in time to protect the grass seed from scouring and loss, and to achieve heat preservation and moisturization to promote the germination and growth of the seeds and prevent the birds and beasts from swallowing the seeds. When the grass seeds generally emerge and most of them reach the trefoil stage, the plastic sunshade net is removed to ensure the reforestation of mines.

Data Review 2018

Total energy consumption
37,910,400
tons of standard coal equivalent

Clean energy consumption
4,426,400
tons of standard coal equivalent

Comprehensive energy consumption per 10000 yuan of industrial value added
4.39
tons of standard coal equivalent

Fresh water consumption
151m
t

Sales volume of energy-saving / environmental protection equipment
11,783
units/set

Energy-saving and green adding

We adhere to sustainable long-term development, avoid or mitigate the impact on the landforms and landscape to the utmost extent, maximize the restoration of ecological environment, and strive to make the mining in harmony with natural environment. At the same time, we actively provide three means (energy conservation by technical modifications, energy conservation by management, and energy conservation by intelligent control), and continuously increase the comprehensive utilization of solid waste resources, and implement the upgrade

of waste heat power generation system with an annual energy output of 13.77 billion kWh. Tianshan Cement has developed the first bypass release pure low temperature waste heat power generation system in China, and the power generation capacity of tons of clinker has reached the highest level in the industry.



Energy conservation by technical modifications

The cement and glass plates construct the power plants through laying photovoltaic energy ,gradually promote "cement + photovoltaic power station" and "glass + photovoltaic power station" and other new models. South Cement Company Limited can save 140 million kWh and 37,000t standard coal annually through technical innovation.



Energy conservation by management

Actively promote the energy management system certification, and continue to optimize it through fine management, energy efficiency diagnosis, and benchmarking management. The Commercial Concrete Section of CNBM Investment Co., Ltd. implements the "lean production and fine management", saving 800,000 kWh annually.



Energy conservation by intelligent control

Promote the intelligent control system of the kiln grinding system to achieve good quality, high yield and low consumption and increase the labor productivity. The "Integrated Standardization and New Model Application of Intelligent Manufacturing of the Ministry of Industry and Information Technology" of Zhongfu Shenying Carbon Fiber Co.,Ltd. has improved the quality stability and production efficiency of high-performance carbon fiber products.

© Qinghai Qilianshan Cement Co., Ltd.

Emission reduction and blue sky protection

We are committed to protecting the ecosystem on the project site and around the project, resolutely win the pollution prevention battle, actively respond to climate change, strengthen the pollutant discharge control, and promote the co-processing of municipal waste, sludge, sewage and hazardous waste in cement kiln and strive to build a harmonious relationship between human and nature.

Data Review 2018

Carbon dioxide emissions

206m t

Nitric oxide emissions

159,900 t

Sulfur dioxide emissions

20,700 t

COD emissions

650.99 t

Soot emissions

819,100 t

Amount of urban garbage disposal

1.91m t

Sludge disposal capacity

1.72m t

Discharge of industrial waste water

6.58m t



Centralized and special treatment of dust

Carry out comprehensive treatment of dust in cement kiln, increase the proportion of high-efficiency bag filter coverage, and implement the closed management of storage, packaging and transportation to reduce the dust emission. After the "ESP Transformed into Bag Filter" of Ningxia Building Materials Group Co., Ltd., the dust emission is controlled below 10mg to achieve the ultra-clean emissions.



Iconic pollutant treatment

Comprehensively promote the construction of staged combustion and desulfurization and denitration systems for cement, glass and other enterprises to ensure the standardized discharge of sulfur dioxide and other pollutants. All the clinker production lines of China United Cement Corporation have been equipped with denitrification systems to meet ultra-low emission standards.



The world's first intelligent production line of light and thin and high-permeability PV glass has been completed and put into production



Special pollution detection and treatment

According to their own process characteristics, all fellow enterprises clearly regulate the test frequency of exhaust gas, sewage, noise and content of indexes, and strictly adopt a monitoring system meeting the national standards. Qilianshan Cement has treated the noise produced within the factory boundary, waste heat power station and domestic sewage.



Participate in the construction of the carbon market

Comprehensively check the historical carbon emissions of cement enterprises with controlled emissions, and gradually build a three-level management and control mode of the headquarters - secondary enterprise - basic unit with controlled emissions and form the positioning of carbon asset strategic management center-carbon asset preservation and appreciation center-carbon implementation cost control center.

China United Cement Jiaxian Tianguang CO., LTD achieved "ultra-low emission" and successfully passed the environmental protection acceptance

In November 2018, the ultra-low emission transformation project of China United Cement Jiaxian Tianguang CO., LTD passed the environmental protection acceptance. After the completion of the transformation, in the case that the baseline oxygen content accounts for 10% of the exhaust gas in cement kiln, the emission concentration of particulate matter, sulfur dioxide and nitrogen oxide isn't higher than 10mg/m³, 35mg/m³ and 100mg/m³. In the case that the environmental protection standard in Henan is stricter than the national environmental protection standard, the emission concentration of particulate matter, sulfur dioxide and nitrogen oxide are lower than the optimal emission limits of Henan Province and Pingdingshan City, and the comprehensive indexes rank highest in the cement enterprises in the province.



Green services

In 2018, the Group actively promoted the manufacturing service and R&D industrialization, and used the Internet, big data, intelligentization and other technologies to explore the green service system with the characteristics of the building materials industry and formed energy-saving service organizations containing more than 20 fellow enterprises.

- The domestic market share of environmental protection technologies for engineering glass has remained at above 80%
- Flue-gas desulfurization accounts for more than 90% of the glass market, ranking first in the industry and maintaining the first brand of smoke-gas treatment in the industry
- Sign a memorandum of cooperation on Japan's biomass generated power station project with a total scale of 120MW

Professional technical service

The Group has the world-leading advanced technologies for cement, glass and manufacturing capacity of complete equipment, including energy-efficient firing system, energy-saving grinding, pollutant emission reduction technology, waste heat power generation, automation control, which can provide professional detection and diagnosis, technological transformation, intelligent control and other energy-saving and environmental protection technical services for industrial enterprises.

Integrated consulting service

Relying on China Building Material Test & Certification Group Co., Ltd., the Group builds the largest third-party test and certification service organization in the domestic building materials industry and the national SME public service demonstration platform to provide energy assessment, energy management system certification, CDM project, green building materials evaluation, green product certification, green manufacturing system certification, carbon verification and other services for industrial enterprises and is designated as one of China's

green product certification bodies; Leading enterprises in the industry carried out the first batch of green building materials product certification business in China and carried out three-star evaluation and identification of green building materials for more than 80 enterprises in 2018.

📍 South Sudan Villa Project



Ecological value-added services

Relying on the recycling of building materials industry resources, solid waste and refuse disposal and other technologies, the Group actively uses the building materials kiln to dispose of industrial by-products and municipal waste, thus achieving effective and harmless disposal of industrial and municipal waste. In 2018, South Cement Company Limited promoted the co-processing in the rotary kiln and

disposed of 390,000t sludge, fly ash and hazardous waste; 2 hazardous waste and sludge disposal projects of China United Cement Corporation were completed and put into production.

Geological and mine comprehensive service

Rely on China National Geological Exploration Center of Building Materials Industry, the geology and mine comprehensive service carries out annual reporting of reserves, verification of reports, measurement of mine stripping and exploitation quantity, comprehensive treatment of geological disaster, engineering investigation, green mine construction plan and other technical services. Hunan Geological Survey Agency has basically realized

the full coverage of daily production technical services of 13 mine enterprises. Based on Sinoma Mining Construction Co., Ltd., it actively promotes the cooperation with geological survey units, focuses on cultivating mine restoration and control and landscape engineering service industries, casts "green mine and safe mine" brand, and becomes the leader in construction and operation of building materials mines.

Contribute wisdom to solving the "garbage siege"

With the acceleration of the pace of urbanization, the refuse disposal has become an inevitable difficult problem of environmental governance in various regions. The output of domestic waste in Chaohu City near Chaohu Lake, one of the greatest freshwater lakes in China, is increasing year by year, greatly restricting the ecological development of Chaohu Lake. In July 2016, Sinoma International Resources Environmental Engineering Co., Ltd. designed and constructed the supporting project of co-processing of the domestic waste in Chaohu by Sinoma International Environmental Engineering Co., Ltd. which dealt with the dilemma of "garbage siege" to the greatest extent, so that the land of refuse landfill of three football fields size was saved, 20,000-30,000 tons of coal was saved, 12,000 tons of raw materials were replaced each year, and 60,000 tons of CO₂ emission was reduced

each year; 100% of "three wastes" in industrial production are absorbed by the cement kiln, thus really realizing the quantization, reduction, resources and harmless disposal of the refuse disposal. By the end of 2018, Sinoma International Environmental Engineering Co., Ltd. built similar projects in many places. The design and construction of 7 production lines of co-processing of domestic waste in cement kiln (Liyang Jiangsu, Laohekou Hubei, Chaohu Anhui, Handan Hebei, Songzi Hubei, Yicheng Hubei and Sancha Guizhou) were completed. The daily processing capacity was between 200 and 500t and the single-line capacity of the supporting cement clinker production line was 5,000t. Two projects in Liyang, Jiangsu and Sancha, Guizhou were listed in the first batch of 6 demonstration projects by the Ministry of Industry and Information Technology of the People's Republic of China.



© Harmless co-processing of 500t domestic waste in cement kiln by Sinoma Anhui Cement Co., Ltd. in Chaohu City



© China United Cement Corporation (Nanyang)

Green operation



China United Cement Mengxin Bayingala Co., Ltd.

Data Review 2018

19

fellow enterprises won the honorary title of "National Building Material Emerging Industry Demonstration Enterprise"

11

fellow enterprises were included in the third batch of green factory directory of the Ministry of Industry and Information Technology of the People's Republic of China

3

fellow enterprises successfully won the "Finding China's Green Creativity Samples" honor

9

mines were rated as "National Green Mine Demonstration Enterprise"

283

enterprises passed the clean production certification

Ecological factory

Taking building the "Garden Factory" and "Green Mine" as the main line, we have realized the advancement, environmental protection and sustainability of all supporting materials mines in the full life circle in the whole process. In 2018, the green area of the enterprise production area was 33.02 million m². China National Geological Exploration Center of Building Materials Industry, compiled the group standard Green Mine Construction Plan of Cement Limestone Industry.

Beautify the Environment Create Wild China

Gangu Company, a Qilianshan cement fellow enterprise, planted trees and covered soil for greening on the ore shipping roads, fixed slopes, industrial sites, earth-disposing sites and cleaning platforms, planted 11,710 strains of pinus tabulaeformis, 1,200 kg of seeds of clover, alfalfa and weeds and 10,000 strains of parthenocissus tricuspidata; Xiahe Company has planted 4,500 strains of robinia pseudoacacia, 1,000 strains of salix mongolica layer and 450 strains of populus alba and dragon spruce; with the seeding area of 11,500

m², Yongdeng Company planted more than 500 pine trees, and greened and beautified 7km uphill road. After the retaining wall on the side of the road edge is covered the mellow soil, the grass seeds of about 121,000 m² and more than 1,500 pine trees were planted.

Idea spreading

We adhere to spreading the idea of green environmental protection. We have implemented the "Responsibility Blue Sky Action" plan, and have practiced the environmental protection responsibility together with suppliers, customers and employees since 2015. At the same time, we also advocate green office, promote the construction of electronic office and video conference system, incorporate green office into daily performance appraisal, and add luster to a beautiful China through organizing energy-saving technology exhibitions, training and other activities, as well as low-carbon transportation, afforestation, enhancement and releasing and other public service behaviors on environmental protection.



Publicity of eco-friendly knowledge

Data Review 2018

Organized or participated in
1,426
environmental protection activities

81,823
person-times of employees had attended trainings related to energy conservation and environmental protection

Office power consumption
279m
KWH

Convened video conferences and replaced
41
on-site conferences

Employee Care



Employee is the most vivid life for enterprise development, while safety is the solidest footstone for enterprise development. CNBM has adhered to the concept of people-first in building a safety-based enterprise, ensured all rights and interests of employee, joined hands in building a happy and warm CNBM with employee, determined to promote the big love of the society by the small love of CNBM.



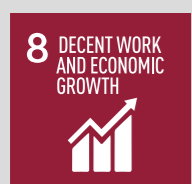
Occupational health& safety fund input
1.08bn
yuan

Total number of employees
208,680
people

Employee Turnover Rate
12.32%



SDGs Respond



© Recreational and sports activities of Jushi Egypt Fiberglass Co., Ltd.

Safety and stability

Safety management

We carefully implement safety production subject responsibilities, newly set safety emergency department, make an overall plan for managing safety production and emergency related work, reinforce emergency management, formulate Emergency Management Systems for Production Safety Accident, revise Emergency Plan for Production Safety Accident, largely promote the creation of safety production standardization and "double-system" construction, work hard in improving the safety management level of the enterprise, and perform social responsibilities of the enterprise.

Occupational health

We have gradually converted the accident-preventive safety production management into the management system that promotes the integration of safety production and occupational health, established and perfected occupational safety and health management system for employee, optimized occupational employee archive management, formulated the Supervision and Management Methods for Occupational Health in the Workplace, periodically carried out occupational health check-up,

psychological health assistance and training for employee, perfected occupational health control and management, and effectively prevented, controlled and eliminated occupational hazards.

Factory of Ningxia Qingtongxia Cement Co., Ltd.



Decompression and counseling lecture

Data Review 2018

3

deaths incurred due to safety responsibility accidents

101

industrial accidents recorded

Data Review 2018

Completion rate for the check-up of employee **94.15%**

Completion rate for establishing health archive for employee **96.88%**

Newly increased occupational disease **1**

Number of organized emergency drill

9,537
times

Number of participants

272,400
person-times



Site Safety Training for Zambia Project

Management of hidden dangers

In 2018, we continued to comprehensively promote the construction of double prevention mechanism, carefully organize fellow enterprises to carry out post-holiday rework, flood season, autumn and winter safety production inspection, the special evaluation and inspection for major hazard source of dangerous chemicals as well as various forms of emergency drill by focusing on the actual conditions of the enterprise and key safety links, and promote emergency disposal capacity.



Fire drill

Education and training

Safety is based on the principle of people-oriented and education-first. We constantly improved the form of safety education in 2018, and organized three sessions of further education training classes for certified safety engineers with 328 participants. Meanwhile, we also carried out online training for above 10,000h accumulatively. The group and all member units participated in the "safety production knowledge competition" held by the Ministry of Emergency Management,

accumulatively answered about 200,000 questions. Both the safety awareness and quality of employee were constantly improved in the process.

Number of people participating in occupational health safety related training

1.72m
person-times

Growth promotion

Protection of rights and interests

We are in strict accordance with the Labor Laws, Labor Contract Laws and other laws and regulations, signed labor contract with the employee legally, respect and protect all human rights internationally recognized, carefully follows the basic right in work confirmed by the national and international labor organization; take active measures in reinforcing all types of paid leave system, and build sound salary and welfare system; maintain employee privacy, care for vulnerable groups, prohibit disturbance and abuse as well as child labors, and prevent any form of slave labor; reinforce democratic management and the opening of factory affairs, ensure equal payments for both male and female workers, and protect employee privacy; encourage

fellow enterprises to handle accidental comprehensive insurance and other supplementary insurances for employee by combing actual conditions of the enterprise, ensure seamless docking, and work hard to create a safe, healthy and comfortable working environment for the employee.

Improve capacity

The group advocates "spending time on studying, and focusing on work", adopts "focusing on inner training, supplemented by external training", "introducing and going out" equal stress training mode, and shares education resources; encourage the employee to establish lofty ideal, communicate with each other actively, and monthly convene operational analysis conference, to let the employee share their learning tips and

management experience; focus on the quality cultivation of the employee, create distinct enterprise talent quality promotion model, and improve the executive capacity, professional quality and cultural identification of the employee.

Data Review 2018

Female manager
3,151
people

Ratio of female manager in management layer
18.8%

Disposal completion rate of workers' congress proposal
92.31%

Local employee
137,000
people



The 7th Young & Middle-aged Class is successfully opened

On October 21, 2018, CNBM 7th Young & Middle-aged Class was successfully opened as scheduled. This is the seventh time for the group to successively select young and middle-aged cadres with strong business capacity, good work performance, excellent comprehensive performance and development potential for intensive training (totally 48 participants), to constantly reinforce the construction of the leader backup team.

This training will continue to follow the action learning route of "learning knowledge, sharing experience, creative group research of problems, actual action", adhere to the guidance of Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era and the spirit of the 19th CPC National Congress, focus on key and difficulties in enterprise development, carry out in-depth discussion and solution of difficulties, promote development ideas, and gather talents for group development.

Career promotion

We promote the establishment of the scientific evaluation system, form evaluation result and salary system as well as the comprehensive motivation and occupational development mechanism that organically combines employment (dismissal) and post adjustment;set dual-channel occupational development for the promotion of employee post, and meet different talent growth demands by management post and occupational post; promote internal communication of employee, their exercise at temporary

post, grass-root exercise mechanism, effectively configure international human resources of the group, cultivate compound talents, and closely combine employee,development and enterprise growth.

Cultural environment

Three-principle: Leniency, tolerance and ease

Three-capacity: Unity, affinity and cohesion

Vocational demands

Three-strict: Be strict in cultivating one's moral character, preventing the abuse of power and disciplining oneself

Three-practical: Be steady in planning matters, starting undertakings and conducting oneself

Five-feature: Possess learning ability, market awareness, professional attitude, professional level and ideological level

Eight-focus: Adhere to policies, the overall situation, undertakings, dedication, solid work, actual effects, integrity and self-discipline

Employee Quality Model of CNBM

Code of conduct

Humility, reverence, gratitude and decency

Cadres' norms

Behave meticulously, work meticulously, exercise power meticulously, make friends meticulously

© Fusion Camp for New Employee Team of Sinoma Overseas Engineering Co., Ltd.



Data Review 2018

Training input
251m
yuan

Hold and organize to participate in
75,157
sessions of training

Annual training participated by the employee
4.85m
hours

Happy 'Little Material'



Spring outing

Enthusiastic poverty alleviation

We pay high attention to the life of employee with difficulties and the disabled employee, establish consolation, care, difficulty support mechanism for them, publish Difficulty Support and Consolation Management Method for Employee in the Headquarters of the Group, and implement normalized difficulty support for the employee, and make elderly employee, employee with work injuries and retired groups with difficulties feel the warmth of the enterprise.

Improve the environment

We pay high attention to balancing the work and life of our employee, try our best to create a comfortable and safe working environment for the employee, and provide protection facilities, protection measures and special treatment for pregnant women, nursing women and other special groups; maintain legal rights, interests and special interests of female employee,

ensure them to enjoy prenatal check, maternity leave, breastfeeding leave, birth insurance reimbursement, and childbirth allowance. Hold 5,027 employee activities throughout the year, to effectively adjust the work pressure of the employee, and reinforce the cohesion of the enterprise.



Swimming contest



Developing activity for the youth

CNBM 3rd Badminton Friendly Match for Beijing Enterprises was successfully held

In November 2018, "Triumph Science & Technology Cup" 3rd Badminton Friendly Match for Beijing Enterprises sponsored by CNBM Work Union and Youth League committee was successfully held in Beijing, and 15 Beijing enterprises of the group participated in the competition. This competition is a team competition, and includes five projects, including the mixed doubles, men's singles, men's doubles, women's singles, and women's doubles. Players are enthusiastic about the competition, with climax and cheers after another. By fierce competition,

China United Cement Corporation, Group Headquarters, China Building Materials Academy, Beijing Sinoma Synthetic Crystals Co., Ltd. respectively won the top four, while Triumph Science & Technology Group Co., Ltd., Geological Exploration Center, CNBM Company Limited respectively won Excellent Organization Award, Fair Competition Award and Spiritual Civilization Award.



Consolation to employee

Data Review 2018

Consolation to special employee, and assistance to employee with difficulties

700m yuan

Consolation to special employee, and assistance to employee with difficulties

10,254 person-times

Corporate Citizenship



We attach great importance to fulfilling our community responsibilities, adhere to localized operations and deepen the Belt and Road Initiative so as to pursue the common development and growth of enterprises and regions; by pairing ambition support, education intelligence support, industrial poverty alleviation, make certain contributions to getting rid of poverty and solving problems; by characteristic social public welfare and volunteer activities, return to the society, and perform responsibilities as a corporate citizen with practical actions.



Accumulative total overseas investment USD

3.61bn

Special fund and material input for poverty alleviation

32.47m
yuan

Number of people benefitting from targeted poverty alleviation

17,672

Carry out volunteer activities

44,445
h



SDGs Respond

1 NO POVERTY



2 ZERO HUNGER



10 REDUCED INEQUALITIES



© Egypt GOE-BENISUEF6X6000tpd undertaken by Sinoma International Engineering Co., Ltd.

Belt and Road

Construction upgrading

In the past 10 years, we have built a total of 312 large-scaled cement lines along the Belt and Road, which can occupy 65% of the global market; There are above 30 10,000TPD production lines in the world, and 20 lines are built by us. Up till year-end 2018, the group's overseas business can involve 170 countries and regions, and 71 newly signed contracts (exceeding USD 5 million) of overseas engineering project.

"Two-emphasis" of CNBM in the Belt and Road

Set up building material industrial park

While being engaged in making cement by the upstream and downstream industries, make comprehensive use of limestone mine resources, and build aggregate, commercial concrete, shale brick and other projects.

Build manufacturing base in mature business sales region

Accumulate rich market resources by years of sales operation, move the manufacturing base forward and build factories in local



Indonesia Baya 10,000TPD cement production line undertaken by Sinoma International Engineering Co., Ltd.

- Invest in and construct building materials industrial park in Zambia and Algeria
- Invest and acquire cement factories in Mongolia and Macao
- Invest in and build glass fiber production base in South Africa, Egypt and America
- Invest in building materials overseas logistic parks in Dubai, Tanzania and other countries
- Invest in and set up building materials & home chain supermarkets in Papua New Guinea, Vanuatu, Tanzania, Zambia and other countries



Production workshop of Jushi Egypt Glass Fiber Co., Ltd.

CNBM Zambia Industrial Park is an important investment project of Chinese enterprises in Zambia. After the products are introduced, it will provide qualified and cheap construction material products to Zambian market, and create above 2,000 employment posts and big taxes to the local directly or indirectly, and exert an obvious effect in driving relevant motor transport, material packing and service industry. The completion and production of CNBM Zambia Industrial Park can not only reflect Sino-Zambia friendship, but also marks that the cooperation of the two countries in productivity has reached to a new height.

—Ambassador of China in Zambia, Li Jie



CNBM Zambia Industrial Park has been officially completed and put into production

On July 26, 2018, the Completion and Production Ceremony of CNBM Zambia Industrial Park was successfully held in the capital of Zambia, Lusaka. Edgar Lungu, President of the Republic of Zambia attended the ceremony and announced that the project has been officially completed and put into production.

CNBM Zambia Industrial Park regards the economic and social development and industrialization of Zambia as the objective, and integrates the wisdom and perspiration of workers in two countries. In the construction process of the industrial park, it has taken active measures in performing social responsibilities, donated to build hospitals and schools in the local community, and also donated to Zambia

Aids Prevention and Control Foundation, drilled and repaired roads for villagers around the park.

The industrial park will continue to be guided by the "innovation, performance, harmony, and responsibility" value core of the group, adhere to cooperation and mutual benefits, integrate Zambia, and promote the economic development of Zambia by qualified construction material products and service, and make bigger contributions to the friendship development of the two countries.



Cooperation and win-win

According to President Xi Jinping, "Despite you go alone fast but you cannot go farther unless we unite as one." By virtue of the Belt and Road Initiative, we closely cooperate with other Chinese enterprises and foreign transnational corporations in co-creating community with a shared future for mankind.

Cooperation with state-owned enterprises: implement multiple cooperation projects with CITIC, CSCEC and CRSS in creating a "grand fleet".

Joint development among private-owned enterprises: establish mixed ownership enterprises with experienced local private-owned enterprises to realize win-win.

Cooperation with transnational corporations: focus both on "going global" and "bringing in", introduce foreign advanced technologies to prompt high quality development and promote developing the third party market with transnational corporations.

Participation in international industrial organizations: improve the green and sustainable industrial development with enterprises of all countries, build up a positive corporate image of Chinese excellent building materials suppliers, continue to strive for Chinese economy and enterprises, and contribute to the industrial collaboration and regulations. Since China National Building Material Group was elected as founding president of World Cement Association, it has presided over World Cement Association Global Climate Change Forum and the 2nd General Meeting of World Cement Association calling upon world cement suppliers to take measures with low carbon, energy conservation and emission reduction, face with world climate change in a positive way and contribute to the sustainable development of world cement industry with the strength and intelligent of Chinese people.

Innovation of services

We are positively developing a "foreign industries + technologies + services" innovated ecosystem and initiating high level, diversified and all-inclusive cooperation in technology with universities, scientific research institutes and government authorities of countries along the Belt and Road. We are also extending our service industry chain, enabling the development from

the original sole EPC into "five-in-one" value-added services including the industrial training and service system, testing and verification system, international technological cooperation system, talent training system and joint development with science parks of universities.



The signing ceremony of Sino-Egyptian Joint National Laboratory for High Performance Fiberglass and Composites

Integration into communities

We adhere to the principle of "contributing to the local development, cooperating with local enterprises and getting along well with local residents" the same time we positively participate

in the development of the Belt and Road initiative and facilitating the cooperation of capacity development, exerting efforts to the local communities, residents and the society.

President Xi Jinping witnessed the signing ceremony of the group

In November, 2018, Chinese President Xi Jinping paid a state visit to Spain, accompanied by Song Zhiping, Chairman of the Board. Song Zhiping attended many important top talks and associated activities. He attended the founding congress of Sino-Spanish Entrepreneurs Council and was elected as Member of Committee, interviewed by national leaders of both countries. In the witness of national leaders of both countries, a cooperation agreement for developing green BIPV project with BHS was signed. Once the project is finished, it will become one of the model projects for the cooperation between China and Spain in the area of green architecture, which is of significance to demonstrating the excellent achievements of cooperation of capacity, the publicity and further developing the bilateral trading.



President Xi Jinping witnessed the signing ceremony of the group

Data Review 2018

USD
55.56m
of total overseas tax paid

USD
871,300
of total overseas charitable donations

18,098
of jobs created



Donations for the disaster area of Attapeu, Laos



Endow for local schools



Visit local employees in a project in Argentina

Targeted poverty alleviation

Since 2002, China National Building Material Group has established targeted poverty alleviation projects in Shitai County, Anhui (county of severe poverty), Jingyuan County, Ningxia (Liupanshan District), Zhaoyang District of Yunnan, Yongshan County, Suijiang County (Wumeng Mountain District) the so-called "four counties and one district". Centered on the "six major strategies" including supporting people's livelihood, industries, employments, medical care, education and e-commerce, we have contributed to the targeted poverty alleviation projects in those areas. In 2018, with our efforts, Jingyuan County, Ningxia and Suijiang County, Yunnan were getting rid of poverty, according to the preliminary evaluation. Shitai County, Anhui, Zhaoyang District, Yunnan and Yongshan County also successfully finished all annual plans for targeted poverty alleviation, laying a solid foundation for the completely anti-poverty.



Inspect the roads of villages in poverty



Villagers of Bitan Village, Shitai County, Anhui

Data Review 2018

32.47m

Yuan totally invested as special funds for targeted poverty alleviation projects

17,672

people alleviated from poverty

Implement and realize poverty alleviation--field research by Song Zhiping for targeted poverty alleviation projects by Yunnan Zhaotong Group

From October 22 to 24, 2018, Song Zhiping, Secretary of Party Committee and Chairman of China National Building Material Group and delegates paid a visit to the site of targeted poverty alleviation projects in Zhaoyang District, Zhaotong City, Yunnan Province, Yongshan County and Suijiang County, learned about the implementation of work and development of the projects, and made on-site office work to resolve the local problems.



Research and survey at health center, Shouwang Village, Zhaoyang District

By multiple methods, we carry out the targeted poverty alleviation projects, positively integrate resources of all sides, donate funds, equipment and hire employees through the projects. We also select cadres with excellent ideological and political qualities and abilities to provide effective supports for counties of targeted poverty alleviation projects by means of taking a temporary post. The funds for targeted poverty alleviation projects in those counties are primary used for the development of infrastructure, geological hazard control, industries, medical care, sanitation, education, e-commerce and training. By virtue of the public benefit e-commerce

platform for poverty alleviation, the group has promoted the online sales of characteristic agricultural products supplied by Shitai County, Anhui Province, Zhaoyang District, Zhaotong City, Yunnan Province, and Suijiang County. In addition, the group has also strengthened the poverty alleviation for employment for corporations in the southwest area and organized special job fairs.



Research and survey at Jing Yuan County, Ningxia

1
Developed driving forces through developing industries in poverty alleviation

In Shitai County, Anhui, since 2015, the group has invested 200 million yuan in establishing two ITO conducting film production lines, with annual output value of 60 million yuan and profit and tax of 12 million yuan. In Jingyuan County, Ningxia, the group has also invested 10 million yuan in developing "beautiful village" poverty alleviation projects in Yangling Village, creating a series of pilot projects and excellent projects for the poverty alleviation including the health care facility, village history museum, happy farmhouse, beef cattle breeding center and tourist trail. In Wei County, Hebei, Triumph Science & Technology invested 150 million yuan in 5.0 neutral borosilicate medicinal glass packing material, with annual output of 20,000 tons, profit and tax of 600 million yuan, and 1,700 new employments. In Tibet, Qilianshan Cement Group invested 1.38 billion yuan in establishing two cement production lines. Once it's established and reaches the designated capacity, it's estimated to reach annual output of 2.4 million tons of cement clinker contributing to the infrastructure development of Tibet.

2
Well-being created by e-commerce projects for poverty alleviation

By creating a "Hebaodan" e-commerce platform, the Group has realized all-round online and offline promotion of high quality original agricultural products covering all area of targeted poverty alleviation villages by means of "government supervision-organization by cooperatives-supply by peasants-operation by platform" multiple cooperation mode, regular sales, pre-sales and crowd-funding. Meanwhile, the platform has also provided special poverty alleviation supports for local cooperatives and peasants including e-commerce training and marketing activities. Since the launch, the platform has helped the agricultural products of "the four counties and one district" to sell to 29 provinces, 168 counties and 16,000 families in China, associated 12 leading enterprises and cooperatives. A total of 1,745 families of peasants realized increase in income.



☉ "Purchasing instead of donating" highland eco-organic rice



☉ Kushan Harvest Festival

In 2018, the group selected 20 excellent cadres from the headquarters and subordinates and appointed them to temporary posts in areas in poverty to contribute to the poverty alleviation projects. Cadres established 11 cooperatives in Shitai County, Anhui, realized organic connection between families living in poverty and modern agriculture, sold and assisted in the sales of agricultural products with revenues of 1.44 million yuan. Zhao Jian, First Secretary of Yanglin Village, Dawan Town, Jingyuan County was awarded "Excellent Individual" by Jingyuan County government in 2018 for poverty alleviation projects.

3
Created endogenous power through employment in poverty alleviation

The group has given play to its resources and organized grass-roots cadre training themed on "2019 Analysis on Political and Economic Trend" in Shitai County, Anhui. A total of 108 members were trained and two local cadres were invited to attend young and middle-aged cadre training class of the group and mid and long-term operation and management training class for leaders as talents developed for the poverty alleviation projects. In Yongshan County, Yunnan, trainings for technicians and leaders for wellness were also hosted and 90 members were trained after the three training periods. Triumph Science & Technology, Southwest Cement and Sinoma respectively held a special job fair for poverty alleviation projects in Yongshan County, Yunnan and Shitai County, Anhui. A total of 147 members were recruited including 83 registered low income residents.

4
Built the path of poverty alleviation through promoting sales of cement

Southwest Cement has positively been dedicated to the targeted poverty alleviation projects in Guizhou Province, insisting on providing preferred supplies and favorable price for the targeted poverty alleviation projects. By the end of 2018, 5.04 million tons of cement were provided in a favorable price lower than the market price for various levels of local projects including "beautiful village projects", road developing people-benefit project, "one case one meeting", "three restoration and two reinforcement", with 287 million yuan discounted. Besides, the company has also opened up a green supply channel for the targeted poverty alleviation projects of governments at the peak time, becoming backbone force for the poverty alleviation in Guizhou Province.

5
Contributed CNBM's love through public welfare platform

"Shanjian Public Welfare" fund was established by the group in June, 2018, committed to the targeted poverty alleviation projects, supporting Tibet and Sinkiang, disaster and emergency relief, voluntary services, assistance to employees and assistance to overseas construction. Since the establishment of the fund, donations of 16 million yuan have been collected, including 6 million yuan donated voluntarily by cadres and employees of the group.



☉ Donations by employees

Yumai sisters of Tibet who had wrote a letter to President Xi Jinping before moved to Tibet-style villa

Yumai Village is hard to reach: You have to depart from Lhasa, travel 400km southeastwards and arrive in Longzi County, Shannan City, take another 197km journey across Yudou Village, climb over Mount Rila 4,627m tall and finally reach Yumai Village. During a long time in the 20th century, two sisters named Drogha and Yang-Zom from Yumai Village insisted on safeguarding the territory of China with their father by grazing and patrolling at the border. As the 19th National Congress of the Communist Party of China is coming, Drogha and Yang-Zom are writing to President

Xi Jinping to report their experience of safeguarding the borderland and changes of their hometown. President Xi Jinping replies to encourage their protection of the borderland of the past several decades. Since May, 2018, BNBM House has strived so hard on the icy land of Tibet giving full play to its new housing technologies and opening up the accelerating construction of Yumai Village into a fairly well-off village.....



Scan to check the report



Public welfare

China National Building Material Group, as one of the leading enterprises for building materials in the world, has spared no effort in the area of education supporting, voluntary services and the other public welfare areas. It can be said that fulfillment of social responsibilities and dedication into the public welfare has become a corporate character of China National Building Material Group. The group also inspires employees to take part in social public welfare activities to devote their love and care. In 2018, the group invested 1.26 million yuan in the voluntary activities. The number of volunteers reached 6,858 and foreign donations reached 62.91 million yuan.



Little Material settled in Beijing Happy Valley



Visit the elderly



Voluntary blood donation

Data Review 2018

44,445
hours of voluntary activities

1,821
activities supported or participated for women and children protection or rights for the disabled

19
corporate non-profit funds/foundations established

Little Material settled in Beijing Happy Valley show special "YOUNG" on Children's Day

Little Material, awarded "Rookie Cartoon Character" for centrally-administrated enterprises at the age of 1, settled in Beijing Happy Valley at the age of 2 and had much fun with children on Children's Day of 2018!

On the afternoon of June 1, 2018, a group of adorable cartoon characters showed up in Beijing Happy Valley. Little Material performed "C Li C Li" dance and "Paihuiwu" with "Guozi Xiaoxin" and the other cartoon characters of centrally-administrated enterprises. Tens of thousands of tourists were attracted on the site. From Children's Day of this year, Little Material will settle down in Happy Valley in a brand new physical image and children may take a picture with him at any time. In the future, Little Material will work harder and make

closer relationship with people and delivery positive energy with his enthusiasm! Let's shake our body for love!



Scan to listen to the songs of Little Material See how Little Material show special "YOUNG" with dance



"Shanjian Public Welfare" fund of China Volunteer Service Foundation and China National Building Material Group was launched in Beijing

On June 20, 2018, "Shanjian Public Welfare" fund, co-sponsored by China Volunteer Service Foundation and China National Building Material Group was launched in Beijing.

In order to fully strengthen the voluntary services and improve the harmonious development, China Volunteer Service Foundation and China National Building Material Group joined hands in launching "Shanjian Public Welfare" to organize series of public welfare activities including targeted poverty alleviation projects, supporting Tibet and Sinkiang, disaster and emergency relief, assistance to employees and assistance to overseas construction by collecting more resources through public fundraising. The initial funding of "Shanjian Public Welfare" fund is 10 million yuan and it will raise more funds in the future to support more public welfare projects and advocate positive energy.



Technological Innovation



The innovation is our core competitiveness, and is also our fundamental strategy to respond to changes in the development environment, enhance the development motivation, grasp the development initiative, and better adapt to the new normal of development. We always adhere to scientific and technological innovation to drive the industrial upgrading, devote ourselves to overcoming international and industrial problems. We will make progress together with industry partners in an open and inclusive spirit, and strive to stand in the forefront in the wave of the fourth industrial revolution.

The expenditure for scientific and technological activities was

9.53bn
yuan

The sales revenue of new products was

55.59bn
yuan

Hold a total of

10,967
patents



SDGs Respond



Carbon fiber carbonization line

Guarantee of strength



State Key Laboratory of Green Building Materials, China Building Materials Academy

23,098
scientific and technical personnel

5
academician workstations

14
postdoctoral scientific research stations

1
center for post-doctoral studies

Innovation ability

Innovation is the primary driving force. CNBM has formed the domestic largest and strongest integrated technology development center in the fields of building materials and inorganic nonmetal represented by Scientific Research Institute, National Key Laboratory, National Enterprise

Technology Center and other innovative platforms. The number of national enterprise technology sub-centers ranked first among central enterprises. In 2018, the expenditure for Research and Experimental Development of the Group was 8.19 billion yuan.

National Enterprise Technology Center	15
National Engineering (Technology) Research Center	8
National Scientific Research Design Institute	26
National Key Laboratory	3
Industry Key Laboratory	7
National Engineering Laboratory	1
National Quality Inspection Center	13
Industry Quality Product Testing Agency	20
Overseas Research & Development Organization	5
Product Evaluation Laboratory	10
Commission on Science and Technology for Development	6
National and International Scientific and Technological Cooperation Demonstration Base	3
Provincial and Municipal, Industry Research and R&D Center	325

CNBM's scientific research institutions

Human resource development

We implement a strategy of strengthening the enterprises with talents, establish the academician workstation and center for post-doctoral studies, and implement the "Thousand Talents Program" to introduce talents; pay attention to the intellectual property protection, improve the incentive guarantee mechanism and strengthen the incentives for the transformation of scientific and technological achievements, long-term equity and talent innovation to retain talents. In 2018, we actively

carried out the investigation of stock ownership dividends of scientific and technological enterprises and guided qualified enterprises to expedite the implementation. Sinoma International completed the registration of stock option of 489 incentive objects; South New Materials explored the implementation of mixed-ownership reform; Southwest Cement actively practiced the excess profit sharing and achieved good results.



The science researchers of Bengbu Design & Research Institute for Glass Industry

Leading and transcending



© CNBM Triumph Robot (Shanghai) Co., Ltd. - Flat glass production line cold-end hierarchical stacker robot

"Integration of informatization and industrialization"

We always adhere to taking ensuring information safety as the bottom line, promote "integration of informatization and industrialization", promote the establishment of the unified network system and business application system, and gradually form a promotion route of management integration, operation network, and production intelligence.



© Digital management and control platform

Innovation of business model

Through the introduction of the "Internet +" development concept, CNBM has realized the industrial transformation driven by technological transformation and helps the innovation of business model. In 2018, the "mass entrepreneurship and innovation for the whole process of Jushi intelligence under the manufacturing mode" was identified by the Ministry of Industry

and Information Technology as the pilot demonstration project for the manufacturing "mass entrepreneurship and innovation" platform of the reform direction under the manufacturing mode.

Spare no effort to make an "Internet + Digitization" management and control mode

Since 2007, Qilianshan Cement has implemented the ERP system basic business platform project based on Microsoft Dynamics. After more than ten years of optimization, transformation and upgrading, Qilianshan Cement has formed an "Internet + Digitization" production and operation management and control information system, provided the preliminary data foundation for enterprise decision analysis and created an "Internet + Digitization" management and control mode with "Qilianshan" characteristics.



- 72 agents and 19 projects are got in the "Green Town" mode
- The "Intelligent Industry" mode covers more than 60 countries
- The projects in many places are newly signed in the "Intelligent Agriculture" mode, with the contract amount 2 billion yuan
- The "Building Material and Home Chain Supermarket" mode is rapidly replicated in Africa, and shops in Tanzania and Zambia have been put in operation one after another
- The "Bulk link" mode strengthens the cooperation among central enterprises and more than 300 projects have been signed
- Tanzanian "Overseas Warehouse" has been completed, and South African warehouse and other overseas warehouses are accelerated
- The test and certification business received the approval of the national inorganic nonmetal new material testing and evaluation platform



Ⓧ Zhongfu Carbon Fiber Core Cable Technology Co., Ltd.-Carbon Fiber Core Cable Production Line

Scientific and technological achievements

We attach great importance to the transformation and application of innovation results. By the end of 2018, the Group accumulated 10,967 valid patents, including 2,765 patents for invention, and cultivated a number of high-value patents such as high-performance carbon fiber, E-series glass fiber and lithium battery diaphragm; 48 key technologies were included in the national key R&D plan, intelligent manufacturing and other catalogues,

"Key Technology and Application of Dry-jet Wet Spinning Kiloton High Strength/ Hundred-ton Medium Modulus Carbon Fiber Industrialization" of Zhongfu Shenyang and "Key Technologies and Equipment for Building Glass Service Risk Detection and Reliability Evaluation and Applications" of China Building Materials Academy won the first and second prize of national scientific and technological progress.



Ⓧ Zhongfu Shenyang Carbon Fiber Co., Ltd. won the first prize of national scientific and technological progress

"Digital City" makes life better

The Geological Exploration in the Chinese Building Materials Center Team in Gansu Province actively builds the e-government version and public version of the Geographic Information Public Service Platform, breaks the data barriers among all government departments, improves the efficiency of collaborative operations and level of scientific decision-making, provides "one-stop" information services for eating, lodging and traveling of the public and improves the quality of people's lives. The intelligent Tianshui spatial temporal big data exhibition center is an important item The

center selects the data of 8 topics (macro economy, smart tourism, urban management, community management, space and time resources, ecological environmental protection, geological disaster and public resource transaction) in Tianshui to be displayed in a graphic chart; at the bottom, the three-dimensional model, oblique photography and point cloud data of the refined city are displayed via video, thus forming the three-dimensional holographic visualization center in Tianshui City and making the city life better.

Data Review 2018

Newly obtain
1,571
authorized patents

Newly obtain
385
patents for invention

Transformation rate of scientific and technological achievements
68.5%



Innovation and sharing

We continue to strengthen the production-research collaborative innovation, promote the transformation of scientific and technological achievements into technical standards, create an "Internet +" information service innovation platform, and establish the CSTM/FC03 and the Group Standards Committee; build a collaborative innovation consortium of enterprises, and determine 7 material cooperation directions through docking with COMAC; open up the "technology R&D + industrialization" collaborative

innovation full chain and establish a collaborative innovation model with capital as the link.

Constantly achieve the industrialization through significant technological innovations

- The melting rate of self-developed glass tank furnace is 3.5t/m² per day, reaching the international leading level
- The conductor with carbon fiber composite core was successfully applied to the 1,000kV transmission supporting ultra-high voltage project for the first time in the world.
- The world's thinnest 0.12mm ultra-thin electronic glass, 0.1mm TFT liquid crystal glass substrate, 540 °C high strain point glass, ultra-thin high-aluminum cover glass and 2.5D, 3D mobile phone cover glass realized the successful mass production
- The first domestic 8.5-generation TFT production line with independent intellectual property rights is under construction
- The carbon fiber composite motor body product with thrust termination structure has passed the assessment and verification of relevant tests

3 national SME public service demonstration platforms

757 academic exchanges activities held and organized

28,638 participants

Panel Production Workshop of Institute of Glass Science and Special Glass Fiber, China Building Materials Academy



Responsibility Management



We always adhere to the core concept of “efficient use of resources to serve the construction”, conveying the core values of “innovation, performance, harmony and responsibility” to each stakeholder, focusing on the organic combination of scientific and technological innovation and management innovation, striving for win-win coordination among the market, environment and society, insisting on harmony with competitors, nature, employees and society, and working together with stakeholders, such as investors, governments, employees, customers, partners, relevant groups, communities, media and the environment to build a better life.



SDGs Respond

17 PARTNERSHIPS FOR THE GOALS



369

quantitative indicators for social responsibility management

Ranked

9th

among Top 300 in China's Corporate Social Responsibility Development Index (2018)

113,782

person-times communication with internal and external stakeholders

GW-class copper-indium-gallium-selenium thin film solar energy efficient module production base (located in Bengbu City of Anhui Province)

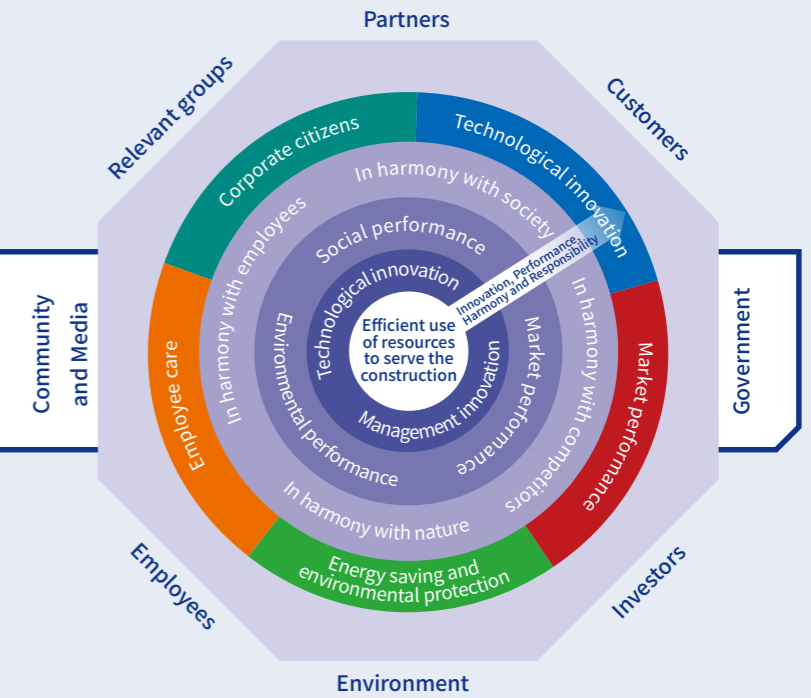
Responsibility value

Concept of responsibility

Starting from the demands of investors, government, employees, customers, partners, relevant groups, communities and media, environment and other stakeholders, we always adhere to the core values of "innovation, performance, harmony and responsibility", ultimately implement the concept of social responsibility in such five aspects as market performance, scientific and technological innovation, energy conservation and environmental

protection, employee care and corporate citizenship, insist on harmony with competitors, nature, employees and society, and pursuing win-win coordination among market, environment and society.

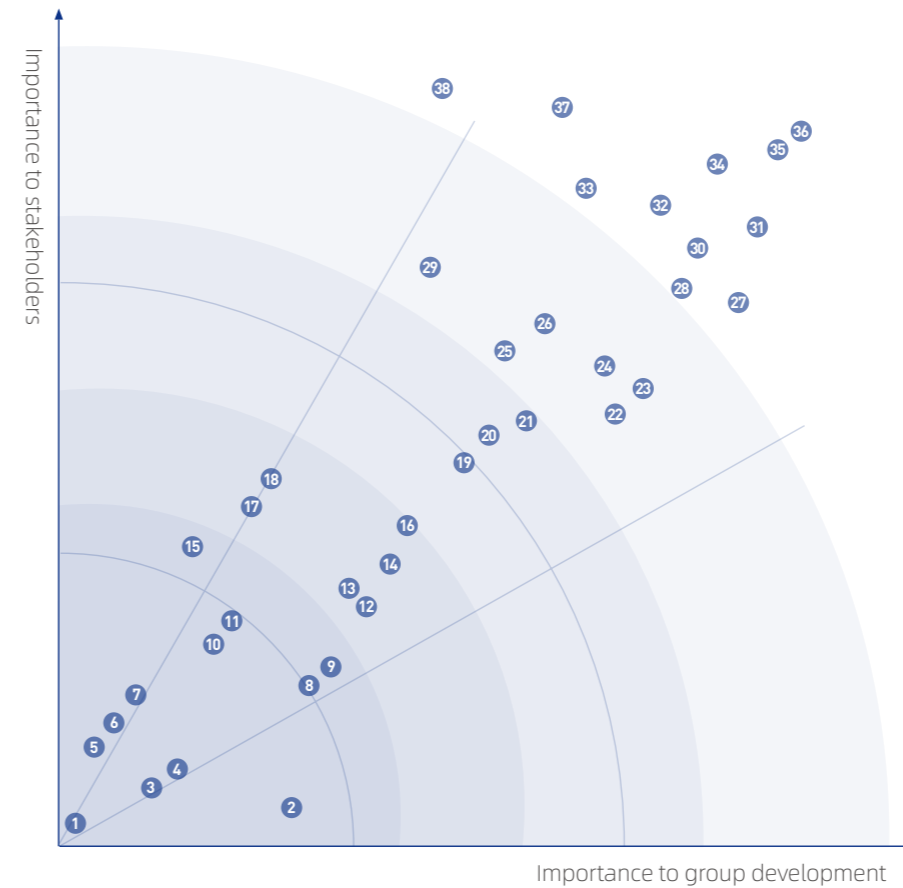
Model of CNBM Social Responsibilities



Selection of topics

Referring to the "Triple Bottom Line" theory and combining the current situation of social responsibility development and the characteristics of the group operation, we have defined the five responsibility frameworks of "market performance, scientific and technological innovation, energy conservation and environmental protection, employee care, corporate citizenship". Finally, we have determined the annual core issues of corporate social responsibility by sending questionnaires to stakeholders.

- | | |
|--|---|
| 1 Overseas community co-construction | 20 Employee rights and interests |
| 2 Information disclosure | 21 Green services |
| 3 Community integration | 22 Responsible supply |
| 4 Communication with stakeholders | 23 Concept of responsibility |
| 5 Public charity | 24 Green products |
| 6 Targeted poverty alleviation | 25 Cultivation of Innovative talents |
| 7 Green office and environmental public welfare activities | 26 Environmental management |
| 8 Advocating sustainable consumption | 27 Employee development |
| 9 Promoting industry development | 28 Supply chain management |
| 10 Democratic management | 29 Corporate governance system |
| 11 Responsible procurement | 30 Risk management and control |
| 12 Overseas development and international cooperation | 31 Green production |
| 13 Supply-side structural reform | 32 Strengthening party building and anti-corruption |
| 14 Enterprise reform | 33 Innovation management |
| 15 Intelligent manufacturing | 34 Safe operation |
| 16 Development of new materials industry | 35 Governing enterprises by law |
| 17 Transformation of scientific and technological achievements | 36 High-quality development |
| 18 Mechanism for customer complaint resolution | 37 Quality management |
| 19 Responsibility management | 38 Integrity management |



Social responsibility planning 2018-2020

Value of responsibility

- ◆ Deepening the concept of responsibility
- ◆ Deepening the integration of responsibility and business management
- ◆ Deepening the mechanism for employee responsibility fulfillment

Responsibility management

- ◆ Strengthening the top-level design of social responsibility
- ◆ Improving the organizational system of social responsibility management
- ◆ Strengthening the training of social responsibility talents
- ◆ Improving the performance evaluation of social responsibility

Responsibility communication

- ◆ Strengthening communication with stakeholders
- ◆ Creating an important and sustainable responsible brand
- ◆ Developing rich responsibility theme activities
- ◆ Creating a normalized responsibility communication platform with stakeholders

Responsibility sharing

- ◆ Enriching the social responsibility management platform
- ◆ Developing social responsibility benchmarking
- ◆ Strengthening research on responsibilities
- ◆ Strengthening external publicity
- ◆ Promoting the CSR report preparation of fellow enterprises

Responsibility management

We will incorporate social responsibility management into Group strategy, overall planning and daily operation, determine the organizational structure, target measures and enhancement priorities, and continuously improve the performance and level of social responsibility management.



☉ Panorama of Bulgaria Devnya Project

Data Review 2018

33,593
person-times of employees' social responsibility-related training

1,855
sessions of social responsibility events organized or participated

315
sessions of social responsibility assessments or evaluations

Organizational structure

Establish a social responsibility work promotion leading group as the top leading body headed by the chairman of the board of directors to lead and promote the social responsibility work of the Group.

Based on the headquarters functional organization for social responsibility management, guide and promote fellow enterprises to strengthen social responsibility management and actively implement the practice of fulfilling their responsibilities. 306 fellow enterprises have set up their social responsibility management organizations; according to the division of work, the functional departments of headquarters of the Group undertake coordination to promote special work.

With fellow enterprises at all levels as nodes, and in accordance with the unified requirements of headquarters, clarify the functional departments and managers, implement the social responsibility work plans and schemes, fulfill the work requirements, and actively implement the practice of fulfilling responsibilities. By the end of 2018, fellow enterprises had 1963 full-time and part-time employees for social responsibility management.

Ability improvement

Prepare and issue Corporate Social Responsibility Reports in China for Nonmetal Mineral Products (CASS-CSR 4.0) jointly with the Chinese Academy of Social Sciences.

Take the CNBM "Shanjian Public Welfare" Fund as an important platform to create a brand of social responsibility.

Publish and implement the Guiding Opinions on Promoting CNBM Social Responsibility and relevant other systems to systemize, standardize and institutionalize the management.

Use the "CNBM Social Responsibility Management Information System" to realize the online management of responsibility performance information and social responsibility managers; the system covers more than 1000 members.

Establish an index system of the Group social responsibility with 369 indicators in all to ensure the integrity of social responsibility reporting.

Strengthen pilot demonstrations, promote corporate accountability practices and participate in various training courses, such as China Social Responsibility 100 Forum.

Performance appraisal

Prepare and publish annual social responsibility reports and continuously improve the performance and management level through the process of preparation, benchmarking and evaluation; regularly publish reports and website columns, and periodically publish performance trends to establish an information disclosure system and build an effective communication platform.

Choose to participate in external performance evaluation, implement comprehensive evaluation and benchmarking in reporting quality, accountability performance and responsibility management, pay attention to the progress and effectiveness of social responsibility of the industry, supply chain enterprises and other related enterprises, learn from each other's strengths and make up for each other's weaknesses for continuous improvement.

In the process of promoting the integration of social responsibility and Group operation management, form a "six-star enterprise" evaluation system to continuously improve its own performance level. In 2018, 22 fellow enterprises were awarded with "Six-Star Enterprise".

Continuous improvement

Give full play to the resources of the think tank of internal management experts to guarantee the applicability and operability of the substantiality and mechanism of social responsibility management.

Establish cooperative relations with professional organizations, grasp the development trends of social responsibility at home and abroad, and ensure the professionalism and compliance of the Group's social responsibility management system.

Have the endogenous responsibility management extended gradually to extroverted responsibility management, such as brand responsibility activities, deep responsibility communication and theme responsibility publicity, so that the influence of responsibility could be exerted from inside to outside.

Continuously improve the publishing rate and quality of fellow enterprises' reports, and promote the systematization and normalization of corporate accountability performance.

Six-Star Enterprise

In order to enhance the level and competitiveness of corporate social responsibility management and promote the management ideas and methods of "Eight Management Measures" in the CNBM fellow enterprises, the Group has accelerated the construction of "Six-Star Enterprise" with "good performance, fine management, first-class environmental protection, well-known brand, excellent Party building, safety and stability", forging ahead towards the goal of the world's first-class enterprise.



Taishan Fiberglass Manzhuang New Area

Six-Star Enterprise Evaluation System

Evaluation Contents	Work Contents	Evaluation Indexes
Good performance	improve profitability strengthen asset Operation	operating income/income growth rate/net profit/net profit growth rate total assets/debt asset ratio/return on total assets/gross interest rate per unit product/sales price per unit product/per capita output/average industrial value added/average labor productivity
Fine management	implement "grid management and control" strengthen cost expense control practice "zero inventory" measures strictly control product quality	sales management cost of unit product /cost ratio in operating income/inventory/inventory turnover rate ratio of centralized procurement of goods/monetary asset/changes in interest-bearing liabilities/accounts receivable/other receivables
First-class environmental protection	actively protect the ecological environment vigorously develop circular economy	cleaner production grade/ proportion of annual environmental investment in operating income environmental management system certification/unit product energy consumption
Well-known brand	adhere to Integrity management promote brand building in an all-round way	credit rating evaluation/quality management system certification product quality certification/customer satisfaction
Excellent party building	steadfastly advance theoretical study adhere to and strengthen the leadership of the party strengthen the construction of Party building culture serve production and management adhere to the Party's management of cadres and talents strengthen grass-roots party organizations comprehensively strengthen party discipline strengthen publicity, ideological and cultural work	key work completion rate normalization of organization construction institutional employee proportion of party building funds
Safety and stability	enhance production safety effectively ensure the stability of enterprises	mild Injury rate per thousand people/rate of occupational health examination/pass rate of health examination/ standardized safety rating/employee satisfaction/employee loss rate

List for Six-Star Enterprises 2018

China United Cement Corporation (Qingzhou)	Sinoma Overseas Development Co., Ltd
China United Cement Corporation (Nanyang)	Beijing Triumph International Engineering Co., Ltd
Zhejiang Southern Sanshi New Materials Co., Ltd.	CNBM Triumph Robotics (Shanghai) Co., Ltd
Huzhou Huaikan South Cement Company Limited	China Non-metal Materials Mine Engineering Co., Ltd(Nan Jing)
Dafang Yonggui Building Materials Co., Ltd.	CNBMIL
Sinoma Cement (Luo Ding) Co., Ltd	Hunan Xianggang Ruitai Materials Technology Co., Ltd.
Lishui Tianshan Cement Co., Ltd.	China Building Material Test & Certification Group Suzhou Co., Ltd
Sinoma Gansu Cement Co., Ltd.	CNBM Technology Corporation Limited
Chengxian Qilianshan Cement Co., Ltd.	BNBM International Wood Industry Co., Ltd.
Huainan BNBM Co., Ltd.	CNBM (Chengdu) Optoelectronic Materials Co., Ltd
Jushi Egypt for Fiberglass Industry S.A.E	Geological Exploration in the Chinese Building Materials Center Team in Gansu Province

Responsibility communication

Around the demands of stakeholders, according to the principle of the “Triple Bottom Line”, we have classified and summarized the objects of performance from such dimensions as influence, dependence and representativeness, so as to strengthen the communication among stakeholders, increased the transparency of enterprise operation, keep abreast of the opinions and suggestions from internal and external stakeholders, and continuously improve the level of social responsibility management.



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Data Review 2018

15,734

sessions of communication between enterprise senior leaders and internal/external stakeholders

Stakeholders	Communication Mode	Focus	Response Measures
Investor	Periodic report Corporate report Promotion activities Shareholder dialogue and feedback New media and network platform interaction	Enterprise performance Interests of shareholders and creditors Authenticity, accuracy, timeliness and completeness of information disclosure Sustainability of development	Sustainable high-quality management Perfect information disclosure mechanism Improve the value of enterprises Regulate corporate governance Protect investors' interests
Government	Publication of laws and regulations Special reports and visits Information submission Assessment of work objectives Industry associations	Corporate governance Safety, environment and compliance requirements Secure supply Employment opportunities Development of local economy Response to climate changes	Operate in accordance with the law and implement national policies Sustainable high-quality management Tax payment Provide jobs Adhere to green manufacturing
Customer	Customer meetings and consultation Market research Daily contact Customer feedback mechanism Telephone service New media and network platform interaction Product packaging information	Enterprise credit Customer relationship Products and service quality Product innovation Health and safety	Provide high-quality products and services Advocate green consumption Improve quality management Protect customers' privacy Launch scientific and technological innovation Advocate sustainable consumption Standardize safety and environmental protection management
Partners	Contract negotiation Bidding conference High-level meetings Document and correspondence contacts Daily business communication New media and network platform interaction	Price and prompt payment Long-term partnership Profit distribution Information resources sharing Credit and reciprocity Risk prevention	Honesty and credit management Promote suppliers' responsibility performance Establish effective partnership Establish an effective communication mechanism
Employee	Employee congress Openness of factory affairs Labor contract Rationalization proposals Normal communication Letters and visits New media and network platform interaction	Enterprise performance Corporate governance Employee rights and interests Career development planning Complaint handling Occupational health Democratic management Openness of factory affairs	High-quality management Protect employees' rights and interests Provide competitive pay Improve employee welfare Strengthen Employee training Provide safe working environment and health protection Establish effective communication Improving democratic management
Community and Media	Sign public welfare agreements Participate in volunteer activities Daily contact Open day activities Media interview New media and network platform interaction	Planning affairs Environmental protection and response to climate changes Joint construction of a harmonious community Occupational safety and health	Establish and improve safety and occupational health management system Increase input Timely information disclosure Improve public welfare input Participate in community activities Promote green production and protect ecological environment
Social Organizations	Regular participation in meetings or activities Daily contact New media and network platform interaction	Environmental protection Promote sustainable development jointly	Play membership role Provide economic and technical support Establish a cooperative relationship

Sharing of responsibility

As a permanent member of the UN Global Compact and the Cement Sustainable Initiative (CSI), we have promoted the dissemination of the concept of global responsibility and its implementation through more diversified and internationalized platforms. In 2018, Chairman Song Zhiping won the first CEO Lifetime Achievement Award of Fortune, and worked with colleagues around the world to discuss the sustainable development of the industry.

We recognize and abide by the Ten Principles of the Global Compact and strive to contribute to the achievement of the sustainable development goals of the United Nations; actively participate in social responsibility sharing and

Guided by responsibility

initiative activities in different fields, participate in launching China Social Responsibility 100 Forum and rely on China Federation of Industrial Economics, China Building Material Federation, China Building Materials Daily and other platforms to disseminate ideas, share experiences and launch initiatives, and work with stakeholders to seek better ways of sustainable development.

In cooperation with the Corporate Social Responsibility Research Center of the Chinese Academy of Social Sciences (CASS-CSR), we have compiled Guide for Preparing Corporate Social Responsibility Reports in China for Nonmetal Mineral Products (CASS-CSR 4.0), participating in the research

on the independent contribution of Chinese enterprises to coping with climate changes and leading the new development of social responsibility in building materials industry.



Static Load Testing Site in CTC Xiamen Hongye Co., Ltd.

Data Review 2018

38,863

suppliers were evaluated and reviewed

The pass rate of environmental management system certification is

41.98%

for suppliers with long-term cooperation with our enterprise

The cooperation with

59

suppliers was terminated due to incompliance to corporate social responsibility

105

potential suppliers were rejected due to irregularities in corporate social responsibility

182,800

person-times of training was offered for suppliers in terms of safety, energy and laws, etc

Implemented liability procurement of

234.27bn

yuan

Supply chain driving

We issued the Management Measures for Group Material Procurement to implement the access system for supplier management for fully guaranteeing the equal rights and interests of small and medium-sized suppliers; incorporating social responsibility into the supplier evaluation system to urge suppliers to continuously improve their product quality; supervising and promoting suppliers to pay attention to employees' physical and mental health; deeply integrating the concept of responsibility into supplier evaluation, product design, strategic cooperation mechanism and other processes to guide stakeholders to implement responsibility management and promote sustainable development; focusing on "resources gathering", "models innovation" and "services supply" to have built a professional material distribution supply chain service platform in the field of building "YANGCAITONG" and thus realized the transformation and innovation from offline to online, Internet + project distribution and supply chain finance. Moreover, we have integrated the concept of social responsibility into procurement management, adhering to transparent procurement and making every effort to eliminate commercial bribery by promoting the integration of regional procurement and bidding, standardization of the bidding process, transparency of the bidding performance and informatization of the bidding management; implementing localized procurement of bulk raw materials to reduce transportation costs; implementing green procurement and giving priority to the products low in carbon contents, excellent in environmental protection and low in environmental damages during production in the process of raw materials procurement; selectively purchasing clean energy and vigorously promoting the utilization of such non-fossil energy as low-grade energy, municipal waste and biomass energy; for such consumer goods as daily office supplies, trying to select the products that are simply packaged and can be easily recycled.

Responsible supply

We insist on fair dealing, fully promote the construction and certification of the quality management standard system in fellow enterprises and carry out QC group activities to integrate quality management into the whole process from raw materials entry to products delivery. Simultaneously, we have established a mechanism for evaluation feedback from customers, inviting customers to participate in product quality control and compensating customers for the loss really caused by product quality. We have set up a pre-sales consultation, in-sales reception and after-sales service system to respond to and deal with customers' complaints and inquiries at the first time, so as to improve customer satisfaction; we have a professional customer service team, able to provide professional technical training for dealers on a regular basis and organize customer training meetings to carry out product promotion and offer customers the basic knowledge of green building materials, the considerations in building materials selection and use, and the knowledge of product anti-counterfeiting; moreover, we have been always paying attention to protecting the privacy of customers and implementing a strict confidentiality system customers' personal data.

We practice the strategy of packaging simplification, continuing to implement bulk cement and naked glass products, simplify the packaging of plasterboard, glass fiber and other bulk products, and try to use renewable packaging materials, so as to reduce packaging waste on the premise of ensuring product quality and transportation safety. Moreover, we have established modern logistics parks for rational planning of supply and marketing as well as logistics projects, reducing resource occupation and ultimately improving sales efficiency. In addition, we have built a network sales platform, providing worldwide online trading services for building materials products to reduce carbon emissions from customers and sales employee during business travel.

Data Review 2018

There were **741** manufacturing fellow enterprises certified by quality standard system

A total of **1,474** kinds of products were clearly marked with safe use and environmental protection reminders on external packaging

Organized **63,893** person-times customers to participate in product knowledge popularization and customer training activities

The qualified rate is **100%** for main business products in national sampling inspection

99.74% customer complaints were solved

Bulk cement sales reached **31,900** tons

Honor of responsibility



📍 Mongolian Mengxin Cement Company

Won "Excellent Responsibility Corporate Award" by China Social Responsibility 100 Forum.

57 achievements won the National Building Materials Enterprise Management Modernization Innovation Achievement Award in 2017.

Won "New Record Major Innovation Project Award for Chinese Enterprises" and "National Gold Award for Excellent Engineering Design" .

Ranked 16th in Central Enterprise Brand Communication Rank 2007, 4th in "China's Manufacturing Enterprises Credit Top 100" in 2018 and 8th in "China's Enterprises Credit Top 500" .

Enterprise Technology Center was awarded as National Excellent Enterprise Technology Center.

Song Zhiping, Chairman of the Group and Secretary of the Party Committee, won the prize of "40 People in 40 Years of Reform and Opening-up: Ten Most Influential Innovative Persons in China" , won the prize of the "Annual Major Figure of Chinese Management 2018" , and was elected as the "China Annual Economic Figure 2018" and among the business leaders top50 in China for eight consecutive times.

Beijing New Building Material Public Limited Company became the only building material enterprise selected among Innovation Top100 of Chinese Enterprises 2018.

South New Materials Technology Co., Ltd. won the "Second Prize for Outstanding Achievements in Reform and Development of Chinese Enterprises" in the project "Restructuring and Integration, Professional Management and Control, value return and Remodeling New Pattern of Regional Ready-mixed Concrete Industry" .

Bengbu Design & Research Institute for Glass Industry won the "First Shi Changxu New Materials Technology Award" and the project "Development and Industrialization of Key Technologies and Complete Equipment for Ultra-Thin Touch Control Glass" won the "Project Award of China Industrial Award" .

Nanjing Fiberglass Research & Design Institute Co., Ltd. was awarded the title of "Best Practice Enterprise for National Corporate Culture Construction" .

Cao Jianglin, President of the Group and Chairman of China National Building Material Co., Ltd., was awarded "Best CEO" for seven consecutive years, as the top candidate of the "Best CEO" in the Asia-Pacific basic materials industry.

China National Building Material Co., Ltd. was awarded "Respected Company" in the sixth year in the Asia-Pacific Region and the title "Excellent Issuer of Corporate Bonds" by Shanghai Stock Exchange for the second time.

China Jushi Co., Ltd. was awarded the "China Industrial Award" and the "Most Respected Listed Company 2017 by Investors" .

South Cement was awarded the title of "Excellent Contributing Enterprises to China's 40 Years' Reform, Opening-up and Development" ; the project "Continuous Promotion of Lean Management for Comprehensive Enhancement, Restructuring and Integration of Corporate Overall Competitiveness" was awarded the "First Prize for Outstanding Achievements in Reform and Development of Chinese Enterprises" .

BNBM House Co., Ltd. won the title of "Demonstration Enterprise for Emerging Industry in National Building Materials Industry" .

Sinoma Energy Conservation Limited won the "Award for Green Governance of Board of Directors" in the 13th "Golden Round Table" Forum for Boards of Directors in China's Listed Companies.

Academician expert workstation of CBMA Quzhou Kinglass Quartz Co., Ltd. was awarded "Model Academician Expert Workstation 2018" .

101 fellow enterprises released their annual social responsibility reports.



CNBM

Future prospects

2019 is the 70th anniversary of the founding of the People's Republic of China and the key year for building a well-off society in an all-round way and achieving the goal of the first hundred years. China National Building Material Group Co., Ltd. will gather strength, work hard and make persistent efforts to make new progress in reform and innovation, in integration and optimization, in "precision" management, in the Belt and Road Initiative and in the work of Party building, and create glory again in the journey to build a world-class building material enterprise with global competitiveness!

We will continue to provide support and services for the structural adjustment and technological innovation of the building materials industry, strive to create an orderly and healthy market environment for the industry, and commit ourselves to building a new era of coexistence, sharing, collective richness and common prosperity for the whole industry.

We will face the new year with an open, integrated and shared mentality, promote the international community to adapt to the reality of China's peaceful development and

create an inclusive and open international environment.

We will vigorously carry out the corporate internal mechanism construction and advocate the distribution mechanism shared by owners, operators and workers, so as to make enterprises full of vitality and let everyone create and share wealth through honest labor.

We are willing to work hard with builders from all walks of life and under the strong leadership of the Party to further promote the structural reform of the supply side, write a new chapter for the healthy and sustainable development of China's economy, dedicate to the 70th anniversary of the founding of the People's Republic of China, and make new and greater contributions to the realization of the great rejuvenation of the Chinese nation!

Responsibility performance

Market performance

Fortune Top 500 Building Material Enterprises in 2018

Ranking in 2018	Company Name	Operating income in 2018 (Million USD)	Country
231	Saint-Gobain	46,001.7	France
243	CNBM	44,701.2	China
382	CRH	31,069.4	Ireland
444	LafargeHolcim	26,545.3	Switzerland

Data Source: www.fortunechina.com

Cement Production in 2010-2018

(100 million tons)

Year	CNBM	China	Global
2018	3.4	22.1	39.5
2017	3.4	23.2	41.0
2016	3.2	24.0	42.0
2015	2.4	23.5	41.0
2014	2.5	24.8	41.8
2013	2.4	24.2	40.0
2012	2.7	21.8	38.0
2011	1.9	20.1	36.0
2010	1.7	18.8	33.1

Data sources: National Bureau of Statistics, U.S. Geological Survey

Total Operating income and profits in 2010-2018

(billion CNY)

Year	Operating income	Gross Profit
2018	348	20.66
2017	302.12	15.11
2016	261.23	7.58
2015	199.25	3.84
2014	250.43	13.01
2013	252.26	11.51
2012	217.43	11.16
2011	194.09	15.85
2010	135.36	7.56

Performance of Holding Listed Companies in 2018

(CNY)

Stock Name	Stock Exchange	Stock Code	Dividends per Share	Earnings per Share
CNBM	Hong Kong Exchanges and Clearing	3323.HK	0.18	0.96
BNBM	Shenzhen Stock Exchange	000786.SZ	0.46	1.46
China Jushi	Shanghai Stock Exchange	600176.SH	0.225	0.6778
Sinoma International	Shanghai Stock Exchange	600970.SH	0.265	0.78
Tianshan Cement	Shenzhen Stock Exchange	000877.SZ	0.38	1.1835
Ningxia Building Materials	Shanghai Stock Exchange	600449.SH	0.30	0.8956
Qilianshan Cement	Shanghai Stock Exchange	600720.SH	0.296	0.8435
Sinoma Tech	Shenzhen Stock Exchange	002080.SZ	0.243	0.7237
Triumph Science & Technology	Shanghai Stock Exchange	600552.SH	—	0.06
Sinoma Energy Conservation	Shanghai Stock Exchange	603126.SH	0.07	0.2136
Luoyang Glass	Shanghai Stock Exchange	600876.SH	—	0.028
Luoyang Glass Company Limited	Hong Kong Exchanges and Clearing	1108.HK	—	0.028
Ruitai Technology	Shenzhen Stock Exchange	002066.SZ	—	0.0748
CTC	Shanghai Stock Exchange	603060.SH	0.265	0.8689

Data source: National Bureau of Statistics, United States Geological Survey

Total Operating income and Profit of Enterprises above Scale in China Building Materials Industry in 2010-2018

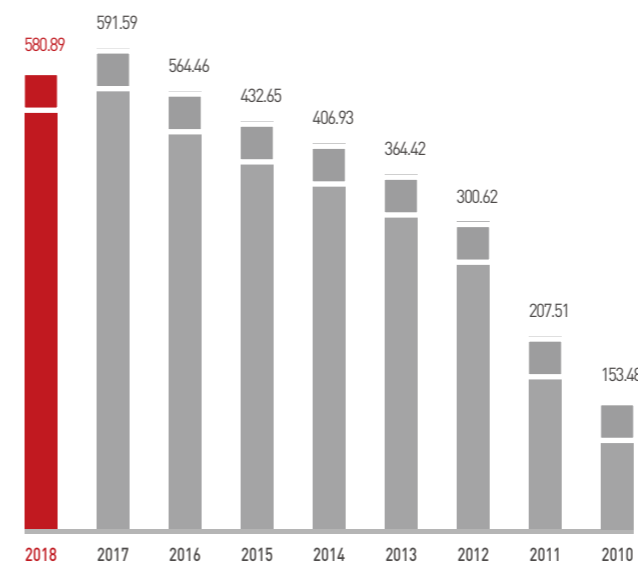
(billion CNY)



Data Source: China Building Material Quantity Economic Supervision Society

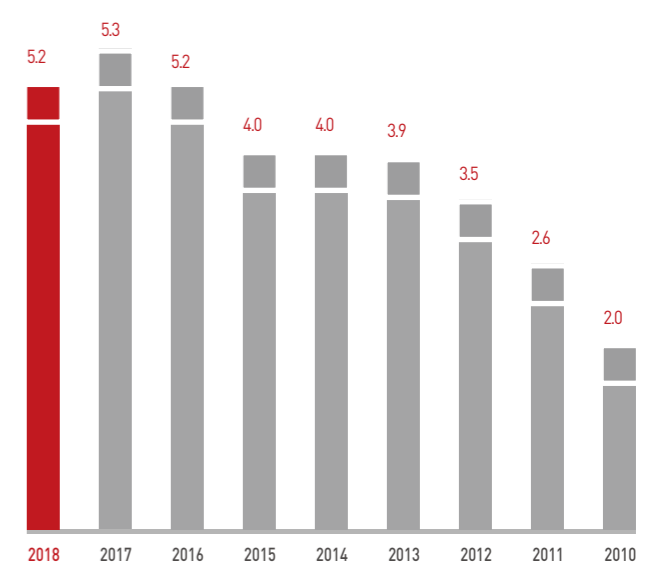
Total assets in 2010-2018

(billion CNY)



Cement productivity in 2010-2018

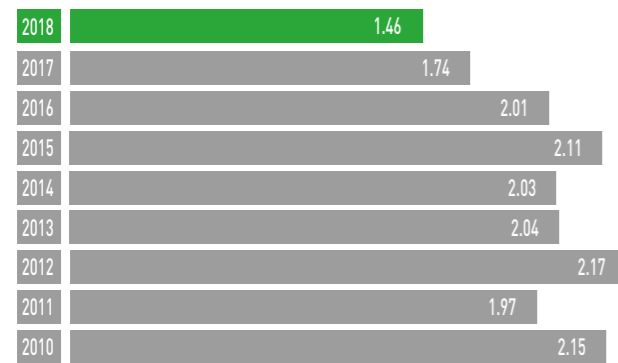
(100 million tons)



Energy conservation and environmental protection

Comprehensive Energy Consumption per 10,000 Yuan Output Value in 2010-2018

(tons of standard coal equivalent/10,000 yuan)



SO₂ and COD emissions per 10,000 yuan output value in 2010-2018

(kg/10,000 yuan)

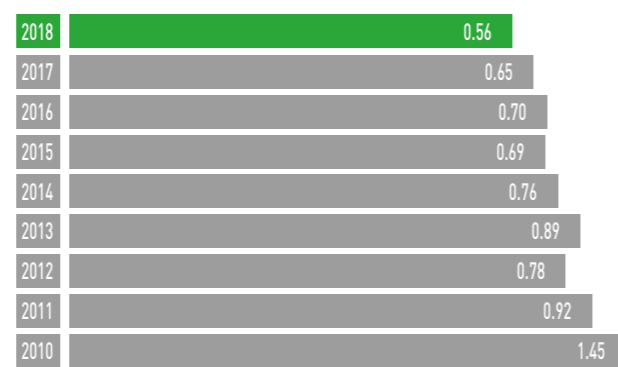
Year	SO ₂ Emission per 10,000 Yuan Output Value	COD Emission per 10,000 Yuan Output Value
2018	1.09	0.03
2017	1.07	0.03
2016	1.60	0.05
2015	1.46	0.06
2014	1.36	0.06
2013	1.39	0.07
2012	1.45	0.07
2011	1.60	0.12
2010	2.33	0.12

Performance of solid waste disposal and utilization in 2010-2018

Year	Solid Waste Disposal (10,000 tons)	Disposal Rate of Self-produced Solid Waste (%)
2018	9,900	92.8
2017	15,615	99.0
2016	14,909	88.6
2015	7,545	98.5
2014	7,882	98.0
2013	6,191	99.2
2012	9,700	100
2011	6,500	100
2010	2,500	—

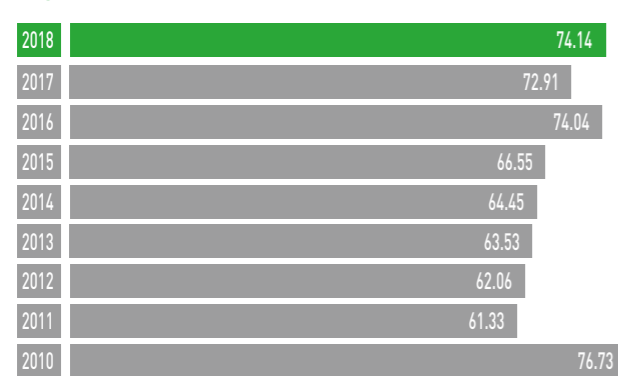
Nitrogen oxide emissions per ton of cement clinker in 2010-2018

(kg/ton)



Comprehensive energy consumption per ton of cement in 2010-2018

(kilogram standard coal/ton)



Performance in Utilization of Water Resources and Waste Heat Resources in 2011-2018

Year	Fresh water consumption per 10,000 yuan output value (tons/10,000 yuan)	Fresh water consumption per ton of cement clinker (tons/tons of cement clinker)	Utilization rate of circulating water (%)
2018	7.9	0.45	90.77
2017	7.1	0.51	96.2
2016	6.2	0.38	93.7
2015	7.2	0.46	93.5
2014	6.2	0.41	90.3
2013	8.0	0.41	96.4
2012	5.0	0.33	94.7
2011	5.5	0.37	—

Employee care

Employee Profile in 2010-2018

(Person)

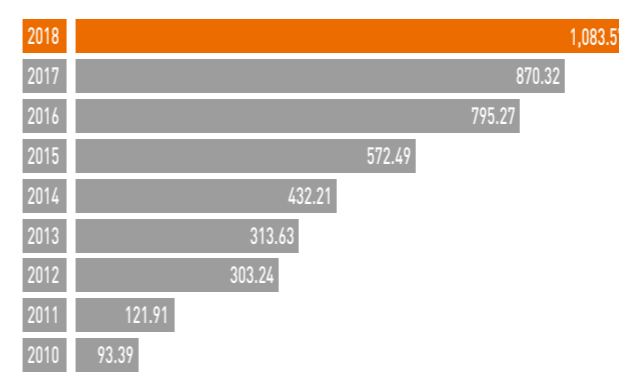
Year	Total Number of Employees	Foreign, Hong Kong, Macao and Taiwan Employees	Ethnic Minority Employees	Disabled Employees	Proportion of Female Employees in Management
2018	208,680	1,059	5,167	1,697	18.7%
2017	221,421	750	5,985	1,732	18.4%
2016	234,511	1,126	5,964	1,875	18.3%
2015	176,610	841	3,521	1,449	17.2%
2014	176,854	892	3,120	2,263	18.4%
2013	179,421	1,234	3,031	1,685	18.1%
2012	165,652	1,190	2,706	1,620	13.5%
2011	126,385	594	3,516	1,023	11.6%
2010	112,676	397	1,566	599	24.0%

Progress of Enterprise Annuity in 2010-2018

Year	Number of fellow enterprises participating in enterprise annuity	Number of employees participating in enterprise annuity
2018	100	35,644
2017	74	24,093
2016	71	22,871
2015	68	22,165
2014	67	21,750
2013	67	21,131
2012	66	20,392
2011	53	13,368
2010	38	12,811

Occupational Health and Safety Investment in 2010-2018

(million CNY)



Labor Contract, Social Insurance Coverage and Employees' Labor Unions Status in 2010-2018

Year	Coverage of Labor Contracts	Coverage of Social Insurance	Proportion of Workers Participating in Labor Union
2018	100%	90%	78%
2017	100%	98%	92%
2016	100%	98%	91%
2015	100%	98%	91%
2014	93%	88%	70%
2013	96%	92%	75%
2012	96%	92%	80%
2011	94%	91%	73%
2010	88%	87%	—

Employee Training Performance in 2011-2018

Year	Training programs organized and participated (pieces)	Employees' training participation (10,000 hours)	Employees' on-the-job academic degrees obtained (pieces)
2018	75,187	485	1,424
2017	52,676	112	2,251
2016	47,554	331	3,028
2015	32,672	133	2,882
2014	43,352	91	3,520
2013	37,491	164	2,387
2012	21,028	126	1,138
2011	11,975	108	1,580

Safety Production Performance in 2010-2018

Year	DIFR recorded per 1000 employees	New patients of occupational diseases (person)
2018	0.5‰	1
2017	0.5‰	2
2016	0.5‰	0
2015	0.9‰	3
2014	1.3‰	2
2013	1.6‰	1
2012	2.3‰	3
2011	1.4‰	19
2010	1.5‰	24

Corporate citizenship

Social Public Welfare Expenditure in 2010-2018

(million CNY)

Year	Expenditure (million CNY)
2018	62.91
2017	23.35
2016	24.00
2015	18.02
2014	20.80
2013	21.95
2012	10.15
2011	17.37
2010	10.36

Assistance of Students in 2011-2018

Year	Special scholarships established (Items)	Total scholarship provided (10,000 yuan)	Number of students awarded or subsidized (persons)	Internship bases established (Items)	Undergraduate posts provided (man-days)
2018	18	73	188	118	45,464
2017	14	72	155	163	31,519
2016	8	37	266	134	34,030
2015	8	36	159	47	26,586
2014	31	53	227	97	28,619
2013	18	112	506	119	36,530
2012	20	136	466	98	17,815
2011	27	—	727	—	—

Payment of taxes in 2010-2018

(billion CNY)

Year	Tax Payment (billion CNY)
2018	27.22
2017	19.68
2016	15.73
2015	11.91
2014	14.64
2013	13.17
2012	16.03
2011	15.07
2010	10.32

Performance in Employment Assurance in 2011-2018

(Person)

Year	Number of New Employees	In which: Current Year's Graduates	Military Personnel Transferred to Civil Work
2018	26,553	3,626	141
2017	29,612	4,727	139
2016	22,342	3,129	23
2015	16,929	2,473	10
2014	23,617	3,848	46
2013	16,081	4,383	158
2012	15,901	3,743	521
2011	21,182	4,276	241

Number of supported social welfare projects in 2010-2018

(Items)

Year	Number of supported social welfare projects
2018	594
2017	419
2016	360
2015	332
2014	310
2013	332
2012	255
2011	209
2010	46

Volunteer activity organization in 2011-2018

Year	Volunteer groups established (Groups)	Input in volunteer support (10,000 yuan)	Number of employee volunteers (Persons)	Volunteer service provided (Hours)
2018	189	126	6,853	44,445
2017	335	363	5,334	25,164
2016	112	344	5,646	28,157
2015	56	191	2,187	14,840
2014	65	145	3,400	9,418
2013	109	145	4,864	10,681
2012	67	91	3,337	39,778
2011	—	—	—	10,618

Technological innovation

Science and technology awards at or above the provincial and ministerial levels in 2010-2018

(Items)

Year	Science and Technology Awards at or above the Provincial and Ministerial Levels	National Science and Technology Progress Awards	Technology Innovation Awards
2018	231	1	73
2017	197	2	66
2016	173	2	82
2015	123	0	48
2014	117	1	48
2013	145	1	54
2012	152	0	89
2011	132	2	46
2010	63	0	17

Annual patent application and authorization in 2010-2018

(Items)

Year	New patents	Invention patents	Patents newly authorized	Invention patents
2018	2,287	1,056	1,571	385
2017	2,144	1,039	1,524	428
2016	2,156	880	1,793	455
2015	1,568	566	1,492	193
2014	1,571	531	1,381	106
2013	1,262	373	848	128
2012	766	228	729	143
2011	630	170	487	80
2010	514	173	420	54

Expenditure on scientific research activities in 2010-2018

(billion CNY)

Year	Expenditure on Scientific and Technological Activities	Expenditure on Research and Test Development
2018	9.54	8.19
2017	7.73	5.93
2016	6.63	5.12
2015	5.06	4.09
2014	5.77	4.16
2013	5.49	3.62
2012	4.97	3.34
2011	4.67	3.16
2010	2.82	2.07

Standards - Presiding over and participating in compilation or revision in 2010-2018

(Items)

Year	Total Standards	International	National	Industrial
2018	167	4	90	73
2017	122	4	90	28
2016	91	2	57	32
2015	62	2	36	24
2014	104	3	35	66
2013	59	1	8	50
2012	22	1	5	16
2011	28	1	15	12
2010	79	0	30	49

Accumulative Patents in 2010-2018

(Items)

Year	Accumulative patents	Invention patents
2018	10,967	2,765
2017	10,024	2,403
2016	8,408	1,913
2015	5,663	900
2014	4,255	687
2013	3,231	589
2012	2,549	448
2011	1,606	288
2010	1,232	227

Income from Scientific and Technological Innovation in 2010-2018

(billion CNY)

Year	Income from Scientific and Technological Innovation	New Product Sales Revenue
2018	3.01	55.59
2017	1.66	46.85
2016	1.57	33.90
2015	1.15	25.65
2014	0.88	28.99
2013	1.03	25.94
2012	0.94	24.84
2011	1.10	24.03
2010	1.41	15.84

Reporting process

01	Project start-up	Determine the annual work plan and hold meetings or issue documents
02	Key topics identification and reporting boundary recognition	Analyze stakeholders' concerns, identify annual key topics of the company and study the CSR standards, guidelines and new trends
03	Issue list of documents	Acknowledge the index system of the information system and prepare the list for annual major cases
04	Collect report materials	Collect and analyze fellow enterprise materials, functional department materials and media reports, etc
05	Report writing	Formulate the reporting framework, identify the report topic and formulate a preliminary draft report
06	Solicit opinions	Solicit opinions from the CSR leading group, headquarters functional departments, fellow enterprises, stakeholders and CSR experts
07	Report improvement	Revise texts, verify data and complete standard self-check
08	Report design	Readability, innovation and continuity
09	Report rating	Standards for CSR Reporting in China (2019)
10	Report release	Distribute to stakeholders through various carriers and channels
11	Summary and upgrade	Analyze shortcomings for rectification and improvement

Rating report

Rating Report for China National Building Material Group Co., LTD Sustainability Report 2018

Entrusted by China National Building Material Group Co., LTD, the "China Corporate Social Responsibility Report Rating Expert Committee" selected experts to form a rating group to rate China National Building Material Group Co., LTD Sustainability Report 2018 (hereinafter referred to as the Report).

I. Rating Basis

Corporate Social Responsibility Reports in China (CASS-CSR 4.0) issued by the Chinese Academy of Social Sciences and Standards for CSR Reporting in China (2019) by "China Corporate Social Responsibility Report Rating Expert Committee"

II. Rating Process

1. The Rating Group examines and confirms the Letter for Confirmation of Procedural Data on Corporate Social Responsibility Report and relevant supporting materials submitted by the Writing Group of the Report;
2. The Rating Group evaluates the Report preparation and contents and draws up a rating report;
3. The vice-chairman of the Rating Expert Committee, the leader of the Rating Group and the experts of the Rating Group jointly sign and examine the rating report.

III. Rating Conclusions

Process (★★★★★)

China National Building Material Group Co., LTD set up a group for leading the social responsibility work, with the chairman as the group leader and responsible for the final examination and approval of the report. The deputy general manager undertook to control the overall direction and key nodes; the report was positioned as an important tool to strengthen stakeholder communication, improve social responsibility management and disseminate the image of responsibility; substantive issues were identified according to the national macro-policy, domestic and foreign indicator systems, company development strategy and questionnaire survey results, etc.; subordinate enterprises were promoted to publish social responsibility reports and build a multi-level reporting system; as planned, the report will be published on the official website and embedded in the Press Conference 2019 for China's Industrial Corporate Social Responsibility Reports for release again; moreover, the report will be presented in the form of electronic, printed and Chinese-English editions. In all, the process performance is excellent.

Substantiality (★★★★★)

The Report systematically disclosed the key topics in the non-metallic mineral products industry, such as product quality management, product innovation, occupational health management, safety production, development and application of environmental protection technology and equipment, energy and resources saving, management of hazardous chemicals, reduction of "three-waste" emissions, management of factory area surrounding environment, supply chain responsibility, and Internet + non-metallic mineral products. The above-mentioned key topics have been sufficiently detailed, so it has outstanding substantive performance.

Integrity (★★★★★)

The main contents of the Report have systematically disclosed 90.48% of the core indicators in the non-metallic mineral products industry from such perspectives as "market performance", "technological innovation", "energy conservation and environmental protection", "employee care", "corporate citizenship" and "responsibility management", so the Report has excellent performance in integrity.

Balance (★★★★★)

The Report has disclosed such negative data as the "number of major and above environmental accidents", the "number of fatalities due to accidents of safety responsibility", the "number of industrial accidents recorded", the "rate of employee turnover" and the "rate of industrial accidents recorded per 1000 persons". Moreover, the Report has also briefly described the "source of pollution, investigation in risk points and treatment results", so it is excellent in balance.

Comparability (★★★★★)

The Report has disclosed more than three consecutive years' data on 69 key indicators, such as "operating income", "return on net assets", "investment in technological innovation", "comprehensive energy consumption per 10,000 yuan output value", "nitrogen oxide emissions per ton of cement clinker", "labor contract coverage", "proportion of workers participating in the labor union" and "social welfare expenditure"; at the same time, it has completed horizontal comparison of the "world's largest

cement producers", the "world's largest ready-mixed concrete producers", "ranked at 9th among Top300 in China's Corporate Social Responsibility Development Index (2018)" and "ranked at 4th in 'China's Manufacturing Enterprises Credit Top100' 2018", so it features excellent comparability.

Readability (★★★★★)

The Report has comprehensively demonstrated the concept, practice and efficiency of corporate responsibility in terms of economy, environment and society, featuring a clear framework with key issues highlighted; its cover design has incorporated the main business scenarios of the enterprise, which has not only highlighted the industry characteristics, but also improved the identification of the Report; narrative introductions are embedded across pages between different sections and chapters, showing the key points in responsibility performance as a leading outline, which can facilitate readers to quickly grasp the contents of the chapter and thus has improved the readability of the Report; its QR code is embedded at different places for visualized extension, which has strengthened its competence in dissemination and communication, so it performs well in readability.

Innovation (★★★★★)

The Report has responded positively to the goal of sustainable development of the United Nations, highlighted the leading role and sense of the times of the concept of corporate responsibility, and revealed that it keeps pace with the times. At the beginning, two topics of responsibility have been set up, namely "1+1>2" and "Tripod", which has comprehensively shown the path and effectiveness of the reform of enterprises. The main chapters have responded positively to the Belt and Road Initiative, targeted poverty alleviation and other hot political issues, which has highlighted the responsibility of the enterprises to implement macro-policies. Furthermore, it has participated in preparing and modifying Corporate Social Responsibility Reports in China for Nonmetal Mineral Products (CASS-CSR 4.0), which is conducive to further enhancing the level of corporate responsibility management and promoting the sustainable development, so it performs well in innovation.

Comprehensive Rating (★★★★★)

In accordance with the evaluation by the rating group, China National Building Material Group Co., LTD Sustainability Report 2018 was rated to be an excellent five-star report on corporate social responsibility.



China National Building Material Group Co., LTD Sustainability Report has been awarded five-star evaluation for seventh consecutive years.

IV. Suggestions for Improvement

Disclose more data and further improve the integrity of the Report.

魏紫川

Vice-chairman of the Rating Expert Committee

邓国胜

Rating Group Leader

王大洋

Rating Group Expert

Process evaluators:
Ren Jiaojiao, Dong Deshang

Time of issue: June 19, 2019



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Feedback

Thank you very much for your attention and support to the social responsibility work of China National Building Material Group Co., LTD. Please fill in the following questionnaires! We'll continue to improve in the future according to your comments and suggestions.

Your comments on China National Building Material Group Co., LTD Sustainability Report as follows:

- Comprehensive evaluation: Very good Good General Not good Rather poor
 Richness in contents: Very good Good General Poor Rather poor
 Page suitability: Very good Good General Poor Rather poor
 Beauty of design: Very good Good General Poor Rather poor
 Language friendliness: Very good Good General Poor Rather poor

In your opinion, what are the cores for China National Building Material Group Co., LTD to perform its social responsibility:

- Operating Performance Scientific and Technological Innovation Energy Conservation and Environmental Protection
 Employee Care Corporate Citizenship Responsibility for Governance

What do you think we should do to further strengthen our social responsibility management:

- Information collection Organizational structure construction Talent training Performance evaluation
 External publicity Stakeholder management Public welfare planning Level of annual report preparation
 Research on social responsibility Others _____

How would you like to know about our responsibility performance:

- Printing report Social Responsibility Column on Official Website WeChat Public Account
 Professional media on social responsibility Others _____

What would you like to see in China National Building Material Group Co., LTD Sustainability Report?

Which performance of China National Building Material Group Co., LTD do you pay more attention to in the future?

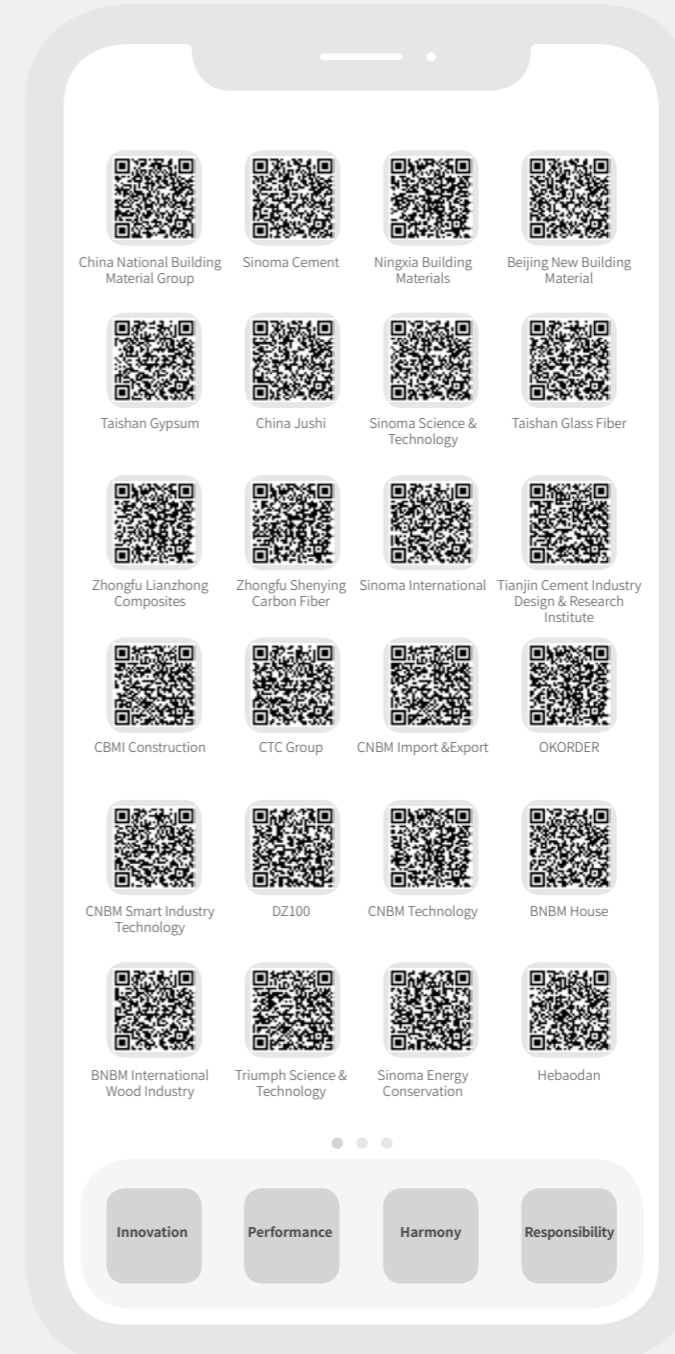
Other comments and suggestions?

In what position did you participate in our activities for collecting opinions?

- Government department Institutional investors Small and medium shareholders Financial institution Industry association
 Supplier Customer Competitive enterprise Partner CSR professional institution Public welfare organization
 News media Group middle and senior manager Group employee Others _____

In order to contact you conveniently and respond to your comments and suggestions in time, please offer your contact and related information. We'll keep it reliably confidential.

Name: _____ Occupation: _____ Institution: _____
 Contact Address: _____ Zip Code: _____ E-mail: _____
 Telephone: _____ Fax: _____



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Environmental concerns in report publication

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