





亚洲水泥 (中国) 控股公司 Asia Cement (China) Holdings Corporation Porc

Overview PA

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Overview

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Dear Readers

This report used the framework of Global Reporting Initiative(GRI) 2016. It's based on the [Comprehensive] options. In addition, the report compliance with relevant international guidelines and standards, including: ISO 26000 Social Responsibility Guidelines and Environmental, Social and Governance Reporting Guidelines(ESG), and to provide reliable public information for readers.

⊙ The Architecture and Value Chain Integration

On the basis of combining Asia Cement (China)'s business and implementing the reporting principles, this report responses to the topics concerned by various parties, and present our effort put into economic, social and environmental aspects through the green sustainable circulation and sustainable governance circulation, integrate the Asia Cement (China) value chain synergy. In a view to show stakeholders our commitment.

Implementation of Stakeholders Engagement

Asia Cement (China) actively undertook its corporate social responsibilities to meet the expectations of the society at large in 2019. We formulated an integrated communication strategy, implementing a comprehensive and instant communication approach to actively engage face-to-face communication with local residents and give prompt assistance on various matters. In addition, we have established communication and feedback mechanisms in the form of online and communities to integrate communication and engagement with stakeholders virtually and physically. We expect to enhance trust and dependence between people.

Report Scope

This report mainly provides the corporate sustainable management and performances in material operation sites of Asia Cement (China) from 1 January 2019 to 31 December 2019. The additional information of the domestic physical operating companies disclosed includes: Jiangxi Yadong, Huanggang Yadong, Nanchang Yadong, Nanchang Yali, Jiangxi Yali, Yangzhou Yadong, Taizhou Yadong, Hubei Yadong, Wuhan Yaxin, Wuhan Yadong, Wuhan Yali, Hubei Yali, Sichuan Yadong, Sichuan Lanfeng, Sichuan Yali, Chengdu Yali, Sichuan Yali. The financial statement is published after being certified by the certified public accountant. Parts of the figures are quoted from the annual report, government sectors, and the public information disclosed on the relevant websites and is presented in the conventional manner. Exceptions will be elaborated in the contents of the report.

It is the sixth year to issue this report, and the previous issuance date is June 2019. This report is issued once a year and the expected issuance date next time will be June 2021.

ို့္ခြဲ Interpretation

For the purpose of expression, in this report, "Asia Cement (China) Holdings Corporation" is also referred to as "Asia Cement (China)", "the Company" or "We".

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Operator's Words



Since its establishment, Asia Cement (China) has been committed to the Group's entrepreneurship of "Integrity, Diligence, Thrift, Prudence and Innovation". With a pragmatic approach, advanced technology, comprehensive strategic planning and management, the Company is able to meet the customers' expectations, enhance employees' capacities, act with integrity towards supply chain partners, support social prosperity and development as well as create long-term investment value for shareholders. The Company has always adhered to the "3 Highs and 1 Low" (i.e. high quality, high efficiency, high environmental awareness and low cost) business strategy while taking into account of the economic, environmental and social sustainability issues. We have been engaged in active transformation, steady growth and developing a recycling economy in line with social needs. We actively perform our social responsibilities and contribute to charity activities while facilitating the construction of infrastructure, transportation and people's livelihood. We also promote green development by proactively ramping up the collaborative waste disposal technology for cement kilns. We aim at supporting the local government in tackling the problem of urban and industrial wastes and becoming a high-quality cement enterprise that takes pride in its advanced technology, leading quality, environmental friendliness and a sense of common prosperity with the society.

In 2019, Asia Cement (China) continued to promote "sustainable green cycle" and "sustainable governance cycle" in order to realize sustainable corporate development.

In terms of sustainable green cycle, Asia Cement (China) operates on the basis of environmental sustainability. Not only strict compliance with the environmental laws and regulations of the PRC, the Company fully utilized its advantages in contributing RMB65.95 million to build a national-level green mine. During the year, four of our mines were announced to pass the screening list of 2019"National Green Mine". Jiangxi Yadong received the second prize of "Green Mine Science and Technology Award" from "ZHONGGUANCUN Green Mine Industry Alliance". In addition, we continuously engaged in low-carbon intelligent production of cement. By introducing international advanced technologies, we enhanced the automatic control operating system, intelligent management system, automatic unloading system, etc. We conducted a comprehensive upgrade and modification of desulfurisation systems of all the kiln production lines, phased out existing electric dust collection systems and invested in the construction of dust bag collection projects, which further achieved the best effectiveness of energy conservation and emission reduction. Each cement company of Asia Cement (China) has a residual heat power generation system. The proportion of residual heat power generation reached 26.32% in 2019, which the electricity generated from residual heat recovery increased by approximately 100 million KW·h as compared to that in 2018. Meanwhile, we enhanced our contribution in environmental protection installations. In 2019, collaborative cement kiln disposal of domestic wastes amounted to 44,000 tons, with 6.73 million tons of industrial slag were utilized. We will continue to strive for excellence and proactively achieve an ultra-low pollutant emission, demonstrating our strong determination in executing the "Blue Sky Campaign".

In terms of sustainable governance cycle, based on the sustainable development strategies of "create a happy work place, support the vulnerable groups, promote the fine culture, and create a harmony society", the Company attaches great importance on the health and safety of our employees and makes more efforts on talent training. In 2019, the Company contributed RMB2.7 million in total to establish a comprehensive training system, where the original fragmented, regular and limited training was reorganized and integrated. We reserve more professional talents for the Company with a complete and systematic training method. We actively deliver sustainable social care, including contributing back to communities, caring for the underprivileged, supporting local education, and sponsoring/participating in charity activities. In 2019, we spent a total of approximately RMB1.67 million for social stability to fulfill our corporate responsibility.

With regard to the continuously intensified supplyside reform from the government, the industrial structure was enhanced and the environment for the development of cement industry was largely improved. However, with the impact of the novel coronavirus (COVID-19) epidemic, the production and sales of cement in the first half of 2020 have faced increasing pressure. Once the epidemic is relieved, various constructions will be carried out speedily and demand for cement is expected to revive. Coupled with the construction industry is progressing into a high-quality development stage, it will also promote the synchronous and sound development of the cement industry. It is expected that cement demand will basically remain flat in 2020. In the future, we will continue to address our shortcomings in terms of energy efficiency, environmental protection, safe production, green mine construction, and the prevention and treatment of occupational diseases. We have drawn up "technological innovation in enterprises", "sustainable green development", "intellectualized factory" and "self-discipline and integrity amongst industry" as our core development strategies for building an "environmentally friendly and resource-saving" smart factory. We have been actively transforming and upgrading to become the first-class factory in the industry. We fully discharged our corporate social responsibilities and are committed to achieve harmonious development of the enterprise and society.

O Mission and Vison of Asia Cement (China)



● Founding Spirit of Asia Cement (China)



For years, the employees follow this model. This has become the corporate spirit of Asia Cement (China). President Hsu expects the employees to be "clean and clear with final analysis until done". He also emphasizes to increase the service quality and emphasis on the efficiency so that Asia Cement (China) may grow sustainably.

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Sustainable Development Goals in 2020

Significant Topics	Sustainable Projects	Actual performance in 2019	Goals in 2020	
Sustainable Mines	8 Disclosure Projects and Key Performance Indicators	100%达成 8 Disclosure Projects and Key Performance Indicators (More details in Sustainable 4.1)	100%达成 8 Disclosure Projects and Key Performance Indicators	
	Meet with the government absolute reduction target	Passed the national assessment of "100 Energy Saving and Emission Reduction Model Enterprises" (百家 节能减排示范企业).	Comply with the requirements of	
Low-carbon Green Intelligent Manufacturing	Low-carbon process improvement	Long belts are used instead of trucks to transport mine limestone, and use wet desulfurization technology and process.	greenhouse gas control and reduction to achieve reduction targets.	
	Cement 4.0 five-year Plan	Smart manufacturing 4.0 proceed with smart mining, smart quality management, smart production, smart logistics and other projects. More than 80% of the project has been completed	GPS+ online automatic analysis intelligent system allows fully automated sampling, sample inspection, batching, automatic packa.	
Recycling Economy	Processing local resources and enhancing the proportion of alternative raw materials	About 6.73 million tons of industrial waste residue and 6,320.86 tons of solid waste were used as fuel rods to replace cement kilns.	Continue researching into alternative raw material and fuels and try to replace 4% of them.	

Overview

⊚Green Sustainable Circulation ⊚Sustainable Governance Circulation ⊕Appendix

CSR Performance Highlights of 2019

Sustainable Mines:

- Four mines of Asia Cement (China) were announced to pass the screening list of 2019"National Green Mine".
- RMB65.95 million was invested to promote digital technology and green mines.
- 60.9 hectares of mines went through reclamation, and planted 28,230 saplings and 9,230 kg of grass seeds.
- Negotiation and communication took place with local residents. In 2019, we had a total of 21 communication sessions with 140 local residents.

Low-carbon Green Intelligent Manufacturing:

- GHG emission intensity was controlled under 0.88, with a CO₂ emission intensity of 0.872 in 2019.
- It saves 14.33 million KW·h per year and 6,900 tons of coal/year by improving equipment and technology.
- A net amount of 742,330 MWh of electricity was generated from residual heat recovery, it increased by approximately 1 million KW·h compared to 2018, with the proportion of residual heat power generation reaching 26.32%.
- We invested approximately RMB203.349 million in pollution control and prevention.

Recycling Economy:

- In 2019, a total of 6.73 million tons of industrial waste residue have been used.
- Treating solid waste to produce fuel rods, which are used as replacing fuel in cement kilns. A total of 6,320.86 tons of fuel rods and 26,691.96 tons of solid wastes were landfilled and sorted by cement kilns, so as to reuse industrial wastes.

Social Care:

- Our Employee Care Education Fund sustained its support to Yadong Hope Primary School.
- Our social stability expenditure amounted to RMB1.67 million.
- · We continued to care for underprivileged groups and actively engage in charity activities
- We promoted industry-academy internships, in a bid to identify and provide talents for our society.



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Corporate Governance:

- In 2019, Asia Cement (China) had distributable surplus of RMB2.009 per share and distributed cash dividend of RMB0.5 per share, with dividend payout ratio of 25%.
- The return rate of customer satisfaction survey sample conducted was 100% and the customer satisfaction score was 96 points.
- In 2019, the mobile APP was officially launched to provide customers with fast and convenient services.

Happy Workplace:

- In 2019, the Company contributed RMB2.7 million in total to establish a comprehensive training system. It can reserve more professional talents for the Company
- Asia Cement (China) provides a safe and healthy workplace for its employees and carries out irregular safety inspections. We tailor-made "three-level safety education training" for the contractor's staff.
- Asia Cement (China) issued an additional special bonus which were in total of RMB24.76 million yuan to encourage the all the staff to create new profit record in 2019.

Action Initiative:

• Asia Cement (China) customized 8 Disclosure Projects and Key Performance Indicators for sustainable

mines, the target achievement rate is

100% •

• Asia Cement (China) has joined ISO 26000 Corporate Social Responsibility Guidelines and Environmental, Social and Governance Reporting Guidelines(ESG), to deepen green production promote sustainable development.





PART 02

Green Sustainable Circulation

Sustainable Mines

Mining Control and Mine Safety Re-vegetation in Mines Sustainable Planning for Mines Sustainable Mine Performance Employment and Communication of Local Residents

Low-carbon Green Intelligent Manufacturing

Low-carbon Green Leadership Intelligent Manufacturing Cement 4.0 GHG and Energy Management Water Resource Management and Pollution Prevention

Recycling Economy

Recycling Economy Value Chain Use of Raw Materials and Energies and Resources Wastes Disposal

Social Care

Local Communities and Vulnerable Care Support to Education Undertakings Humanistic Science Education Social Care Expenditure

Environmental Education Greenery Cultivation Jiangxi Yadong's Agricultural Park

Sustainable Mines--Management Policy

Pursuant to the Opinions on Accelerating the Construction of Green Mines (Guo Tu Zi Gui [2017] No.4) (国土资源部《关于加快建设绿色矿山的实施意见》 (国土资规〔2017〕4号)) and the Specification for Construction of Green Mines of Cement Limestone (《水泥灰岩绿色矿山建设规范》) (DZ/T0318-2018), Asia Cement (China) carried out a new mining development model for its mines which fit into the requirements for ecological civilization. The model works on six aspects, namely, the environment of the mining areas, resource development methods, integrated resource utilization, energy saving and emissions reduction, technological innovation and digital mines, corporate management and image. Under the model, green mine construction plan and implementation solutions are prepared according to the characteristics of each mine and carried out accordingly, to promote reasonable resource utilization, energy saving and emissions reduction, protection of the ecological environment and harmony between mines and land. Ultimately, the model is designed to coordinate and balance the economic, ecological and social benefits of resource development.

Evaluation Methods

 In accordance with the "Notice on Well-preparation for the Selection of Green Mines in 2019 (关于做好2019年度绿色矿山遴 选工作的通知)" issued by the Ministry of Natural Resources, selfassessment, third-party evaluation, government inspection and review will be conducted for the mines.

② Each year, our CSR report continues to track and review whether the objectives are met.

Policy and Commitment

Objective

Our mining areas demonstrate standard and clean environment, as we utilize resources reasonably, protect and restore the ecological environment of the mining areas, establish modern digital mines and build the positive image of a mining enterprise.

Our mines will complete the accreditation process to be included in the directory of green mines at provincial and above levels by the end of 2020.

※ Specific Actions and Initiatives:

Prepare the Overall Implementation Plan for Green Mine Construction:

Jiangxi Yadong completed the "Overall Implementation Plan for Green Mines Construction of Ma Tou Limestone Mine (码头灰岩矿绿色矿山建设实施总体方案)"by the end of 2018.

The "Overall Implementation Plan for Green Mines Construction of Xinwutian and Xiazhang Limestone Mine (新屋田及下张灰岩矿绿色矿山建设实施总体方案)"was completed in June 2019.

Huanggang Yadong completed the "Overall Implementation Plan for Three Green Mines Construction including Benjishan Limestone Mine, Yuanyishan Limestone Mine and Zhongjianwan Sand Shale Mine (畚箕山灰岩矿、圆椅山灰岩矿及中间湾砂叶岩 矿等三个绿色矿山实施总体方案)" in March 2019.

Project Tracking:

Tracking system is introduced in the headquarters of Asia Cement (China) to trace the project implementation situation and is reported during the monthly operation meeting at the headquarters.

Self- assessment and Third-party Evaluation of the Mine:

Jiangxi Yadong completed its self-assessment report and third-party evaluation of the green mine construction of Ma Tou Limestone Mine in March 2019, while Huanggang Yadong completed the self-assessment reports and third-party assessments of three green mines including Benjishan Limestone Mine, Yuanyishan Limestone Mine and Zhongjianwan Sand Shale Mine in June 2019.

Government Review:

Such review includes on-site investigation and submitted materials examination. Huanggang Yadong and Jiangxi Yadong have completed the materials submission and examination in July and August 2019 respectively.

5 Public Notice for the Annual Selection:

The selection list of the 2019 National Green Mine was issued on 24 December 2019. A total of 556 mines across the country passed the selection and was made public notice for one week. Among which, a total of four mines under Asia Cement (China) were announced passing the selection.

Annual Reporting for the Implementation:

Asia Cement (China) prepares the corporate social responsibility report each year for the public to disclose its implementation progress.

Smart Mining

In 2019, Huanggang Yadong contributed RMB500,000 to set up a smart mine management system. Phase one construction was completed in December 2019.



Smart Mine Management System of Huanggang Yadong



The live scene 3D visualization system module provides the visualization display of mines, which comprehensively displays the details of mines such as production information and restoration and greening. 3D analysis and measuring tools can reduce the measurement workload during production. The accuracy of the model elevation and horizontal measurement is better than 10cm/pixel, which can achieve 1:500 accuracy in ratio and improve work efficiency.

The live scene 3D system is constructed to display data in a 3D scene, such as mines' location, mine boundaries, videos, outputs, vehicle satellite positioning, mining rights, cross-boundary alert and cross-boundary record. Through remote video monitoring, the management personnel of the mines can conduct real-time management and control over material sessions such as mining, processing and production, thereby realizing remote command and promoting the production safety of the mines. The installation of video surveillance systems at key locations of the enterprise, such as maintenance areas, living areas, and oil depots, provides robust protection for property safety of the mining enterprises and reduces the occurrence of thefts and damages. Green mine data input module can achieve green mine planning and publicity effect.

Insensitive Blasting

All the mines of the Company have adopted Orica high-precision detonators for long-hole blasting on a hole-by-hole basis, which can effectively control the impact of noise, dust and vibration generated by blasting.

- Sichuan Yadong introduced digital electronic detonators with higher safety standards in 2019, which improved the blasting effect under a complex blasting environment. Its detonation system and control software reduce the time of deploying the digital electronic detonators. Building on its safe, reliable and simple operation, our work efficiency was improved. Such detonators also offer security and information features that are not provided in traditional detonators, which can achieve clear and instant management and control functions of the detonator flow. For an unofficially authorized detonator, any incorrect setting in detonating location, time or operator will cause the failure of detonation. Any abnormal conditions will be reported to the management department through the detonation system, which is highly conducive to social security and internal management.
- To ensure the stability of the side slope after completion of mining and the implementation of subsequent restoration work, and to reduce the damage to the entirety of the rock mass of the completed side slope caused by the seismic wave of general mine blasting operations, Jiangxi Yadong fully carried out the design of presplitting blasting for the completed side slope and put it into service since 2019.



Pre - split blasting is carried out at the end of the slope to maintain the integrity and stability of the rock mass.

Safety of the mine and its surroundings

Mining: Mining operations usually involve a larger area. The mining area requires the removal of surface vegetation, and the re-vegetation and restoration after mining. In accordance with the development and utilization plan, land restoration report, mining environmental protection and comprehensive regulation plan, water and soil conservation plan and others approved by the government, we mapped out the related drainage facilities, detention grit chambers, environmental protection measures and plant restoration.

Mine Safety: In order to enhance the safety hazard warning and contingency procedures for operation staff, each mine conducts safety emergency drills each year.

Jiangxi Yadong

Accidental Explosion

for

Drill

ergency

E

In September 2019, implementation of "Emergency Drill for Accidental Explosion of Explosives"

Huanggang Yadong

In March and Augest 2019, implementation of "Drill for Pumice Treatment along Side Slope" and "Emergency Drill for Mine Truck Accident" respectively

Sichuan Yadong

In June 2019, implementation of "Emergency Drill for Side Slope Collapsing"

Side Slope Stability

Asia Cement (China) attaches great importance to the safety of mines and puts rigorous treatment on side slope stability:

- Jiangxi Yadong began to fully carry out the design and implementation of pre-splitting blasting operation on the completed side slope in 2019. Each year, Jiangxi Mine Inspection Safety and Technology Co., Ltd. (江西 矿检安全科技有限公司) is commissioned to conduct an annual safety inspection for open side slopes and issue a gualification test report.
- Sichuan Yadong spent RMB200,000 to conduct a stability analysis and evaluation report for the completed side slope of Woniuping Mine (卧牛坪矿山) (in preparation). It spent another RMB180,000 to conduct the side slope inspection and stability analysis report of the working bench slope formed along the Woniuping Limestone Mine (卧牛坪灰岩矿场) and Tazishan Sand Shale Mine (塔子山砂页岩矿场).

Drainage and Detention System

Asia Cement (China) excavated intercepting ditches, drainage ditches and sedimentation tanks for all its mines. The water in the sedimentation tanks is recycled to use for spraying and dedusting in the mining area, providing atomized dust removal for crushers, sprinkling water on roads and watering its own green saplings, etc.

During the year 2019, one sedimentation tank was constructed in the limestone mining area while three sedimentation tanks were constructed in the sandstone mining area. The construction of a wellstructured level-four sedimentation tank and a 11,000-meter drainage and diversion system thereby form a closed water system at the mine site, and regular sampling and monitoring are conducted at the two drainage outlets. In accordance with the Comprehensive Emission Standard for Waste Water (GB8978-1996) applicable to Grade I standard, the test results showed that each indicator (ph value, suspended solids, chemical oxygen demand, five-day biochemical oxygen demand, etc.) is in line with the standard.

Jiangxi Yadong

Sichuan Yadong





In 2019, according to the terrain, three sedimentation tanks and concrete drainage ditch systems were installed, and natural precipitation across the region can be channeled to discharge.

Based on the difference in elevation, the precipitation flows along the mountain by means of the mine site equipped with two sedimentation tanks, four flood detention energy dissipation tanks and 5,200-meters drainage ditches. By funneling a 6-kilometer concrete side ditch and flood detention energy dissipation tank, the water flow on the surface slows down and guides downwards. The surface runoff is collected in the living area under the mountain and filtered by one detention tank and two sedimentation tanks. A professional testing company is commissioned to sample and monitor the discharges every quarter and the discharge is conformed to the restrictions of Class 1 standard.

Green Sustainable Circulation1: Sustainable Mines

Mining on an Orderly Basis

achieve obvious results.

2

Landscaping

Surrounding Areas

1.2 Re-vegetation in Mines

A Sustainable Cycle for Mining and Restoration of the Mining Area



Landscaping Surrounding Areas

For the purpose of reducing the visual impacts of landscape, and reconstructing visual compatibility with surrounding area, Jiangxi Yadong continued to construct an ecological agricultural park and brought it into service in 2019. There are separate zoning layout for the ecological garden, ecological agricultural area, sedimentation tank ecological area and natural landscape and garden area in accordance with the design and the construction was successively completed in 2019.

Dust Suppression in Mines and Roads

Each mine site is equipped with a total of 12 sprinkler trucks, and some sections are installed with 1,200 meters of auto sprinklers. In order to reduce road muds and remove the difficulties of tackling dusts, permanent roads and crusher hopper platforms for each site are to be hardened. In 2019, 4,076 square meters of roads and crusher hopper platforms in Jiangxi Yadong mining area were hardened. RMB1 million was invested to equip a car washing machine in the sandstone mining area, and we continued to complete the additional construction of the fully closed crusher room and the pipeline for atomized dust. A total of RMB1.09 million was invested to complete the closure works for the 5# and 6# line crushers, temporary warehouses and the 4# and 5# line unloading hoppers. 2.8 kilometers roads along Huanggang Yadong mining area were hardened in order to prevent vehicles from bringing out pollutants along with tires when driving out of the mine. Huanggang Yadong added a high-pressure wheel washing machine in 2019 to reduce unorganized emission and diffusion from crushing operations in the mine. For each of the mine site area that is not being mined temporarily, it is covered with soil and sowed grass seeds.



(1)

Mining on an Orderly

Basis

(3)

Dust suppression in mines and roads

(4)

Mining and

Reclamation Hand in

Hand



Mining and Reclamation Hand in Hand

For the mine site area that has completed mining, the ultimate side slope, upon the completion of mining, will be fully underwent earth-covering and planted with tree seedlings to reduce the exposed area and minimize the visual impacts.

Company	Actual performance in 2019		
Jiangxi Yadong	44 hectares were greened (24 hectares of limestone mining area and 20 hectares of sand shale mining area), 800 tree saplings planted, 7,100 kilograms of grass seeds sown.		
Huanggang Yadong	2.0 hectares were greened (about 2.8 kilometers slope), approximately 70,000 tons of soil replanted with vegetation, Transplanting 19,790 native tree saplings, as well as 450 kg of tree seeds and 100 kg grass seeds sown.		
Sichuan Yadong	14.9 hectares were greened, 7,640 trees were planted, 1,680 kilograms of grass seeds were sown.		



Green Sustainable Circulation1: Sustainable Mines

A Sustainable Cycle for Mining and Restoration of the Mining Area



Integrated Resource Utilization

High-magnesium limestone that cannot be used as raw material for cement is used to produce construction fillers, and the powder produced from the production of fillers is used as cement ingredient, which basically achieves the full utilization of waste rock.

Company	Actual performance in 2019
Jiangxi Yadong	Approximately 3.3 million tons of construction fillers have been produced from high- magnesium limestone under integrated utilization.
Huanggang Yadong	Integrated resource utilization 2,174, 070 tons, of which 1,411,567 tons of cement limestone (high-magnesium waste rocks, maokou formation, interlayer, rock and surface soil, fractured soil), and 762,503 tons of high-magnesium waste rocks used for angles, which translates into an integrated resource utilization rate of 32.94%.
Sichuan Yadong	The integrated utilization of low-quality limestone and topsoil in the limestone mine in Sichuan Yadong is about 2 million tons. The annual production of limestone for cement is 9.939 million tons, which translates into an integrated resource utilization rate of approximately 20%.



Energy Saving and Emissions Reduction

Sichuan Yadong purchased one excavator PC460, one PC850 and one drilling rig D50. Huanggang Yadong purchased one excavator CAT349 and one drilling rig D50. Jiangxi Yadong purchased one excavator CAT349, two CAT349 and one drilling rig D50, increasing the efficiency in the use of production energy and reducing energy consumption. No wastewater has been produced during the production and crushing process of all mines. Surface rainwater is discharged into a multi-stage sedimentation tank for comprehensive utilization. A grease trap was built in the washing area of the maintenance depot. The washing water was filtered and discharged after meeting the standard. Furthermore, an automatic wheel washing machine is installed, such that all mining trucks will be rinsing before driving out of the mine.

Ecological Diversity

In 2019, Jiangxi Yadong Mine completed the construction of its greenhouse nursery and an outdoor health site. Local native tree species have started to be cultivated, with greenery teams organized to cultivate tree saplings including red locust, camphor tree, Chinese scholar tree, golden rain tree, soapberry, honey locust, cedrus and Boston ivy.

Technological and Digital Mines

The Company realized information-based mine operation, production decision-making, production safety management and equipment control by adopting information network control technology, and built a digital mine structure through real-time management which reduces manpower, system optimization which improves the performance of the production system, and big data collection which provides judgments on future trends. In 2019, Huanggang Yadong carried out the construction of phase I digital mine, integrating the video monitoring screen and production control, excavation monitoring, environmental monitoring and other data in the "Remote Comprehensive Supervision System of Mines", which realized the live scene 3D visualization application at the initial stage.



Asia Cement (China) Investment in Green Mines

	Unit: RMB0'0
Total Investment	2,918
Project investment (71 projects)	2,298
Environmental projects for the mining area	
Resource development methods	
Integrated resource utilization	
reduction reduction	
Technological innovation and digital 6	
1	
Corporate management and image 5	
Rental of heavy machinery	360
Concrete materials fee	140
Manpower	120
Total Investment	1,747
Environmental projects for the mining area	557
Resource development	1,077
Energy saving and emissions reduction	47
Technological innovation and digital mines	46
Corporate management and image	20
Tatal lucia atma ant	1 0 2 0
Total investment	1,930
Environmental projects for the mining area	338
Resource development	1,563
Technological innovation and digital mines	9
recimological innovation and algital mines	
	 Project investment (71 projects) Environmental projects for the mining area Resource development methods Integrated resource utilization Energy saving and emissions 20 reduction Technological innovation and digital mines Corporate management and image Rental of heavy machinery Concrete materials fee Manpower Total Investment Energy saving and emissions reduction Technological innovation and digital mines Corporate management and image

1.3 Sustainable Planning for Mines





Renderings of green mine planning of Jiangxi Yadong wharf limestone mine.

1.4 Sustainable Mine Performance

second prize and the individual second prize of the Green Mine Science and Technology Award from ZHONGGUANCUN Green Mine Industry Alliance for the "Green Mine Construction Project of Comprehensive Ecological Park Rehabilitation by Utilizing Industrial Sites (利用 工业场地复垦综合生态园绿色矿山建设项 目)".

In May 2019, Jiangxi Yadong received the



- The mines under Asia Cement (China) have been selected in the list of national green mines in 2019, among them, a total of four mines have been approved and the public codes are as follows::
- ① 250 (Jiangxi Yadong Ma Tou Limestone Mine (江西亚东码头灰岩矿)
- 2 357 (Huanggang Yadong Benji Mountain Limestone Mine (黃冈亚东畚箕山 灰岩矿))
- ③ 366 (Yuanyishan Xuejiachong Limestone Mine (园椅山-薛家冲灰岩矿))
- ④ 359 (Middle Bay Sand Shale Mine (中间湾矿区砂页岩矿))

- 2019

In May 2018, Huanggang Yadong received the third prize and the individual third prize of the first Green Mine Science and Technology Award from ZHONGGUANCUN Green Mine Industry Alliance for the "project for integrated utilization of scrap from high-magnesium limestone" (高镁灰岩剥离废料 综合利用项目).

In May 2018, Jiangxi Yadong received the third prize and the individual third prize of the Green Mine Science and Technology Award from ZHONGGUANCUN Green Mine Industry Alliance for "comprehensive utilization of the dirt scrap from limestone topsoil (灰岩矿表层土夹石剥离废料 综合利用)."



2018



1.5 Employment and Communication of Local Residents

Providing Employment Opportunities

The most direct way for Asia Cement (China) to care for local residents is to provide a large number of job opportunities. we highly respect local customs, laws and culture. Based on our compliance with local policies and regulations, we implemented localized policies, hired local employees, cultivate excellent talents, reduce the local talents' outflow, promote local economic development, and take practical actions to take care of local residents. In 2019, local employees accounted for 73% of the entire workforce of Asia Cement (China).

Company	Total in 2019	Local em	ployees
Company	10tai in 2019	Number of employees	Percentage
Jiangxi Yadong	1,022	685	67%
Huanggang Yadong	289	224	78%
Nanchang Yadong	49	25	51%
Nanchang Yali	103	37	36%
Jiangxi Yali	125	88	70%
Yangzhou Yadong	168	120	71%
Taizhou Yadong	32	26	81%
Hubei Yadong	435	290	67%
Wuhan Yaxin	278	237	85%
Wuhan Yadong	77	49	64%
Wuhan Yali	50	34	68%
Hubei Yali	90	72	80%
Sichuan Yadong	583	390	67%
Sichuan Lanfeng	405	326	80%
Sichuan Yali	52	32	62%
Chengdu Yali	43	36	84%
Sichuan Yali	84	83	99%
Total	3,885	2,754	71%

Note: Local employee refers to the employee's native place in the prefecture-level city where the company is located.

Valuing Local Employees

The total number of competent employees in Asia Cement (China) is 558, and local competent employees is 210, accounting for 38%.

Company	Competent employee (tenth (including tenth) position or above)	Local Competent employee	Percentage
Jiangxi Yadong	177	39	22%
Huanggang Yadong	37	14	38%
Nanchang Yadong	8	5	63%
Nanchang Yali	12	7	58%
Jiangxi Yali	12	11	92%
Yangzhou Yadong	19	9	47%
Taizhou Yadong	3	0	0%
Hubei Yadong	83	42	51%
Wuhan Yaxin	30	18	60%
Wuhan Yadong	13	9	69%
Wuhan Yali	6	2	33%
Hubei Yali	6	6	100%
Sichuan Yadong	74	17	23%
Sichuan Lanfeng	61	20	33%
Sichuan Yali	5	4	80%
Chengdu Yali	6	2	33%
Sichuan Yali	6	5	83%
Total	558	210	38%

Competent employee	558	Local competent employee	
General competent employee	348	37.63%	General competent employee
Local competent employee	210		62.37%
		-	

Giving Back to Locals

In 2019, Asia Cement (China) invested over RMB1.44 million in community care and beautification, as we maintained friendly relations with the communities and strived to create harmonious and pleasant life circles. Our efforts to give back to locals are summarized as the table. Other local social care is detailed in "Green Sustainable Circulation 4-Social Care".

	Provide home repair services	¥118,864
S	Local community auxiliary facilities and services	¥268,664
nojec	Promoting community education services	¥79,836
	Local community road repair service	¥796,748
госан теепраск ргојеста	Beautification service of community environmental sanitation	¥123,000
	Care for/maintain good relations with the community	¥59,380
	Total	¥1,446,492

Negotiation and Communication with Local Residents in 2019

ltem	Number of Sessions	Number of Participants
Settlement of production disputes between plants and mines	18	60
Factory visits by local party member representatives	3	80

Asia Cement (China) has always valued the rights and interests of local residents. We actively negotiate and communicate with local residents to settle disputes and create a harmonious atmosphere together. As a result, we have won positive comments and praises from local governments and the general public.

Unit: RMB0'000

Low-carbon Green Intelligent Manufacturing--Management Policy

Asia cement (China) manufactures low-carbon green cement with advanced management concepts, modern equipment and excellent technical personnel, and through continuous research and innovation to create smart ecological cement and the concrete industry, we will use big data analysis, intelligent production and smart manufacturing to create a brighter future for the development of the Company and make certain contribution to the society.

Evaluation Methods

- Fully investigate and research various solutions for lowcarbon green smart manufacturing projects and conduct sufficient feasibility study and benefit analysis.
- ② Formulate various project plans and track the progress of the implementation of important indicators for projects.
- ③ Utilize weekly and monthly meetings to regularly review the implementation of various projects and optimize the promotion measures in a timely manner.

Policy and Commitment

Promote industry 4.0 and establish smart control system.
 Promote smart environmental management and build a vision of sustainable green environment.

※ Specific Actions and Initiatives

- **1** Carry out green mine construction and create a green ecological industrial chain.
- 2 Carry out the construction and declaration of green cement factories and build a low-carbon green cement demonstration factory.
- 3 Study and use advanced equipment such as online cement particle size analyzer, digamma analyzer, neutron online analyzer, automated laboratory, automatic sampling and sample preparation of raw fuel to carry out the construction of the AI intelligent production control system.
- 4 Research and plan the transformation and upgrade of smart production across the entire line to meet operational requirements such as automatic kiln burning, automatic operation of mills and intelligent solutions for product energy consumption and quality control.
- 5 Strengthen the upgrade and transformation of equipment, adopt the transformation of electric dust removers into bag dust removers to reduce dust emissions, and study the use of permanent-magnet motors to reduce power consumption during production.



2019

Manufacture of masonry cement (M32.5)

and the water retention rate, reducing

replaces compound cement (PC32.5R), which uses low clinker ratio, optimizing the workability

of mortar such as the fluidity of M32.5 cement

Overview

@Green Sustainable Circulation

20

2.1 Low-carbon Green Leadership

Cement manufacturing is an energy-intensive industry where the production process consumes a large amount of fuel and electricity and emits a considerable amount of greenhouse gases. In order to save energy and reduce emission efficiently, Asia Cement (China) attaches great importance to the consumption of energy and resources since its establishment in 2000. We actively use the latest energy-saving equipment and technologies, and have passed the national assessment of "100 Energy Saving and Emission Reduction Model Enterprises" (百家节 能减排示范企业).



Voluntary Reduction of Greenhouse Gases

Cement manufacturing is an energy-intensive industry where the production process consumes a large amount of fuel and electricity and emits a considerable amount of greenhouse gases. In order to save energy and reduce emission efficiently, Asia Cement (China) attaches great importance to the consumption of energy and resources since its establishment in 2000. We actively use the latest energy-saving equipment and technologies, and have passed the national assessment of "100 Energy Saving and Emission Reduction Model Enterprises" (百家节能减排示范企业).



Other Low-carbon Reductions

Add SP boiler to fully recovery of low temperature waste heat by using the preheater to improve energy efficiency.

Through the development of cement grinding aid to improve the strength of cement and cement output. It can reduce the use of clinker, optimize the quality of cement, achieve the purpose of reducing production costs and energy consumption.

2.2 Intelligent Manufacturing Cement 4.0

Asia Cement (China) controls the production process and quality of clinker and cement in real time by taking advantage of its advanced technology and equipment, continuously optimizing the operating parameters of the control system to ensure the optimal energy saving and emission reduction operation effect, so as to improve the production volume and quality. We have established systems such as an automatic sampling, detection and analysis system of raw fuel input, an automatic control operating system for clinker and cement production lines, an automatic batching system for raw materials, an automatic bagging system for bagged cement and an automatic truck (vessel) loading system for clinker and cement. Currently, the Company is actively researching on the construction of systems such as the intelligent mining system, intelligent energy management system, intelligent diagnostic precaution system for production equipment, intelligent inspection system of production lines, automatic delivery system for cement, automatic sampling, sample preparation and laboratory testing system of raw fuel input, automated laboratory , automatic unloading system of coal trucks, striving towards the construction of a large intelligent cement plant.

Objectives for Intelligent Manufacturing Cement 4.0



The implementation and performance of smart cement manufacturing 4.0 of Asia Cement (China) in 2019:

ltem	Implementation	Expected Result
Smart mine	 Constructing green mine to enhance corporate image. Establishing a mine laboratory to analyze the quality of limestone promptly and efficiently. Plan and implement the cross- checking system for precautionary maintenance of heavy machinery for mining. Integrating the management of mineral resources within the Group to increase production efficiency and reduce operating costs. 	 Stable limestone quality with reasonable use. Utilize different grades of ore and topsoil in the mine to improve the integrated resource utilization rate of low grade ore, effectively extending the life of the mine. Improve production safety and environmental performance of mines. Reduce production costs of mines.
Automatic sampling system of raw fuel input	Automatic sampling of limestone and coal input	Reduces manpower and prevent sampling errors and possible drawbacks to ensure sample representativeness.
Smart batching system for raw materials	 Automatic sampling of grinded raw materials, XRF fluorescence analysis, automatic batching system for raw materials. The neutron online analyzer automatically analyzes the grinding of raw materials and makes real- time adjustment to raw material ingredients. 	Select the most appropriate raw material batching system according to the process configuration of each cement plant to reduce the fluctuation in the value of raw materials in the kiln, improving the stability of raw materials quality, enhancing the quality of sintered clinker and reducing production costs.
Automated laboratory	Fully automatic sampling, sample preparation and laboratory testing system for grinded raw materials and clinker.	Reduces manpower and increases the sample representivity of raw materials and clinker, data analysis accuracy and analysis speed to lay a solid foundation for the automatic kiln system.
Smart cement particle analyzer	The online laser particle size analyzer detects the distribution of grinded cement particles in real time.	Utilizing the timely detection results of the online cement particle analyzer to adjust the operating parameters of the mill, optimizing the distribution of cement particles, improving the workability and quality of the cement and increasing the hourly output of cement mills.
Smart statistical analysis system	Statistical analysis of quality using software.	Reduces manpower and statistically analyze clinker and cement quality using software to provide the improvement direction in a timely manner, implementing ongoing optimization measures.

2.3 GHG and Energy Management

GHG Emission and Reduction Measures

In the face of global climate change, every country is actively promoting energy saving and carbon reduction, and reducing greenhouse gas emissions is at the center of risk prevention and control. Asia Cement (China) adheres to its operation concept of caring for global climate change, protecting the resources on our planet and fulfilling its corporate social responsibilities. Complying with the national greenhouse gas control and reduction requirements, the Company conducted greenhouse gas emission inspection, and at the same time, established internal documentation and verification procedures to lay a solid foundation for the implementation of effective greenhouse gas reduction improvement programs. In addition, the Company actively responded to the national environmental protection policy of reducing greenhouse gas emissions, energy saving and carbon reduction, producing low-carbon green cement products which achieved sustainable energy development goals that take into account resource efficiency, energy conservation and environmental protection, continuously working to transform the industry towards low-carbon energy conservation.

GHG Emission

Since the Development and Reform Office implemented the greenhouse gas emission monitoring program in 2017, Asia Cement (China) been active has in improving greenhouse gas emissions - online monitoring, collecting real-time data, and taking CO₂ emission reduction measures as one of the top priorities. So far, the GHG emission intensity of Asia Cement (China) has been controlled to below 0.88, indicating the Company's sustained efforts measures and determination to reduce GHG emissions and fulfill its social responsibility for environmental protection.





Note: Emission intensity of =total emission of CO_2 (t CO_2) /clinker output (t clinker)

Green Sustainable Circulation2: Low-carbon Green Intelligent Manufacturing

Asia Cement (China) Holdings Corporation requires a greenhouse gas emission inspection certificate in accordance with eco - environmental climate No.943 [2019] (The notification of the 2019 carbon emission report and verification and the notification of submitting the list of key emitters in the power generation industry).

Greenhouse gas emissions of cement clinker products in 2019 of Asia Cement (China)'s Consistent Cement Companies:

	Production	20	2019			
Company	lines	Clinker output/0,000 tons	Total emission of CO ₂ /0,000 tons			
	1#	167.26	146.45			
	2#	175.82	153.44			
Jiangxi	3#	171.97	150.38			
Yadong	4#	181.47	158.70			
	5#	253.82	219.35			
	6#	244.24	211.32			
Huanggang Yadong	1#	160.95	150.34			
Hubei	1#	182.44	150.78			
Yadong	2#	141.57	116.08			
Wuhan Yaxin	1#	91.10	85.00			
	1#	92.21	81.39			
Sichuan Yadong	2#	160.30	140.79			
	3#	154.46	133.85			
Sichuan	1#	139.55	122.72			
Lanfeng	2#	167.05	144.38			



Clinker output/0,000 tons

Emission Performance of GHG (CO₂) of Clinker Products in Asia Cement (China)'s Consistent Cement Companies



Measures to Reduce GHG (CO₂) Emissions from Cement Kilns:

01

Choose a reasonable cement preparation formulae.

Improve burnability of raw materials, reduce burning coal of during clinker calcination process and consumption and heat.

04

Reduce the amount of clinker used in cement production.

Blend in industrial wastes such as slag, flyash, coal slag, etc. in appropriate proportions to replace some of the clinker during the cement production process; meanwhile appropriate amounts of cement grinding aids are added in cement grinding to increase production of cement mills and clinker strength, reduce ratio of cement clinker; can greatly reduce the CO₂ emissions generated by clinker...

02

Use raw grinding AIDS.

Increase the output of raw material grinding table, improve the burning property of raw material, reduce the coal, heat and electricity consumption of clinker.

05

Use a small amount of yellow phosphorus slag to mix raw materials.

Improve raw material burning ability and clinker output, reduce clinker heat consumption and improve clinker quality.

06 Search for alternative fuels.

Replace part of the fuel with combustible waste (Such as industrial waste, urban sewage sludge, etc).

03

Decrease the CaO content in clinker appropriately.

Under the premise of guaranteeing the quality of cement clinker, and reduce the usage of calcium carbonate in cement clinker.

07 Optimize and transform production equipment, process and operation control technology.

Reduce energy consumption, improve output and optimize quality.

Overview

Result of Energy Saving and Carbon Reduction

In compliance with "The 13th Five-Year Plan" Integrated Work Program for Energy-saving and Emission Reduction of the State Council, all cement companies under Asia Cement (China) strengthened scientific management and implemented tasks related to energy saving and emission reduction. In 2019, we replaced and transformed equipment, optimized production processes and batching technology, saving a total of approximately 14,330,000 KW·h of electricity per year and saving 6,900 tons of coal per year, which is equivalent to reducing CO₂ emission of approximately 23,300 tons per year. Among them, Jiangxi Yadong can save approximately 3,700,000 KW·h of electricity per day, approximately 3 tons of coal per day and increase clinker production of approximately 200 tons per day by mixing yellow phosphorus slag into raw materials. Recycling of wastewater by various cement products companies save water by up to 62,000 tons/year.

Major energy-saving measures and performance of all cement companies under Asia Cement (China) in 2019 :

Company	Main Energy-saving Measures	Energy-Saving Results
	An additional flame-proof three-phase asynchronous 3KW motor, 80°500L/H diesel pressurized pump and 0.6°0.8bar compressed air are added to the diesel burner to replace the internal spiral structure of the original spray gun.	Saving 23.52 tons of oil
	The German Aumund double drive central chain hoist with cement mill has been changed to a domestic belt hoist.	Reduced electricity consumption by 196,000KW·h
Jiangxi Yadong	The raw mill uses a new type of sealed turn feeding valve.	Reduced electricity consumption by 1,550,000KW·h
	Use multifunctional raw material auxiliaries.	Reduced electricity consumption by 3,700,000KW·h, Saving 5,627 tons of coal
	Develop technology to improve diesel burnout rate.	Saving 30 tons of oil
	Adopt wet desulfurization technology.	Saving 716 tons of ammonia
	Permanent magnet motor energy saving renovation in No.1 factory.	Reduced electricity consumption by 5,040,000KW·h
	Permanent magnet motor energy saving renovation in No.2 factory.	Reduced electricity consumption by 345,600KW·h
Huanggang Yadong	Modification of cooling water system.	Reduced electricity consumption by 625,680KW·h
Yangzhou Yadong	250W lighting is transformed into 60W LED lighting (replace 80 lights in 2019).	Reduced electricity consumption by 27,000KW·h
Hubei Yadong	1#Add yellow phosphorus slag to raw material.	Saving 23.52 tons/day of coal, Reduced electricity consumption by 675KW h/day Increased production clinker 124 ton/day
	2#Add yellow phosphorus slag to raw material.	Saving 2.31 tons/day of coal, Reduced electricity consumption by 1,868KW h/day Increased production clinker 85 ton/day
	Replace the non-electrode lamps.	Reduced electricity consumption by 35,000KW·h
	Replacement of LED lamps.	Reduced electricity consumption by 10,500KW·h
Wuhan Yaxin	Clinker group primary line to add capacitor.	Reduced electricity consumption by 216,000KW·h
	Clinker group second line to add capacitor.	Reduced electricity consumption by 129,600KW·h
	Transformation and replacement of superheater of AQC boiler economizer.	Reduced electricity consumption by 1,100,000KW·h
Wuhan Yali	Use recycled water to produce concrete	Saving 28,000 tons of water
	3#Replace the permanent magnet inverter air compressor in the kiln.	Reduced electricity consumption by 360,000KW·h
Sichuan Yadong	2#Change feeding valve in raw material mill.	Reduced electricity consumption by 744,000KW·h
-	Replace the new type of kiln gun.	Saving 42 tons of oil
	Use a new ammonia spray gun.	Saving 1,173 tons of ammonia
Sichuan Yali	Water recovery and reuse.	Saving 50,000 tons of water
Chengdu Yali	Save electricity consumption	Reduced electricity consumption by 20,000KW h
	Waste water recycling.	Saving 4,000 tons of water

Energy Density

Asia Cement (China) is implemented in accordance with the national standard "Energy Management System Requirements" (GB/T23331-2012/ISO50001: 2011) and "Energy Consumption Limit for Cement Unit Products" (GB16780-2012), and set up a long-term energy saving goal. We actively implement energy conservation and efficiency, and work hard to reduce energy intensity. The energy intensity of Asia Cement (China) was 2.74 GJ/ton in 2019. It was 0.01GJ/ ton lower than that in 2018. The less energy intensity the better energy efficiency. Asia Cement (China) has been continuously promoting save energy and reduce consumption measures in recent years and has made some achievements, which is conducive to the company's sustainable development and social progress.



-		
2017	2018	2019
24,081,816	25,479,957	25,196,723

The cement output of Asia Cement (China)'s consistent cement companies (ton)

Note : Asia Cement (China)'s consistent cement companies include: Jiangxi Yadong, Huanggang Yadong, Hubei Yadong, Wuhan Yaxin, Sichuan Yadong, Sichuan Lanfeng.

Waste Heat Power Generation System

As the technology of cement kiln waste heat power generation matures, the State attaches importance to energy and supports energy saving and emission reduction, and more and more cement companies are becoming aware of the benefits of waste heat power generation, where they have a positive attitude towards the development of waste heat power generation. Each cement company of Asia Cement (China) has a residual heat power generation system that uses the residual heat generated by the rotary kiln system to produce hot water, then provides generator power through high-pressure steam generated by the boiler. Through recovering residual heat from the cement kiln to generate electricity not only saves energy and reduces carbon, but also protects the environment.

In 2019, the proportion of waste heat power generation was 26.32%, which is about 3% lower than that in 2018. This year, the electricity consumption of plants has increased, which was mainly due to the increase in the total output of clinker and the increase in the number of opening and closing of kilns. In addition to the suspension of the off-peak season production of kiln and the planned kiln suspension in 2019, in response to the Military World Games held in Wuhan City, three cement factories of Asia Cement (China) in Central China ceased production during the period as specified by the government, as such, the net power generation of waste heat recovery in 2019 increased by approximately 1 million KW-h compared to 2018. Waste heat power generation not only saves energy and is beneficial to environmental protection, but can also reduce the cost of electricity for enterprises and further improve economic efficiency.

Power consumption of Asia Cement (China)'s consistent cement companies



Implementation of Energy Management

Each cement company of Asia Cement (China) actively performs energy conservation and reduce carbon related work with the company's energy management policy. Examines the abnormality of each production equipment through daily production line of coal consumption, electricity, oil and other statistical data, strengthen the control of product's energy consumption process, identify and control each factor that's affecting product's energy consumption, and comprehensively and meticulously implement specific operations of departments, posts, and personnel to achieve systematic management; review of energy consumption and implementation progress of energy-saving projects on a monthly basis; analyze and review the status of the implementation of energy saving and performance on a quarterly basis, and conduct annual energy management system review, etc.; constantly improving the level of energy management and energy efficiency, and optimize and reform energy-consuming equipment, or replace high energy-consuming equipment, improve the production process, reduce the overall energy consumption of the product, and achieve sustainable development of the Company.



.4 Water Resource Management and Pollution Prevention

Asia Cement (China) has always adhered to the concept of "industrial development and environmental protection can co-exist" (工业发展与环境保护 可并行不悖). In regards to protecting water resources, not only do we enhance employees' water-saving awareness and conserve water, strengthen the control of water use, implement various water-saving measures, but also vigorously develop greening, improve the comprehensive utilization of water resources and develop sewage treatment technology, as well as constantly improve the water resources management level and water efficiency to achieve the sustainable development of the Company.

Water Resource Utilization

Water Sources and Water Consumption

Cement companies under Asia Cement (China) usually supply water for production and domestic, such as equipment cooling water, general domestic water, etc. The main source of water is surface water in rivers near companies. The water station of the plant is stored in the reservoir for use after it is purified and sterilized. Each cement grinding companies mainly use city tap water.

Water sources of cement companies under Asia Cement (China)

Company	Water Sources
Jiangxi Yadong	Upstream section of the Yangtze River in Matou town Jiujiang City
Huanggang Yadong	Wuxue section of the Yangtze River
Nanchang Yadong	Tap water in Nanchang City
Yangzhou Yadong	Yangluo section of the Yangtze River
Hubei Yadong	Tap water in Jiangxia District, Wuhan City
Wuhan Yaxin	Tap water in Dongxihu District, Wuhan City
Wuhan Yadong	Renminqu, Dujiangyan, Pengzhou City, Chengdu City
Sichuan Yadong	Aishanhe & Renminqu, Pengzhou City, Chengdu City
Sichuan Lanfeng	Tap water in Jiangxia District, Wuhan City





164.3

102.4

101.5

145.4

88.9

Sichuan Lanfeng

Company	2017	2018	2019
Nanchang Yadong	1.7	2.2	2.9
Yangzhou Yadong	3.1	3	3.8
Wuhan Yadong	5.5	4.7	5.5

Green Sustainable Circulation2: Low-carbon Green Intelligent Manufacturing

Water resources used in production of cement companies under Asia Cement (China) use water recycling system which can recycle water after cooling, significantly reducing water consumption with a small amount of evaporation loss and no emission. The sewage is mainly from staffs' domestic water and they use rain-sewage separation system which can recycle sewage as water for afforestation, car washing, floor washing, dust - control and so on or can be discharged into the local municipal sewage pipe network.

Water Usage Process of Each Cement Company of Asia Cement (China):



Purification Method of Self-owned Water Station:

Mainly for precipitation, filtration and add the appropriate chemicals to purify water and sterilization. Take Jiangxi Yadong for example, firstly, the drawn water will be removed sands and precipitated. Secondly, it will be added aluminium polychlorid to the water as flocculants to separate the sludge and impurities during sedimentation. And then, the water will be drawn to the water purifier for secondary filtration after sedimentation. Finally, after adding chlorine dioxide to the filtered water for disinfection, the clean water will be drawn to clean water tank for production and domestic uses.

The Flow Chart of Purification Treatment of Jiangxi Yadong's Water Station:



Efficient Use of Water for Production and Water Conservation Measures

The water used in production process by each cement company of Asia Cement (China) is recycled and reused. Taking Jiangxi Yadong as an example, the raw water from the upstream section of the Yangtze River in Matou town is purified and then sent to the reservoir on Mopan Mountain for storage as tap water by using pumps. When using water, the downstream from high to low levels will be used to provide cool water and residual heat power generation for each equipment. Afterwards, the used water will be cooled by the cooling tower and flows back to the wells, then be pumped back to the reservoir on Mopan Mountain for torage and reuse. During the production process, while the water-use measures mentioned above could lead to a small amount of water being evaporated, the rest of the water can be recycled and reused, the reuse rate can reach more than 80%, achieving the efficient use of water resources management and the concept of water conservation.

Treatment Measures of Domestic Sewage

Domestic sewage of cement companies under Asia Cement (China) is treated by "Biological contact Oxidation". The contact oxidation tank uses TDK elastic space packing of easy conjunctiva which possesses large specific surface and good oxidation resistance, while the oxidation pond uses submerged underwater aerators with low noise pollution. The removal rate of CODcr and BOD5 is up to 73% and 88%, respectively. The processing rate of ammonia nitrogen is up to 71%. The quality of water generated can reach Grade I standard as set out in the Integrated Waste Water Discharge Standard (《污水综合排放标准》) (GB8978-1996).



Sewage Treatment Flowchart:

First, by cleaning the grilles on a regular basis, we remove large suspended solids of the water which is pumped into grease trap. With the rationale of water inflow from the top and water outflow from the bottom, the grease trap removes grease from the surface of sewage, which then flows into the adjustment tank, a device that homogenizes the quality and quantity of sewage. Afterwards, sewage is pumped into contact oxidation tanks, where such water fully contacts with the activated sludge produced by aeration devices and aerobic bacteria degrade organic pollutants. Finally, the water enters sedimentation tanks which separate the activated sludge arising from aeration through gravity, with the upper purified liquid to enter into clear water tanks and can be reused for afforestation, car washing, floor washing and dust control or discharged into the local municipal sewage pipeline network. The quality of the discharged water complies with the local sewage limit.

The discharged water quality of each companies of Asia Cement (China) in 2019

	-			-						
Company	Water quality project	РН	Suspended solids mg/L	Chemical oxygen demand mg/L	Biological oxygen demand mg/L	Ammonia nitrogen mg/L	Total phosphorus mg/L	Oil type mg/L	Animal and vegetable oils mg/L	Qualified
Jiangxi	Emission limits of sewage	6-9	70	100	20	15	0.5	5	-	v
Yadong	Average value of measurement	7.42	16.00	36.25	11.05	1.05	0.28	-	-	
Huanggang	Emission limits of sewage	6-9	100	100	30	15	0.5	10	20	v
Yadong	Average value of measurement	7.74	15.00	72.00	18.20	9.23	0.41	-	-	v
Nanchang	Emission limits of sewage	6-9	70	100	20	15	1.0	-	-	v
Yadong	Average value of measurement	7.63	23.00	92.00	19.40	4.70	0.54	-	-	v
Yangzhou	Emission limits of sewage	6-9	400	500	-	35	8.0	-	-	v
Yadong	Average value of measurement	7.16	17.50	32.00	-	0.65	0.59	-	-	
Hubei Yadong	Emission limits of sewage	6-9	400	500	300	-	-	20	-	v
Huber radolig	Average value of measurement	7.69	9.50	38.10	7.50	4.71	1.03	0.11	-	v
Wuhan	Emission limits of sewage	6-9	70	100	20	15	0.5	-	-	v
Yadong	Average value of measurement	7.45	8.00	15.00	3.00	0.15	0.30	-	-	v
Sichuan	Emission limits of sewage	6-9	70	100	20	15	0.5	5	3	v
Yadong	Average value of measurement	7.04	13.00	18.00	5.20	2.50	0.36	0.06	-	v
Sichuan	Emission limits of sewage	6-9	70	100	30	15	-	10	20	v
Lanfeng	Average value of measurement	7.44	14.20	39.00	5.80	4.32	-	0.12	0.05	V

Green Sustainable Circulation2: Low-carbon Green Intelligent Manufacturing

Water Conservation Management Measures

Recycle the cooling water used in production equipment, reasonable control water temperature and water consumption reduce the use of fresh water consumption, and waste heat power generation steam condensate water reuse boiler. And strengthen on-site equipment management to prevent equipment leakage and other faults from polluting the circulating cooling water.

Implement measurement management, Install flowmeters and water meters in main water- using areas and workshops to monitor water production and usage on a daily basis, and to analyze water usage by comparing the data recorded so as to strictly prevent pouring, dripping and leakage of water; review water consumption on a monthly basis, and compare, analyze, and review the implementation and performance of water conservation measures on a quarterly basis.



Optimize or update water saving equipment as appropriate, and strengthen the propaganda of water conservation and raise employees' awareness of water conservation. Many rainwater collection ponds are made in the plant, and the fresh water after rainwater precipitation is used for washing the ground, greening and automatic car washing machine.

Emissions from Stationary Sources

Asia Cement (China) accelerated the progress of green development of the cement industry by adopting the most advanced dust collecting devices and selecting high-quality raw (fuel) materials to reduce the amount of air pollution generated from the source. Strict control to all aspects of cement production is applied according to the latest national environmental protection requirements, so that the emission index of Asia Cement (China) such as nitrogen oxides, sulfur oxides and particulate pollutants are better than the national environmental protection requirements.







Nitrogen oxide emissions of Asia Cement (China)'s consistant cement companies (ton)

Green Sustainable Circulation2: Low-carbon Green Intelligent Manufacturing



Particulate pollutant emissions of Asia Cement (China)'s consistant cement companies (ton)

Prevention and Control of Major Pollutants

Nitrogen Oxide (NOx) Control

Six consistent cement companies under Asia Cement (China) adopt lownitrogen combustion denitrification and SNCR denitrification process to significantly reduce the concentration of NOx emission from the smoke of kilns.

The low-nitrogen combustion denitrification process uses a low-nitrogen burner, a low-nitrogen decomposition furnace or a coal powder staged combustion equipment for the rotary kiln system. The NOx content in the air is significantly reduced by using low-nitrogen combustion to produce a large amount of carbon monoxide (CO) gas and undergo a reduction reaction with NOx. In addition, through the SNCR process where an appropriate amount of ammonia is injected into the upward air flow of kiln tail, causing a reduction reaction with NOx in flue gas to control the reduction of NOx emission can noticeably save the consumption of ammonia, and slightly reduce the heat consumption of clinker, which has certain economic and environmental benefits. The average annual emission concentration of nitrogen oxides (NOx) of various cement companies under Asia Cement (China) has a gradual downward trend as compared with 2017, and meets and exceeds the national and local emission standards.



Average concentration of nitrogen oxide of Asia Cement (China)'s consistant cement companies (mg/m³)



Dust emissions of Asia Cement (China)'s cement grinding

companies (ton)

Asia Cement (China) Holdings Corporation

Sulfur Dioxide (SO₂) Prevention and Control

Sulfur oxide is the main cause for the formation of acid rain. In 2013, the PRC promulgated the Emission Standard of Air Pollutants for Cement Industry (GB 4915-2013) in response to the current severe environmental issues. Among which, it stipulates that SO₂ emission in the cement industry to be $\leq 200 \text{ mg/m}^3$, and certain regions have even stricter emission limit standards, which indicates that the government attaches importance to emission of pollutants. The average annual emission concentration of sulfur dioxide (SO₂) of various cement companies under Asia Cement (China) meet and is better than the standard limit.



Control SO₂ Emission Measures of Asia Cement (China):

Use low-sulfur fuel as much as possible to control SO₂ emissions at source.

Actively improve the production process. Select appropriate kiln tail gas desulfurization process according to the production conditions of each kiln:

- Appropriate amount of slaked lime powder is added to a section of the preheater of the kiln system and an appropriate amount of raw material is added to the large bag collectors to the kiln tail to absorb a significant amount of SO₂ in the kiln exhaust gas. In addition, kiln flue gas desulfurization is controlled through the collaboration between raw mill and cement kiln operation.
- Appropriate amount of desulfurizing agent is injected into the upward air flow of the kiln tail and a section of the preheater to significantly absorb SO₂ in the kiln flue gas.
- Use wet desulfurization tower to absorb SO_2 in the kiln flue gas.

Plant 2 of Jiangxi Yadong first established a wet (raw meal-gypsum process) flue gas desulfurization process where kiln flue gas enters from the bottom of the desulfurization tower and countercurrent contact with slurry as the absorbent. SO_2 reacts with the raw slurry in the flue gas in the tower, and after desulfurization, the flue gas is discharged through the chimney in which the calcium sulfite hemihydrate (CaSO₃•1/2H₂O) formed falls into the desulfurization tower slurry tank where it will undergo an oxidation reaction with oxygen (O₂) and water (H₂O), to obtain desulfurization by-product gypsum dihydrate and recycled for use in the cement mill.

Process Flow of Wet Desulfurization of Kiln Flue Gas



Asia Cement (China) Holdings Corporation 32

Particulate Pollutants Treatment

Asia Cement (China) has adopted the most advanced dust collecting devices and extensively used the dust collection bag device to collect the raw materials, semi-finished product, clinker, cement and other fine particles in the production process. For example, For example, we have adopted heat resistant (NOMEX, 240°C) bag dust collectors for the collectors of our head kilns, and part of the electric dust collection machine is gradually replaced by bag dust collection machine. The emission concentration of particulate pollutant measured by all consistant cement companies and cement grinding companies under Asia Cement (China) reached and exceeded the national emission standards. At the same time, such devices control the unorganized dust emission concentration of the packaged cement loading system to below 1.5mg/m^3 , thus significantly improving the working environment for workers and achieving clean production within the packaging workshops.

Particles (soot and dust) emission concentration of each consistant cement companies of Asia Cement (China)

Company		Upper limit of emission standards		Annual average measured value	
Comp	Jany	Soot	Dust	Soot	Dust
	2017	30	20	9.1	
Jiangxi Yadong	2018	30	20	16.9	14.3
rauong	2019	30	20	9.0	6.0
	2017	30	20	15.25	
Huanggang Yadong	2018	30	20	8.38	12.31
rauong	2019	30	20	7.2	7.8
	2017	20	10	13	6.6
Hubei Yadong	2018	20	10	8.6	5.2
rauong	2019	20	10	9.1	4.8
	2017	20	20	7.43	7.43
Wuhan Yaxin	2018	20	10	4.65	6.9
Taxin	2019	20	10	6.3	7.6
c: 1	2017	20	10	17.3	8.9
Sichuan Yadong	2018	20	10	3.34	3
rauong	2019	20	10	2.9	5.0
C 1	2017	20	10	9	6
Sichuan Lanfeng	2018	20	10	8	2
Lameng	2019	20	10	6.8	5.3

2017		20	2018		2019	
Company	Upper limit of emission standards	Annual average measured value	Upper limit of emission standards	Annual average measured value	Upper limit of emission standards	Annual average measured value
Nanchang Yadong	20	8.2	20	9.7	30	22.2
Yangzhou Yadong	10	5.1	10	3.5	10	6.4
Wuhan	1#cement grinding=10	8.4	1#cement grinding=10	7.7	1#cement grinding=10	3.6
C	2#cement grinding=20	8.4	2#cement grinding=20	10.3	2#cement grinding=20	6.2

Particles (dust) emission concentration of each cement grinding companies under Asia Cement (China)

Expenditure on Pollution Prevention and Control

In 2019, Asia Cement (China) invested RMB172.595 million in pollutants control, which covered the operation expense for dust collectors, desulfurization and denitrification devices, payment of pollutants discharge fee and environmental protection tax to the government. And, each consistant cement companies and cement grinding companies under Asia Cement (China) also invested RMB30.754 million in other prevention and control measures and operating fee in 2019.



Expenditure on pollution prevention and control of each cement company and cement grinding company under Asia Cement (China) (RMB' 0,000):

Cost Company	Operation expense for big bag dust collectors, bag collectors and static dust- eliminating devices	Denitrification operation expense	Desulfurization operation expense	Pollutants discharge fee paid and environmental protection tax to the government
Jiangxi Yadong	4,940.8	944.8	969.1	744.8
Huanggang Yadong	131.9	148.2	-	158.2
Nanchang Yadong	403.0	-	-	10.1
Yangzhou Yadong	118.7	-	-	6.2
Hubei Yadong	1,186.6	387.3	540.7	246.0
Wuhan Yaxin	185.5	95.2	1.2	116.3
Wuhan Yadong	50.0	-	-	4.5
Sichuan Yadong	2,018.0	1,224.7	-	165.0
Sichuan Lanfeng	1,724.3	559.8	-	178.6
Total	10,758.8	3,360.0	1,511.0	1,629.7

Penalties Concerning Environmental Protection

On March 26, 2019, Wuhan Ecological Environment Bureau imposed an administrative penalty of RMB110,000 on the unorganized dust emission in Wuhan Yadong. After full renovation, Wuhan Yadong has been in line with environmental protection requirements.

Other pollution prevention and control measures and operating costs of each cement company and cement grinding company under Asia Cement (China) (RMB' 0,000):

Company	Control Measures	Operation Expense
	Hardened mine road to suppress dust	241.0
	Install dust collection in the cement packing room	92.0
Huanggang Yadong	Sealed material barn (limestone barn, etc.)	138.0
	Sealed accessories barn	113.0
Nanchang Yadong	Add raw material yard barn	1,050.0
	Recycle and reuse production sewage and domestic sewage	5.1
Nanchang Yali	Occupational hazard detection and prevention	1.0
Yangzhou Yadong-	1#2#3# Sound insulation of cement mills	15.5
grinding companies	Install the car washer at the cement delivery gate	4.8
	Cover the dust screen with sand and gravel	4.0
Yangzhou Yadong- products companies	Use water spray guy to reduce dust	2.0
products companies	Use tire cleaner to remove dust	2.0
	Non - organized dust control	417.5
Hubei Yadong	Plant rainwater and domestic sewage diversion treatment	376.1
	Noise control	217.5
Wuhan Yaxin	Self-environmental monitoring	29.0
Wuhan Yadong	Buried sewage treatment plant	1.5
	Sewage control (ditch edge, dredging, etc.)	15.9
Wuhan Yali	Prevention and control of solid waste	18.6
	Prevention and control of dust	0.6
Sichuan Yadong	Sewage disposal	160.0
Sichuan Lanfeng	Make sound insulation wall and add silencer	160.0
	Maintenance of sewage treatment equipment	3.5
	Maintenance of dust collection equipment	0.2
Sichuan Yali	Dust mask and earplugs	0.2
Siciliani fali	Disposal of scrapped concrete	3.0
	Noise and dust detection	0.3
	Install dust removal equipment	0.8
	Replace dust collection bag (dust control facilities)	1.0
Chengdu Yali	Maintenance and repair of sewage circulating sink treatment system	0.5
	Environmental monitoring (including noise and non-organization waste gas)	0.5
	Testing the current situation of occupational-disease-inductive workplace (noise and dust)	0.3
	Total	3,075.4

Green Sustainable Circulation3: Recycling Economy

Recycling Economy--Management Policy

Asia Cement (China) vigorously promotes circular economy under the orientation of resource conservation, recycling and reuse, and works on the application of various industrial wastes to cement production. We seriously implement a series of state policies on green development and promoting recycling economy. In addition, we continuously study and develop new technologies and formula to improve the amount of waste utilization, , increase the types of waste as alternatives raw material and fuel for green cement production. The move is designed to effectively reduce the pollution of soil, water, air and surrounding environment by long-term storage of various wastes and alleviate the excessive dependence on natural resources, while actively responding to state policies with low consumption, low discharge and high efficiency as our goals to create harmonious progress between economic development and our ecosystem.

The cement process has superior 3T characteristics (high temperature, long time residence, strong turbulence), It has the advantage of recycling waste. The use of waste materials as raw materials and fuel for cement industry can make waste materials return to a virtuous resource cycle after reuse. so the development of Recycling Economy in cement plants is the one of the most essential strategic direction.



Evaluation methods

We keep tracking the attainment of our objectives through the CSR report.

Policy and Commitment

We tap into the characteristics of the cement production process to deliver waste reduction as well as energy and waste reuse, striving for environmental sustainability.

※ Specific Actions and Initiatives

Alternative raw material

Asia Cement (China) vigorously promotes the collaborative waste disposal by cement kiln, such as sludge, heavy metal contaminated soil, industrial solid waste, etc.. And uses smelting slag, limestone powder, construction garbage, volcanic ash materials and other materials as raw cement ingredients or cement mixtures.

Alternative Fuel

- The processed fuel rods from waste tires, separation solid waste and industrial solid waste are transported to the rising air duct of the preheater for incineration through the climbing belt conveyor to replace part of the fuel.
- All cement plants under Asia Cement (China) actively strengthen the comprehensive utilization of industrial solid waste in production, The Company cooperate with the government to make waste harmless, recycle and reduce the amount of waste, so as to fulfill corporate social responsibility.
- We will continue increasing the types of alternative raw material and fuels and reducing the usage of coal and the amount of coal mined to reduce the discharge of air pollutants.
3.1 Recycling Economy Value Chain

Asia Cement (China) leverages its advanced production technologies and crafts by using waste ingredients such as limestone powder, converter slag, non-ferrous metalslag, electric furnace slag, sulfate slag, tailings and drill cuttings during raw material production, with less consumption of limestone, sandstone and iron ore during theproduction to reduce our dependence on natural mineral resource. In our cement production, some cement clinker and natural gypsum have been replaced by slags such as flyash, coal slag, limestone powder, nonferrous ash, desulfurized gypsum, phosphor gypsum and construction waste to produce green cement of high quality and with lowenergy consumption.

Asia Cement (China) continuously optimizes production technique and product formula. we will actively broadens the type and quantity of slags utilized with a view tocreating the maximum benefit of the Recycling Economy. In 2019, a total of 6.73 million tons of industrial waste residue have been used.

Comprehensive Utilization of Industrial Wastes Resources

The utilization volume statistics of industrial slag by cement companies under Asia Cement (China) in 2019: (ton)

Industria	al wastes	Fly-ash	Coal slag	Limestone powder	Desulfurization gypsum	Phosphogypsum	Converter slag	Non-ferrous metal slag	Electric furnace slag	Sulfate slag	Tailings(sand)	Construction waste	Others	Subtotal
	2017	126,589	127,480	0	356,600	35,507	201,020	15,142	0	0	499,253	0	0	1,361,591
Jiangxi Yadong	2018	95,403	134,071	0	394,643	24,428	0	0	0	0	641,868	49,845	0	1,340,258
	2019	69,534	115,898	333,431	422,395	12,312	36,293	31,818		293	612,982	58,152	0	1,693,108
	2017	54,308	57,739	171,516	76,532	30,591	19,759	0	0	0	0	0	0	410,445
Huanggang Yadong	2018	45,004	59,446	176,092	107,959	16,938	15,451	0	0	0	73,123	0	0	494,013
ladeng	2019	39,062	58,347	165,761	93,813	28,789	400	15,063	5,999	0	54,183	0	0	461,417
	2017	66,493	0	105,545	0	0	0	0	0	0	0	0	0	172,038
Nanchang Yadong	2018	86,476	0	91,351	0	0	0	2,935	0	0	0	5	0	180,767
ladong	2019	100,969	0	99,373	0	0	0	0	0	0	0	5	0	200,347
	2017	150,030	43,990	75,286	131,650	0	0	0	52,871	0	0	0	1,513	455,340
Yangzhou Yadong	2018	98,735	19,102	66,925	118,878	0	0	0	76,318	0	0	0	0	379,958
ladong	2019	86,763	21,158	13,390	115,060	0	0	0	0	0	0	0	0	236,371
	2017	409,073	0	1,057,180	183,363	23,260	0	44,422	161,340	0	0	0	0	1,878,638
Hubei Yadong	2018	356,614	0	744,046	237,906	7,174	0	52,066	132,040	0	0	0	5,613	1,535,459
ladong	2019	253,679	0	404,204	219,320	0	0	56,807	123,881	0	0	0	64,756	1,122,647
	2017	8,344	6,779	637,881	61,348	5,108	0	1,265	49,091	0	0	0	0	769,816
Wuhan Yaxin	2018	0	19,188	735,121	65,842	0	0	0	42,358	0	0	0	0	862,509
luxin	2019	0	55,123	695,700	79,845	0	0	6,652	51,942	0	0	0	0	889,262
	2017	23,194	145,719	106,894	91,194	4,769	0	78,808	4,008	0	0	0	32,382	486,968
Wuhan Yadong	2018	23,242	88,888	72,126	69,898	4,167	0	66,088	0	0	0	0	0	324,409
ladong	2019	7,612	77,631	58,595	51,889	0	0	46,280	0	0	0	0	19,735	261,742
	2017	0	0	0	98,318	161,511	0	14,113	49,554	93,604	17,172	0	177,102	611,374
Sichuan Yadong	2018	0	0	0	119,543	205,559	0	36,931	27,298	99,042	10,066	0	196,805	695,244
lauong	2019	0	0	0	128,458	201,408	0	8,474	40,782	101,848	7,872	0	300,052	788,894
	2017	0	261,424	294,521	12,598	100,924	25,154	7,219	11,391	80,125	0	0	29,042	822,398
Sichuan Lanfeng	2018	0	12,060	0	0	160,822	0	21,880	8,472	74,889	0	26,977	34,537	339,637
Lameng	2019	0	8,172	0	6,053	175,254	18,253	14,302	18,182	77,613	3,572	15,918	327,778	665,097

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under Asia Cement (China) (0,000 tons) 187.9 200.0 169.3 180.0 153.5 136.2 160.0 134.0 140.0 112.3 86.3 77.0 120.0 88.9 78.9 100.0 69.5 82.2 66.5 61.1 80.0 45.5 48.7 46.1 60.0 41.0 18.1 38.0 34.0 32.4 40.0 23.6 20.0 17.2 26.2 49.4 20.0 0.0 2018 2019 2017 2018 2018 2019 2017 2018 2019 2017 2018 2019 2017 2018 2019 2017 2018 2019 2019 2018 2019 2017 2018 2019 2017 2017 2017 Jiangxi Huanggang Nanchang Yangzhou Hubei Wuhan Wuhan Sichuan Sichuan Yadong Yadong Yadong Yadong Yaxin Yadong Yaxin Yadong Yadong

3.2 Use of Raw Materials and Energies and Resources

Raw Materials and Energies and Resources of the six Cement Companies of Asia Cement (China)

Raw material	Limestone	32,971,876	Ton
input	Clay, sandstone	4,953,444	Ton
Circular economy	Iron material	1,287,211	Ton
input	Desulfurization gypsum & phosphogypsum	1,367,647	Ton
	Other industrial slag	3,378,379	Ton
Energy input	Coal	3,436,419	Ton
	Fuel oil	9,814,717	Liter
	Electric power	1,841,548,823	Watt
	Water	7,759,550	Ton

Clinker production 24,915,225 tons

Residual heat power generation 742,330 KW

Raw material

economy input

Energy input

input

Circular



Clinker

gypsum

Limestone

Slag

Coal

Fuel oil

Water

Electric power

Desulfurization

Fly ash & coal cinder

Other industrial slag



2,457,269

166,949

82,884

134,692

294,133

237,378

16,655

29,663

143,047,643

121,098

Ton

Ton

Ton

Ton

Ton

Ton

Ton

Liter

Watt

Ton

	排	放	
CO ₂	NOx	SOx	Particulate
21,650,000 tons	8,439 tons	1,583 tons	572 tons

Cement output

3,570,002 tons

Emission

Dust

74.2 ton

Renewable Fuel Project

In 2019, Jiangxi Yadong assisted Jiangxi Lee & Man Paper in the treatment of solid waste. It is used to produce fuel rods where it is dried after pretreatment, replacing fuel for use in cement kiln and is transported to the upward air flow of the preheater through the conveyor belt to be incinerated. Throughout the year, a total of 6,320.86 tons of fuel rods and 26,691.96 tons of solid waste were landfilled and sorted by cement kilns, and industrial waste was recycled to reduce land occupation, environmental pollution and harmful gas emissions.

3.3 Wastes Disposal

Waste produced by companies under Asia Cement (China) during the production and transportation processes are mainly general production and household wastes. Its disposal strictly follows the national environmental protection requirements. Moreover, we adopt categorized waste processing in response to the state policy and concept that "green mountains and clear water are the most precious assets" (绿水青山就是金山银山) and "we shall not be engaged in destructive development, but properly work on environmental conservation" (不搞大开发共抓大保护),of which the recyclable wastes were recycled before reuse and non-recyclable waste is considered to be used as a furnish when it is incinerated into the kiln or into the raw material mill, in addition, companies were engaged in collaborative waste disposal by cement kiln and disposed a total of 39,027 tons of waste.

Sewage sludge treatment 19,616 tons	Disposal of waste refrigerator cotton 5,280 tons
	ns coordinate waste disposal in 2019
Disposal of drilling cuttings from Sinopec West Sichuan Gas Field and solid waste 13,978 tons	Disposal of scraps from a garment factory 153 tons

Type of Wastes

Trans of Maria	Dispersel	Wa	stes Disposal (iosal (ton)	
Type of Wastes	Disposal method	2017	2018	2019	
Household wastes	Burned in kiln / sent to environmental sanitation station	1,512	1,365	807	
Drilling cuttings	Add raw sandstone to grind	0	0	13,978	
Refrigerator cotton	Add raw material mill for vertical grinding	0	0	5,280	
Scraps from a garment factory	The rotary kiln head is fed by hand	0	0	153	
Cement kilns coordinate waste disposal (domestic sludge)	Burned in kiln	1,200	5,268	19,616	
Waste soil, gravel, waste concrete, and test blocks	Used in the raw mill as grinding ingredients	7,931	2,179	313	
Refractory bricks	Recycled and auctioned	572	477	322	
Waste metal	Recycled and auctioned	2,572	2,270	2,295	
Waste paper	Recycled and auctioned/Burned in kiln	5	6.2	0	
Waste belts and tires	Manufacturing of Stopper Rubber/Recycled and auctioned /Burned in kiln	588	58.2	841	
Waste lubricating oil and engine oil	Recovery for lubrication of scraper, disk conveyer, etc.	162	344	68	
Waste chemical test solution	Discharge after pretreatment and neutralization of wastewater	4	4.2	6	
Waste cable and batteries	Sent to the qualified unit for recycle	4	9.8	0	
waste wood and metal bucket	Recycled and auctioned	14	35.6	7.4	
Тс	tal	13,364	12,017	43,686	

Overview

Social Care--Management Policy

Based on the sustainable development strategies on the social aspect of "create a happy work place, support the vulnerable groups, promote the fine culture, and create a harmony society", Asia Cement (China) will accomplish its social care mission of becoming "the first choice partner for building a sustainable green home" by community activities, donation to the vulnerable groups, human science education and ecology environment protection. This helps us to promote the positive energy throughout society.

Focusing on the community and becoming a partner that grows together with the community help to create a win-win situation, which can be linked to the sustainable growth of Asia Cement (China). At the beginning of each construction, we will conduct impact assessment on the community where our factory operates, continuously discuss with the community to reach consensus, make efforts in the community development plan and other activities. By doing so, we will achieve our social care mission of becoming "the first choice partner for building a sustainable green home", and continue to pass it on.

Evaluation Methods

- ① We keep tracking the attainment of our action plans through the CSR report.
- ② We evaluate our social expenditure items and expense breakdown, which is collated by the CSR Committee and submitted to the committee chairperson for approval.

Policy and Commitment

Asia Cement (China) provides all necessary assistance for the caring and education of underprivileged groups.

% Specific Actions and Initiatives:

1 Community Infrastructure Construction

- Support community activities
- Assist post-disaster reconstruction of surrounding villages
- Support community's public welfare undertakings

2 Care for the Vulnerable Groups

- Participate in public welfare activities
- Reaching out to vulnerable groups
- Employees help each other

3 Support to Education Undertakings

- Support school construction
- Support campus activities
- · Award outstanding teachers and students

Poverty Alleviation

- Support the construction of poverty-stricken villages
- Provide subsidies to financially difficult families



4.1 Local Communities and Vulnerable Care

Community Activities

Asia Cement (China) has always insist on the integration of corporate development and social responsibility. The company actively participates in various poverty alleviation and public welfare, and has repeatedly funded surrounding villages to build roads, green barren hills, and help the needy. We also actively promote friendly interaction between each company and the local community, fully create sustainable development strategy, so as to contribute to the harmonious development of the society.

In 2019, subsidiaries of Asia Cement (China) have donated cement, concrete, gravel, mountain flou and other goods RMB1,144,476 and cash RMB162,800 to the neighboring communities in a total of 29 times. Cumulative amount RMB1,307,276.

NO.	Company	Donor	Donation	Value
1	Jiangxi Yadong	Ruichang Water Bureau	Cement donation	¥20,750
2	Jiangxi Yadong	Matou Town, Matou Village	Cement donation	¥46,500
3	Jiangxi Yadong	Daqiao Village,Wujiao Township, Ruichang City	Cement donation	¥33,350
4	Jiangxi Yadong	Qingshan Timberland	Cement donation	¥90,000
5	Jiangxi Yadong	Dawu Feng Village, Hongxia Township	Cement donation	¥25,000
6	Jiangxi Yadong	Sanyuan Village, Matou Town	Cement donation	¥29,364
7	Jiangxi Yadong	The forth group of West Street Community, Matou Town	Concrete	¥34,000
8	Jiangxi Yadong	Longwo Village, Matou Town	Cement donation	¥27,000
9	Jiangxi Yadong	Shangtian Natural Village, Tuanjie Township, Matou Town	Cement donation	¥78,880

NO.	Company	Donor	Donation	Value
10	Huanggang Yadong	Taiwan affairs, Huanggang City	Cash	¥30,000
11	Huanggang Yadong	The forth squadron of Wuhan Traffic police	Power donation	¥40,000
12	Huanggang Yadong	Guochong Village	Cement donation	¥33,000
13	Huanggang Yadong	Lanzhou Community and Tianzhen Street Community	Cement and gravel donation	¥27,400
14	Huanggang Yadong	Pantang Community	Cement donation	¥18,000
15	Huanggang Yadong	Malong Village, Meichuan Town	Cement donation	¥9,000
16	Huanggang Yadong	Lanzhou Community	Cement, gravel and mountain flou donation	¥50,000
17	Jiangxi Yali	Xiaoyuan Village, Gaofeng Town, Ruichang City	Cement donation	¥18,600
18	Jiangxi Yali	Nanxia Village, Huayuan Township, Ruichang City	Cement donation	¥18,600
19	Hubei Yadong	Chenyun Village, Chidong Town, Qichun County, Huanggang City	Cement donation	¥25,000
20	Wuhan Yaxin	Jiangxia Branch, Zhifang Street police station	Cement donation	¥26,514
21	Wuhan Yaxin	Lingang Village, Zhifang Street, Jiangxia District	Cash	¥30,000
22	Wuhan Yaxin	Lingang Village, Zhifang Street, Jiangxia District	Cement donation	¥44,189
23	Wuhan Yaxin	Lingang Village, Zhifang Street, Jiangxia District	Cement donation	¥4,419
24	Sichuan Yadong	Zhoujia Community, Tianpeng Town, Pengzhou City	Cement donation	¥60,950
25	Sichuan Yadong	Tongji Town, Pengzhou City 's Government	Cement donation	¥244,600
26	Sichuan Yadong	Siwen-chang Community, Tongji Town, Pengzhou City	Cement donation	¥24,560
27	Sichuan Lanfeng	Dengta Village, Guihua Town, Pengzhou City	Cement donation	¥18,800
28	Sichuan Lanfeng	Guihua Town, Pengzhou City's Government	Cash	¥102,800
29	Sichuan Lanfeng	Longtou Village, Guihua Town, Pengzhou City	Cement donation	¥96,000
		Total		¥1,307,276

Overview

Green Sustainable Circulation4: Social Care

he new rural construction in Wujiao.



Donating to repair houses and riverways.



Care for the Vulnerable Groups

Asia Cement (China) prepares budgets for emergency relief annually. In 2019, the total budgets prepared were about RMB350,000 (only the cash portion of annual budgets prepared for emergency relief, excluding the physical budget), for contributing to post-disaster reconstruction and for emergency relief and vulnerable groups. Asia Cement (China) cares in every moment for the elderly singletons and underprivileged families in urgent need and actively organizes various donation and charity activities to help the vulnerable groups get out of the plight. Also, taking the advantage of subordinate production enterprises, Asia Cement (China) provides material and manpower support for villagers, such as building bridges and roads.

Public Welfare Activities



Supported the Communist Party Activities in Longquan Village by donating RMB15,000 in cash and 2 cabinet air conditioners



Consoled person who works for flood control Tian Zhen section of the Yangtze River embankment by providing materials which valued about RMB5,000.



We donated RMB13,285 to underprivileged groups and those in need on the "5•19" Charity Day in Yangzhou.



Donated RMB18,000 to support "70th anniversary of China" which held by in Tuxi Village, Lichun Town, Pengzhou city.

Reaching out to Vulnerable Groups



Provided RMB33,780 in total since 2019 to Miss Wangs for their tuition fees and living expenses which ensure their completion of studies.

Huanggang Yadong

- Visited 32 poor households in Lanzhou community, Tian Town, Wuxue City with material which valued RMB10,000 in January 2019.
- Visited 26 poor households in Huluoyu Village, Shifo Temple, Wuxue City. with material which valued RMB15,600 in total in January and April 2019.



Donating materials to help flood control work.



Green Sustainable Circulation4: Social Care

Employees Help Each Other

In a bid to carry forward its motto of "mutual assistance, helping those in need and delivering care", we organized a total of 11 staff donations for mutual support in 2019, raising RMB173,663 to help 8 staff members and their families go through difficulties.

	Times of mutual donations	Amount of mutual donations (RMB)
2017	3	¥95,810
2018	5	¥173,663
2019	11	¥172,225

4.2 Support to Education Undertakings

Asia Cement (China) focuses on education. Since its establishment, the Company has provided goods and financial assistance for many times, and supported for the development of school education and teaching too.

- In August 2017, we donated 500 tons of PO42.5 cement (about RMB147,500) to Matou Yadong Hope Primary School for the construction of the complex building and dormitory.
- In December 2018, We donated 150 tons of PC32.5 cement (about RMB72,750) to the Matou School for the construction of the experimental building.
- In September 2019, We respectively donated 50 tons and 100 tons of PC42.5 cement, about RMB63,836, to Matou primary and secondary schools for the construction of ancillary facilities around the experimental building.





Xin Xing Yadong Hope Primary School (新兴亚东希望小学)

During the Wenchuan earthquake on 12 May 2008, the schools located at the hardest-hit areas of Pengzhou City suffered serious damage and were in most urgent need of reconstruction for maintaining normal educational activities. In order to implement the Company's long-standing concept and fulfill corporate social responsibility, we decided to donate RMB15 million for supporting the construction of the Xin Xing Yadong Primary School in Pengzhou City, which was completed and formally opened for the purpose of education on 1 September 2009 as scheduled. In order to encourage teachers and students of Yadong Primary School to spend great efforts in teaching and learning and making a firm determination to become successful, we set up the "Employee Care Education Fund" by appropriating part of the monthly salary of every executive in Sichuan Yadong as charitable contributions. The Fund will be utilized on a dedicated-fundfor-dedicated-use basis, for recognizing the outstanding teachers and students selected on Teacher's Day and Children's Day by the school every year. on that day, Sichuan Yadong will send designated personnel to Xin Xing Yadong Primary School for attending the "Teacher's Day" and "Children's Day" celebrations, at which ten distinguished teachers and thirty outstanding students will be selected, and each teacher will be awarded RMB1,000 and each student will be awarded RMB200.

Green Sustainable Circulation4: Social Care

4.3 Humanistic Science Education

Education is the fundamental task for generations to come. Asia Cement (China) continues to introduce corporate resources, focuses on humanistic science education and cooperates with Yuan Ze University and Yadong Technical College under the Far East Group to carry out the cooperative education. We has promoted industry-academy internships and talents reserve plans, brought in new blood and revitalized the human resource structure, and it has also cooperated with some professional cement colleges and universities in China to help the students cultivate their abilities to combine theory with practice. After the practical experience activity, the guests and students benefited a lot and were widely praised. Which will lay a solid foundation for them to adapt to their work environment and workplaces and integrate into the working team.

Currently, many young people choose to attend the vocational schools, because the vocational schools cooperates with relevant industries to carry out "industry, academic and research" collaboration for mutual development, in addition to preparing young people with skills early. It presents a multi-win situation for the future employment of students, schools' grasp of market demand, and the exploration of talents in the industry. In view of this, Asia Cement (China) and its subsidiaries welcome all organizations from all walks of life and schools to visit the Company, and the Company is willing to make plans for related study activities.

- In February 2019, Mining engineering students from the School of Environment and Resource of Southwest University of Science and Technology visited the mines of Sichuan Yadong.
- In July 2019, Teachers and students from Wuhan University of Technology majoring in inorganic nonmetallic materials came to visit our company for practice.
- In July 2019, Mining engineering students from the School of Inorganic Non-metal Material of Southwest University of Science and Technology came to Huanggang Yadong for practice.
- The fist group of works unit, the first plant of quality unit, and the second plant of manufacturing section in Jiangxi Yadong are recruited respectively of students. Currently, they are still in the internship, and the post salary is normally paid.



4.4 Social Care Expenditure

Social Stabilization Expenditure

In 2019, Asia Cement (China) spent a total of approximately RMB1.67 million in social expenditure. The main expenditure categories were community construction of approximately RMB1.3 million, accounting for approximately 78%.







Asia Cement (China) is committed to building a "garden-style factory". It is committed to the concept of greening empty spaces and no wasteland in the factory area, striving to offer a good working and leisure environment to its staff.

Asia Cement (China) actively implement the ""green mountains and clear water are the most precious assets"" strategic policy, and firmly uphold the concept of respecting, complying with and protecting nature.We actively responded to the government's environmental protection policy to promote environmental sustainability, with heavy investments in manpower, materials and financial resources. Each company has set up its special unit as well as green technology staff and workers to grow green plants in living quarters, factory areas and both sides of the road, as a way to demonstrate our commitment to environmental sustainability.

Evaluation Methods	
Policy and Commitment	

Each company is equipped with environmental preservation professionals to assess the effectiveness of its plan based on the implementation of environmental protection programs.

 Protecting the ecosystem and raising the awareness.
 Providing free guided tours and commentaries on environmental preservation.

Specific Actions and Initiatives:



5.1 Greenery Cultivation

Asia Cement (China) promotes the formation of green development and lifestyle. In order to realize the harmonious development between man and nature, the Company actively cultivates green plants. There is a flower garden and seeds cultivation center in Jiangxi Yadong, Huanggang Yadong, Nanchang Yadong, Hubei Yadong, Sichuan Yadong, Sichuan Lanfeng. It is equipped with greenhouses, shady nets and other facilities to cultivate a variety of seasonal flowers. Strive to build a green home, do a good job in planting green, protecting green, loving green and flourishing green.







Green Sustainable Circulation5: Environmental Education

Company	Green plant cultivation performance in 2019	Cost (RMB)
Jiangxi Yadong	There are 98 camphor trees, 914 arbors, 213,900 shrubs, 100,000 grass/wood flowers, 12,600 m ² of lawn.	¥834,730
Huanggang Yadong	There were 5,190 robinia pseudoacacia trees, 634 camphor trees, 340 red photinia trees, 100 kg camphor tree seeds and 350 kg grass seeds.	¥1,121,000
Nanchang Yali	Planting red heather, eucalyptus.	¥45,000
Hubei Yadong	Planting metasequoia, photinia, boxwood pile scene, French holly, green area of 2.5 hectares.	¥19,749
Sichuan Yadong	Cultivate taxus, Chinese pine, sweet-scented osmanthus, Lechang michelia, etc.	¥1,346,000
Sichuan Lanfeng	Cultivate 16 camphor trees, 3 Magnolia grandiflora from Guangzhou, 200m ² of lobular privet seedlings, 30m ² of photinia, 71 plants of red plum, 260 plants of Japanese red maple, 1 plant of Yellow pueraria,8 plants of red bulb, 28 plants of four seasons poplar, 7 plants of four seasons azarea,8 plants of arbonian pine, 400 plants of four seasons azalea, 20 plants of lily, 3,000m ² of dwarf coreopsis, 1,800 eucalyptus saplings and 461 hibiscus saplings.	¥111,558
	Total	¥3,478,037

5.2 Jiangxi Yadong's Agriculture Park

In order to apply for the "National-level Green Mine", Jiangxi Yadong has gradually established an ecological agriculture park integrating modern agriculture, leisure sightseeing and three-dimensional cultivation by increasing capital injection annually on idle lands, which eventually made the company become a role model in the cement industry.

The park is currently divided into four areas, namely green leisure area, agricultural sightseeing industry area, orchards area and cultivation area. The social image, influence and food quality of Yadong is enhanced with lower procurement costs in fruits, vegetables and poultry of Yadong. According to the statistics, the production volume of vegetables and fruits, eggs, meat and rapeseed oil reached over 60,000kg, 4,000, 300kg and 150kg respectively, with the total amount surpassing RMB120,000. Subsequently, the company will continue to make adjustments to achieve the ultimate goal.

Jiangxi Yadong's Mine Hyriculture Park





Sustainable Governance Circulation

Corporate Governance

Corporate and Governance Overview Products and Economy Performance Climate Change Adaptation and Mitigation Supply Chain Management Customer Service

Happy Workplace

Employee Structure Welfare Competitiveness Capacity Competitiveness Occupation Health and Safety

Sustainable Topics Management

Sustainable Topics Identification Stakeholders Assessment and Engagement Management and Disclosure of Significant Topics Sustainable Topic Validation and Report Management

Sustainable Action Initiative

Disclosure of Projects and Indicators on Sustainable Mine ISO 26000 Corporate Social Responsibility Guidelines Environment, Society and Governance (ESG) Report Index

Corporate Governance--Management Policy

With the operation concept of "high quality, high efficiency, high environmental protection, and low cost," Asia Cement (China) not only produces high quality products but also is proud of upholding the highest environmental standard and high efficient production. Besides the cement business, Asia Cement (China) also engages in marine transport and cement mix businesses. It endeavors to create the best value for the Company and biggest interest for the shareholders by integrating relevant resources in the multi-angle operation and to become the first choice partner for building sustainable green home.

Evaluation	We keep tracking the attainment of our objectives and action
Methods	plans through the CSR report.

Policy and

Annual dividend distribution rate remains above 20%. 1 We push forward the adaptation and mitigation plan for (2)climate change and participate in carbon disclosure projects each year.

Specific Actions and Initiatives

Commitment

- (1) Our continuous development of sustainable and innovative products has yielded both economic and environmental benefits.
- (2) Our value chain integration has delivered comprehensive economic benefits.

1.1 Corporate and Governance Overview

Asia Cement (China) operates its business with the principal of sincerity and strives to improve the governance structure of the Company so as to perform its sustainable operating responsibilities. A healthy and efficient board is the governing basis to govern a company well. The Board is committed to maintaining high standards of corporate governance practices to safeguard the interests of the Company's shareholders. Audit Committee, Remuneration Committee, Nomination Committee and Independent Committee were set up under the Board to assist the Board performing company governing rules. Company website have set up special column of investors' relations as a pipeline of delivering and communicating information.

Management and Organization Structure of Asia Cement (China)



Overview

@Green Sustainable Circulation

Basic Information

Company	Asia Cement(China)Holdings Corporation
Employees	3,900 employees.
Paid-in capital	RMB9.7 billion
Establish/listing date	March 2006/2008 (stock code: 00743)
Main product and service	Different types of "Skyscraper" ("洋房牌") cement and clinker manufactured by Asia Cement (China)
Chairman /Director	HSU, Shu-tong/WU, Chung-lih
Headquarters	No. 6 Yadong Avenue Ma-Tou Town, Ruichang City Jiangxi Province
Main operation sites of cement production	Jiangxi Yadong,Huanggang Yadong,Nanchang Yadong,Yangzhou Yadong, Hubei Yadong, Wuhan Yaxin, Wuhan Yadong, Sichuan Yadong, Sichuan Lanfeng
Production lines and capacity	Jiangxi Yadong has six production lines with an annual output of 11.30 million tons of clinker and 14 million tons of cement. Huanggang Yadong has one production line with an annual output of 1.65 million tons of clinker and 2 million tons of cement. Nanchang Yadong has one cement mill with an annual output of 0.6 million tons of cement. Hubei Yadong has two production lines with an annual output of 3.30 million tons of clinker and 4 million tons of cement. Wuhan Yaxin has one production line with an annual output of 1 million tons of clinker and 1.5 million tons of cement. Wuhan Yadong has two crement mills with an annual output of 1 million tons of clinker and 1.5 million tons of cement. Wuhan Yadong has two cement mills with an annual output of 0.6 million tons of mineral powder. Sichuan Yadong has three production lines with an annual output of 4.95 million tons of clinker and 6 million tons of cement. Sichuan Lanfeng has two production lines with an annual output of 3.8 million tons of clinker and 5 million tons of cement. Yangzhou Yadong has three cement mills with an annual output of 3 million tons of clinker total production capacity amount to 26 million tons of clinker and 36.7 million tons of cement.
Net sales	Clinker and cement sales volume: Asia Cement (China) 30,468,000 tons. Clinker and cement sales amount: Asia Cement (China) RMB11,470million.
Providing services market	Domestic sales covers Jiangxi, Hubei, Sichuan, Jiangsu, Shanghai, Henan, Anhui, Zhejiang, Fujian, while some are sold for export to Singapore and the US.
Sales network	Fifteen sale offices in the PRC: Nanchang, Jiujiang, Ruichang, Shanghai, Wuchang, Hankou, Yangluo, Wuxue, Jiangxia, Xinzhou, Xiaogan, Chengdu, Pengzhou, Yangzhou and Taizhou sale offices. Number of distributors in the PRC: 488.
Main entities of the consolidated financial reports	Jiangxi Yadong, Huanggang Yadong, Nanchang Yadong, Nanchang Yali, Jiangxi Yali, Yangzhou Yadong, Taizhou Yadong, Hubei Yadong, Wuhan Yaxin, Wuhan Yadong, Wuhan Yali, Hubei Yali, Sichuan Yadong, Sichuan Lanfeng, Sichuan Yali, Chengdu Yali, Sichuan Yali
Country and region	PRC

Composition and Operation of the Board

The Board of Asia Cement (China) is its supreme governance unit and major operation decision-making center. The Company recognizes the importance of diversification of board members to the corporate governance and effective operation of the Board. The Company adopts the diversification policy for board members to ensure that the board members of the Company achieve proper balance in diversified aspects like skills, experiences and perspectives so as to improve the effective operation of the Board and maintain high standard corporate governance level. The Nomination Committee under the Board is responsible for identifying qualified persons to act as directors based on a series of diversified category and with reference to the Company's business model and specific needs.

The board of directors of Asia Cement (China) consists of 11 directors. Under the leadership of Chairman HSU Shu-tong, the primary responsibility of the Board is to supervise and through setting up various committees thereunder, to improve the supervision and decision-making. The board plans to meet at least once a quarter and review the financial and business reports and sustainability issues of the operating team. There were four board meetings in 2019.

Title	Name	Main Experience	NO. of attendance/No. of meetings
Chairman	HSU Shu-tong	Chairman of Far Eastern New Century Corporation Chairman of Far EasTone Telecommunications Co. Ltd. Chairman of Far Eastern Department Stores Ltd.	4/4
Vice Chairman	HSU Shu-ping	Vice Chairman of Far Eastern New Century Corporation Vice Chairman of Far EasTone Telecommunications Co. Ltd.	4/4
Executive Directors	CHANG Tsai-hsiung	Advisor of Asia Cement (China) Executive director of U-Ming Marine Transport Corporation Supervisor of Far Eastern New Century Corporation	4/4
	WU Chung-lih	CEO of Asia Cement (China)/Chairman of Jiangxi Yadong	4/4
	CHANG Chen-kuen	Vice CEO of Asia Cement (China) Former General Manager of Jiangxi Yadong	4/4
	LIN Seng-chang	Business consultant of Asia Cement (China) Former general Manager of Hubei Yadong	4/4
	WU Ling-ling	Vice General Manager fo Asia Cement Chairman of Oriental Holding	4/4
	TSIM Tak-lung Dominic	Non-executive Director of Playmates Holdings Limited	4/4
Independent Directors	WANG Wei	Former Vice President of China National Materials Company Limited Former Vice President of China Building Materials Federation Former Vice President of China Cement Association	3/4
	LEE Kao-chao	Former Director of Economic Research Department in Council for Economic Planning and Development Former Director of the Board of Taipei City Bank Former Independent Director of Asia Cement Corporations	4/4
	WANG Kuo-ming	Former President of Yuan Ze University Former President of Nan Kai University of Technology	4/4

Institutionalization of Board and Supervisor Remuneration and Sustainable Performance

The remuneration policy for directors shall be determined by the Remuneration Committee consulted the Company's business performance, individual duties and performance and comparable market statistics.

Evaluation of Board Performance

In order to implement corporate governance and enhance the functions of the board, Asia Cement (China)'s Board has worked out the "Board Performance Evaluation Regulations" and published the annual evaluation results on the company website.

Avoid Conflicts of Interest

According to current Board practice, any material transaction, which involves a conflict of interests due to a substantial shareholder or a director, will be considered and dealt with by the Board at a duly convened Board meeting. The Company's articles of association also contain provisions requiring Directors to abstain from voting and not to be counted in the quorum at meetings for approving transactions in which such directors or any of their associates have a material interest.

Audit Committee

The committee members are appointed by the Board of the Company from non-executive directors, and the Committee shall act as the communication bridge for other directors, external auditors and internal auditors (if there was internal audit requirements) in connection with financial and other reporting, internal control, external and internal audit matters and other financial and accounting matters as determined by the Board from time to time and assist the Board to provide independent review in connection with the financial reporting procedures, internal control and the effectiveness of risk management systems of the Company and its subsidiaries, as well as supervise the audit process and perform other duties and responsibilities delegated by the Board.

The Audit Committee comprises Mr. TSIM Tak-lung Dominic (Chairman), Mr. HSU, Shu-tong, Mr. LEE Kao-chao. Two meetings were held by Audit Committee in 2019.

Title	Name	NO. of attendance/ No. of meetings
Chairman	TSIM Tak-lung Dominic	2/2
Member	HSU Shu-tong	2/2
Member	LEE Kao-chao	2/2

Remuneration Committee

The Committee comprises three members appointed by the Board of the Company and most committee members are independent non-executive directors of the Company. The Committee shall review and formulate remuneration structure policy for all directors and senior management of the Company, make recommendations to the Board for its consideration; consult the Chairman of the Board and/or chief executive officer or professional advices if necessary regarding to their remuneration proposals for other executive directors. he members of the Remuneration Committee are Dr. WANG, Kuo-ming (Chairman), Mr. HSU, Shu-tong and Mr. TSIM, Tak-lung Dominic. The Remuneration Committee convened one meeting in 2019.

Title	Name	NO. of attendance/ No. of meetings
Chairman	WANG Kuo-ming	1/1
Member	TSIM Tak-lung Dominic	1/1
Member	HSU Shu-tong	1/1

Nomination Committee

The members of Nomination Committee (which comprises three members) are appointed and removed by the Board ("Board"). The Committee shall review the structure, size and members (including skills, knowledge and experience) of the Board at least annually, and make recommendations to the Board in respect of any proposed changes to implement the Company's development strategy; identify individuals qualified to act as Board members and make recommendations to the Board on the selection and nomination of the individuals for directorships; assess the independence of independent non-executive directors; make recommendations to the Board on relevant matters relating to the appointment or re-appointment of directors and succession planning for directors (in particular the Chairman and chief executive officer).

The members of the Nomination Committee are Mr. HSU Shu-tong (Chairman), Mr. TSIM Tak-lung Dominic and Mr. WANG Wei. Nomination Committee convened one meeting in 2019.

Title	Name	NO. of attendance/ No. of meetings
Chairman	HSU Shu-tong	1/1
Member	TSIM Tak-lung Dominic	1/1
Member	WANG Wei	1/1

Independent Committee

The Independent Committee comprises Doc. LEE Kao-chao (Chairman), Mr. TSIM Tak-lung Dominic and Dr. WANG Kuo-ming and shall convene at least one meeting annually. Its primary responsibilities include: reviewing all transactions among the Company, Asia Cement Group and Far Eastern Group to ensure that they are conducted on normal commercial terms and in the ordinary and usual course of business of the Group and if necessary, recommending the Board to correct such transactions or cancel them; establishing, where applicable, guidelines for management to follow while conducting continuing transactions among the Company, Asia Cement Group and Far Eastern Group; reviewing and assessing the ongoing relationships of the Company, Asia Cement Group and Far Eastern Group to ensure the Committee guidelines formulated as aforesaid being complied and maintaining such relationship being fair to the Company and analyzing and assessing any potential conflict of interests among the Company, Asia Cement Group and Far Eastern Group. The Independent Committee convened one meeting in 2019.

Title	Name	NO. of attendance/No. of meetings
Chairman	LEE Kao-chao	1/1
Member	TSIM Tak-lung Dominic	1/1
Member	WANG Kuo-ming	1/1

Compliance with Ethic and Honesty and Anti-corruption

The operation concept of "Sincerity, Diligence, Thrift, Prudence and Innovation" of Asia Cement (China) has been deeply rooted in the mind of the employees. Sincerity represents open-hearted and zealous; diligence means hardworking and considerate; thrift is frugal and simple; prudence implies cautious and accurate. In short, "be honest, clear, inquisitive, and do the best" has become part of the corporate culture. There was no corruption event in 2019. Article 5 (Appropriateness of Laws, Compliance and Anti-Bribery) 1. Personnel of purchase business shall develop the relationship with suppliers according to the laws, and comply with all applicable laws and regulations in the business operations. 2. Commitments of the personnel of purchase business to the suppliers must be legally authorized by the Company and shall not be made in the name of an individual. 3. Corruption and bribery are prohibited. All corruption and bribery shall be strictly handled in accordance with the relevant regulations of the Company, and the persons and matters involved in violation of relevant laws shall be referred to the judicial authority for disposal. 4.All staff are forbidden to ask for or accept any pecuniary or nonpecuniary benefit for themselves or for others from the clients or other persons, companies and institutions who have business contacts with the Company.

Code of Conduct of Purchase Business in Asia Cement (China)

Code of Conduct of Business Personnel of Asia Cement (China) Article 6 (Customer Exchanges and Report of Conflicts of Interest) 1. Businessrelated personnel shall avoid trading with clients who have record of dishonest conducts. When dealing with clients, they shall be made understood and respect the Company's code of ethic and conduct, and will be required to provide written commitments stating that they do not engage in illegal business practices and will not provide unjust benefits or bribes to employees of the Company. When signing a contract, it is advised to establish terms of termination or dissolution of the contract in violation of good faith behavior. 2. When a client has a relationship of private interest with a business personnel or a close member of his/her family thereof, the business personnel shall report on his/her own initiative and follow the avoidance principle during the fulfillment of the business. Business personnel shall not sacrifice the interests of the Company in any way, and seek unjust benefits for themselves, the clients or anyone else.

Method of Settle Illegal and Immoral or Dishonest Behavior Cases

The general audit office, acting as the task force of Asia Cement (China), is responsible for the promotion, formulation, supervision and execution of corporate integrity operation policies and prevention programs, coupled with the establishment of internal and external reporting channels, its mechanism as well as the reporting windows on the Company's website to facilitate the implementation of its ethical code of conduct and integrity operation. The head of general audit office accepts reports from colleagues, customers, suppliers and contractors of the Company, including personal reports, telephone reports and letter reports. The general audit office will identify the purposes of reports, collect specific evidences and investigate reporting cases in a confidential manner, with verification via independent channels to protect the whistleblowers. Once reporting cases are verified to be true and the circumstances are serious, the Company will process the relevant cases in accordance with laws or relevant regulations of the Company and disclose the information on public information bulletins, providing appropriate reward for the whistleblowers at the same time.

Overview

Sustainable Governance Circulation1: Corporate Governance



Participation in Association

Asia cement (China) has participated in all kinds of organizations in different ways in order to keep close contact with the community and seek for cooperative sustainable development apart from engaging in core cement industry. Main associations participated include:

Company	Association	Identity
	China Cement Association 中国水泥协会	General director
	Investment Association of Jiangxi Province 江西省投资协会	General director
	Jiangxi Association for Quality 江西省质量协会	General director
	ZHONGGUANCUN Green Mine Industry Alliance中关村绿色矿山联盟	General director
Jiangxi	Safety Production Association of Jiangxi Province 江西省安全生产协会	Ordinary member
Yadong	The Entrepreneurs Association of Jiangxi Enterprise Confederation 江西省企业联合会企业家协会	General director
	Jiangxi Institute of Energy Conservation Technology 江西省节能技术学会	Member
	Jiangxi Provincial Building Materials Association 江西省建材协会	Director member
	China Mining Association中国矿业联合会	Member
Huanggang	Wuxue Non-coal Mine Safety Production Association 武穴市非煤矿山安全生产协会	Vice president
Yadong	Hubei Provincial Cement Industry Association 湖北省水泥工业协会	Member
	Jiangsu Provincial Building Materials Association 江苏省建材协会	General director
Yangzhou Yadong	Yangzhou Building Materials Association 扬州市建材协会	Vice director
Tuuong	Yangzhou Concrete Association 扬州市混凝土协会	Mmember
Hubei	Taiwan Asset Enterprise Association Wuhan 武汉台资企业协会	General director member
	Wuhan Association of Enterprises with Foreign Investment 武汉外商投资企业协会	General director member
	Wuhan Xinzhou Enterprises Confederation 武汉市新洲企业联合会	Vice president
Yadong	Hubei Provincial Cement Industry Association 湖北省水泥工业协会	Vice president
	Hubei Provincial Circular Economy Association 湖北省循环经济协会	General director member
	Wuhan Association of Circular Economy 武汉市循环经济协会	General director member
Wuhan Yaxin	Hubei Provincial Cement Industry Association湖北省水泥工业协会	Ordinary member
Wuhan Yali	Wuhan Concrete Mortar Association 武汉混凝土协会	Ordinary member
Sichuan	Sichuan Provincial Cement Association 四川省水泥协会	Member
Yadong	Chengdu Enterprise Federation Association 成都企业联合会	Member
Sichuan Lanfeng	Chengdu Building Materials Association成都市建筑材料行业协会	General director

Internal Control and Risk Management System

In order to reinforce risk management, Asia Cement (China) has formulated a series of internal risk management solutions and internal control self-evaluation process and methods which are implemented by the board of Directors, managers and employees, aiming at promoting the robust operation and ensuring the accomplishment of goals in a reasonable way.

Goals of Internal Control and Risk Management System:



Risk Identification and Countermeasures

Risk description

- ① Real estate control policies were launched intensively in various cities and the regulations of financial investment tend to be stricter. The industry supply and demand is expected to improve against the backdrop of the ongoing supply-side reform, off-peak production normalization, accelerating capacity replacement, tightening environmental protection and production limitation caused by serious pollution.
- ② The Campaign for Cutting Excessive Production Capacity of the Cement Industry (2018-2020) sets out that for the next three years, clinker products output shall be slashed by 392,700,000 tons, with efforts to attain an average utilization rate of 70% of cement production capacity, a production capacity concentration of 70% for clinker among top 10 conglomerates nationwide and a production capacity concentration of 60% for cement among top-10 producers in China.
- ③ Real estate control policies were launched intensively in various cities and the regulations of financial investment tend to be stricter. The industry supply and demand is expected to improve against the backdrop of the ongoing supply-side reform, off-peak production normalization, accelerating capacity replacement, tightening environmental protection and production limitation caused by serious pollution.
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- (5) Real estate control policies were launched intensively in various cities and the regulations of financial investment tend to be stricter. The industry supply and demand is expected to improve against the backdrop of the ongoing supply-side reform, off-peak production normalization, accelerating capacity replacement, tightening environmental protection and production limitation caused by serious pollution.

	Responding
Business:	We stabilized the market position, expanded the scale of self-owned shipping, strengthened the operational efficiency of current production, shipping and marketing teams, and consolidated midstream and downstream channels, improved the production of rotary kilns and quality of clinker, continued to select excellent target markets, established production and distribution bases, and expanded customers to achieve the pre-determined goals of selling all products produced and making a stable profit.
Industry chain:	We increased the reserve of raw materials, promoted the operation of products such as angles, concrete and admixtures, and expanded new profit points.
Innovation and upgrade:	We are moving forward to the development of smart factories integrating smart mining, smart maintenance, smart production and smart logistics. Jiangxi Yadong cement kilns would assist in waste disposal and monitor the waste pollutants from various cement plants in real time, striving to become "environment-friendly and resource-saving" smart factories.

Specific Audit Department

Asia Cement (China) has specific audit department in charge of promoting and supervising the establishment of internal control system by each company for the purpose of maintaining an effective risk control; checking and assessing the effectiveness and sufficiency of internal control system in each company and supervising the effective implementation of internal control system; performing regular and special audit plans and following up the improvement on the defects and irregularities of the internal control systems of the companies under investigation to ensure the ongoing effectiveness of design and implementation of internal control system while maintaining and increasing the overall interest of the enterprise. The annual audit plan, audit report and corporate sustainability issues will be presented by Asia Cement (China) each year to the Board of Directors for approval according to the laws.



1.2 Products and Economy Performance

Brand



Based on the operating philosophy of "high quality, high efficiency, high environmental protection and low cost", the Company has created an outstanding brand image for the "Skyscraper Brand Cement".



Including distributors, general customers, relationship enterprises, wholesale customers, key projects, clinker and furnace powder customers.

Business Units and Distributors

 Business units: We have 15 business offices in China include: Nanchang, Jiujiang, Ruichang, Shanghai, Wuchang, Hankou, Yangluo, Wuxue, Jiangxia, Xinzhou, Xiaogan, Chengdu, Pengzhou, Yangzhou and Taizhou.
 Distributors: There are 488 distributors in China..

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Products and Services

Asia Cement (China) has established production or dispatching bases in Jiangxi, Hubei, Sichuan, Jiangsu, Shanghai and so on for production and supplying to meet customer's needs. The Company has set up 15 business offices in total with sales network covering nine provinces and one city, detailed information of which as following: business office of Jiangxi Yadong locating in Jiujiang, Ruichang, Nanchang and Shanghai; business office for Hubei province locating in Yangluo, Xinzhou, Hankou, Xiaogan, Wuchang, Jiangxia, Wuxue; the business office for Sichuan province locating in Pengzhou, Chengdu; business office for Jiangsu province locating in Yangzhou, Taizhou. Each business unit is equipped with professional staffs for assisting sales and after-sales service, which has further enhanced the service efficiency of production and sales.

Combined Financial Performance

The Company is one of the top 10 enterprises manufacturing cement and clinker in PRC and held leading market positions in certain regional markets such as Jiujiang, Nanchang, Huanggang, Wuhan, Chengdu, Yangzhou and so on. In 2019, the sales volume of cement clinker remained stable. The overall profit level of the Group in 2019 was significantly higher than that in 2018 due to higher prices in major sales regions amidst the supply-side reform in full force and the continued deepening of environmental protection. Faced with a changing new era, the Group will remain dedicated to the operation and management direction of efficiency enhancement, cost reduction, structural improvement and quality enhancement in 2020. Committed to its long-standing corporate culture of "Sincerity, Diligence, Thrift, Prudence and Innovation", the Group will further promote its transformation into an information-based and intelligent enterprise, implement ultra-low energy consumption and emission standards, and optimize the current marketing network. Bo doing so, we can enhance the overall competitiveness of the Group with quality products and excellent service. As an international group with rich heritage, innovation and sustainable operation, Asia Cement (China) will create greater value for the country, shareholders and employees with excellent performance.

<financial performance (based on the combined financial statements)>



Sustainable Governance Circulation1: Corporate Governance

In 2019, Asia Cement (China) had distributable surplus of RMB2.009 per share and distributed cash dividend of RMB0.5 per share, with dividend payout ratio of 25%.

The dividend payout ratio of Asia Cement (China) maintains at a high level of above 20% and the dividend yield ranges from 1.4%-10.5%. We create values for investors continually by adopting steady high dividend distribution policy.





Combined Financial Statements of Asia Cement (China)

The stable below set out the combined financial statements from 2017 to 2019:

ltem	Unit	2017	2018	2019
Operating revenue	RMB'000	7,815,527	11,330,347	12,608,716
Operating costs	RMB'000	5,905,183	6,943,932	7,289,590
Operating gross profit	RMB'000	1,910,344	4,386,415	5,319,126
Net operating profit	RMB'000	1,236,334	3,624,065	4,443,163
Non-operational balance	RMB'000	(251,504)	(240,915)	(93,083)
Profit before tax	RMB'000	984,830	3,383,150	4,350,080
Income tax expenses	RMB'000	348,627	882,360	1,119,984
Net profit for the current period	RMB'000	636,203	2,500,790	3,230,096
Surplus per share	RMB	0.384	1.545	2.009
Total assets	RMB'000	16,409,987	20,722,346	23,985,754
Total liabilities	RMB'000	6,199,603	8,280,000	9,342,760
Total equity	RMB'000	10,210,384	12,442,346	14,642,994

1.3 Climate Change Adaptation and Mitigation

Early Warning Principles/Guidelines

Climate change is another issue that Asia Cement (China) pays great attention to, primarily including the personnel, asset and Manufacturing process, three major basics for assessment of climate change adaptation as well as actual actions for climate change adaptation and mitigation.



Occupational hazards and supply chain-based (shortage of power and water resources, shortage of raw material for production) Overview

Description on Climate Change Management Procedures

A corresponding disaster risk management mechanism is set up in respect of blows and impacts from natural disasters and human-made disasters on the operations, including the "Measures on Emergency Reporting and Management of Crisis Events". An emergency operations center will be established as soon as practicable once there occur disaster risks, in which CEO/General Manager will act as the commander-in-chief and the team will be headed by relevant risk-based department, which aims at effectively dealing with major disaster crisis by integrating the resources and grasping the situation through the "Response Approaches to Material Disaster Crisis" of the Company.

In the company level:

Asia Cement (China) has included the climate risk management in its strategy of operational risks. Asia Cement (China) organizes relevant personnel to form a committee by company level to manage the sustainable issues of the green development and evaluates the risk impact to the operation of the Company caused by carbon tax, energy tax, water consumption fee and energy efficiency standard, hence, prepares a corresponding strategy and develops the derived opportunities. So that in facing the impact caused by climate change, the Company already has overall evaluation, corresponding and development strategies.

In the asset level:

In identifying the risks to the production management caused by climate change, Asia Cement (China) performs its evaluation and management mainly through "Measures on Emergency Reporting and Management of Crisis Events". In addition to evaluating in advance the damages caused by significant climate risk, it also prepared a response and recover plan to lower the possible damage to the systems and equipment, the possible financial loss and possible loss of operation shutdown. Furthermore, in accessing the insurance coverage in respect of the machine and equipment, plant buildings, and leasing equipment, construction in progress, inventory and other assets managed by relevant property management units (including headquarter, cement factories, places of business and storage and transportation stations, etc.) of various companies within Asia Cement (China), Asia Cement (China) shall, in addition to consideration given to the risks inherent in each asset plan to take out insurances against earthquake, floods and other natural disasters in response to the possible climate change risks, in an attempt to mitigate the impacts from climate change on its finance and management for the purpose of the asset security. We has established a carbon disclosure project, which is expected to help companies achieve this goal by exposing climate-related financial risks and opportunities to understand the financial impact of climate change.

Risks and Opportunities of Climate Change



Financial Impact and other Risk Opportunities

Asia Cement (China) has established a carbon disclosure project, which is expected to disclose climate change-related financial information to reveal the risks and opportunities brought by climate change, in order to understand their financial impact and help enterprises achieve this goal.

Environmental aspect (emission and energy)					
Risk	Environmental impact		GHG emissions	Waste emissions	Carbon emissions
Opportunity	Asia Cement (China) strives to reduce environmental impact and promotes energy conservation and carbon reduction.	Greenhouse gas inspection is carried out in accordance with ISO 14064-1. We make efforts to implement energy saving and emission reduction measures every year. Accordingly, the greenhouse gas emission of clinker per ton is lower than that of most cement counterparts within the industry.		Air pollution control and waste water and other waste management measures.	We have begun to implement issues related to carbon disclosure and climate change since 2015.
Economic aspect (Circular economy)					
Risk	Waste generation		Waste disposal		
Opportunity	In order to seek sustainable economic development, turning wastes into resources is an effective way for both environmental protection and economy.		disposed of and applying to environmental authorities for licenses and refitting on-site equipment. For the future, the		

Social aspect (sustainable mines)					
Risk	Information asymmetry	Mines content conflict	Mining damage		
Opportunity	Self-formulated strict requirements for sustainable mines enables information transformation, which makes the relevant information of mines accessible to the public and online views should be handled by special personnel.	Asia Cement (China) invites nearby villagers to participate in site investigations and conferences on a regular basis, with the purpose of achieving effective communication among Asia Cement (China), villages and towns and governments.	The mining areas plan to combine ecological parks and greening of sustainable mines with surrounding communities and national parks, aimin at promoting industrial development o local employment, caring for the minority to establish a sound community, facilitating the safety in mining areas and the sustainable development of living environment by pursuing the five key concepts of "human, culture, land, scenery and production". We plan to diversify utilization of native plants and gardens so as to complete the mining project in communities. Asia Cement (China) will conduct proper planning for mines, to		

Sustainable Governance Circulation1: Corporate Governance

1.4 Supply Chain Management



Purchasing Division, Administration Department

Purchasing division (including southeast, central and southwest) are organizations owned by Asia Cement (China) for the integration and sharing of purchasing resource information, whose functions are to process concentratedly the purchasing-related businesses of Asia Cement (China). The mission statement made by purchasing division is that: to become a professional procurement service team trusted by customers and suppliers to make expected contribution to the sustainable development of society and environment by integrating internal and external resources of the Company and strengthening the synergy function and with a target of 5Rs (Right time, Right item, Right price, Right volume, Right source), 3Ds (Deep in, Diversify, Do it as much as you can) and 1L (Incorruption) and taking environment friendly, low-carbon, safe and energy-saving supply chain as a direction under the effective risk control.

Purchasing Division Requirements

company or their family members and relatives for the purpose of gaining unfair dvantages, which may have an adverse impact on the business decision of the			
nd no forgery. he supplier shall not infringe our rights and interests through fixing the selling rice alone or in collusion with others, bid-rigging, bundling and abuse of market ominance. he supplier shall not attempt to offer employees of the Company and their elatives a bribe (including pecuniary or non-pecuniary interests) to gain improper interests. The supplier also shall not offer any gifts or treats to employees of the company or their family members and relatives for the purpose of gaining unfair dvantages, which may have an adverse impact on the business decision of the			
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nterests. The supplier also shall not offer any gifts or treats to employees of the company or their family members and relatives for the purpose of gaining unfair dvantages, which may have an adverse impact on the business decision of the			
relatives a bride (including pecuniary or non-pecuniary interests) to gain improp interests. The supplier also shall not offer any gifts or treats to employees of the Company or their family members and relatives for the purpose of gaining unfai advantages, which may have an adverse impact on the business decision of the Company.			
he supplier shall disclose any potential conflicts of interest to the Company, and			
ny employees of the Company or their family members and relatives have any interest in the businesses with the supplier or any kind of economic relationships with the supplier, the supplier shall disclose such information to the Company.			
he supplier shall guarantee and maintain the confidential and proprietary nformation of the Company, and such information shall be used only for the urposes authorized by the Company.			
Vithout the written approval of Party A, the supplier shall not engage ubcontractors. The approved subcontractor or transferee shall issue a written onsent of accepting this code, which is also applicable to them.			
he supplier shall communicate this code to its employees and subcontractors and			
xplain related rights and interests to them. he Company encourages its supplier to establish a management system in ompliance with the requirements of this guideline. The supplier shall appoint a enior management to inform the Company of matters not in conformity with the rovisions of this guideline on an ongoing basis.			
the supplier breaches any guidelines above, the Company may, at its own iscretion, retain the rights to suspend or terminate the procurement from the upplier due to all losses to the Company resulted from the breach of such uideline by the supplier.			

Sustainable Governance Circulation1: Corporate Governance

Supplier Evaluation

We conduct annual evaluation on materials and engineering and semiannual evaluation on raw materials with detailed records to rate them as "Grade A (outstanding)", "Grade B (qualified)", "Grade C (to be observed)" and "Grade D (ruled out)" as a basis for supplier selection.

A separate in-depth investigation will be conducted on suppliers rated as "Grade C (to be observed)", and a letter will be sent requesting an improvement once any poor condition is discovered. Suppliers rated as "Grade D (ruled out)" cannot be admitted to qualified suppliers within two years, and a letter will be sent to inform the cancellation of supply qualification. The suppliers to whom we have made prepayment for purchases are strictly controlled, and are required to, among others, provide equivalent performance bond and retention fund, to mitigate the purchasing risks.

The potential and existing manufacturing suppliers will accept relevant evaluations in terms of: basic conditions, manufacturing capacity, technical capacity, quality control capacity, timeliness of delivery and supporting services. In addition to the above, suppliers of engineering services will also accept relevant evaluations in terms of business management, accidents in the last year, contribution of five social insurances and one housing fund for employees as well as bad records over the past year.

2019 Evaluation Practice for Raw Material Supplie

 Quality confirmity rate-return rate On-time delivery rate Provision of reasonable price Green environment protection/social responsibility Labour condition and environment complying with regulations 	
	production quality control, establishment and implementation of standards f Cooperation- ales-Reputatio

- ✓ Southeast procurement office 1,017
- ✓ Central procurement office 691
- ✓ Southwest procurement office 633

1.5 Customer Service

Good Customer Service

Adhering to the attitude of striving for perfection, Asia Cement (China) brings the best quality and perfect all-round service to customers by equipped with highquality professional service team, observing customer needs, following up customer suggestions in real time and providing professional assistance and technical support.



customers' trust.

Number of suppliers by region

Promote the automation of system

Intelligent Ordering System

In order to improve customer's convenience and satisfaction of placing orders, Asia Cement (China)'s mobile APP was officially launched in 2019, which integrates multiple functions such as billing, inquiry and information to provide customers with fast and convenient services.

All process can be operated online



Through the APP, Consignment bill can be issued and the drivers can pick up the goods at the factory with the QR code of his/her mobile phone. Customers can also check, modify and cancel the bill at any time, and check the delivery and account information at any time.

Compatible with all kinds of mobile phones. Simplify operation interface, optimize operation logic and improve ease of use.

Customer Satisfaction

Asia Cement (China) establishes a customer-oriented quality system and operation concept. With objective supervision system, we evaluate customers' satisfaction to the products or services in order to understand the gap between customers' demand and expectations. This will be used as the reference for operation and achieve the goal of corporate sustainable operation.

Each business unit of Asia Cement (China) conducts two surveys on customer satisfaction every year. It is a paper questionnaire survey with four sections : A. product quality; B. service quality; C. convenient delivery; D. performance of contract. The business unit will review opinions proposed by customers and make improvement responding measures when the questionnaire was completed. The return rate of 2019 customers' satisfaction survey conducted was 100% and the customer satisfaction score was 96 points. However, Asia Cement (China) not be satisfied with this,we will still keep improving products and services and excelling in order to provide better services and quality.



The Percentage of Recycling Products and Packaging Materials

There are two types of packaging for cement shipping, the bulk and the bag types. For Asia Cement (China), most of the package is bulk type. In 2019, the percentage of bulk cement package was 87% of the total shipment, the bag type was only 13%.

The material of cement bags of Asia Cement (China) arrives at the national quality inspection standards, which can be recycled and reused to reduce the contamination to the environment. After the cement bags are resold by the dealers to the downstream customers, the paper bags shall be disposed of by themselves on the site, which are generally used to collect the waste on the site, etc., to reduce the impact on the environment.

Protection of Customer Privacy

Asia Cement (China) attaches great importance to the privacy of customers and strictly requires all colleagues to abide by the company's confidentiality regulations. For confidential documents, we shall be destroyed regularly or immediately depending on the degree of confidentiality. We will keep confidential all business information provided by customers in connection with their business dealings and to avoid the leakage of business information, so as to ensure that customers can have peace of mind in their dealings with us.

In 2019, Asia Cement (China) had neither any cases related to violation of customer privacy, nor had any fines related to violation of product regulations. We will continue to focus on protecting customer privacy in the future.

Happy Workplace--Management Policy

Asia Cement (China) always adheres to the philosophy of "boosting a company by developing talents" and regards employees as the core competitiveness and primary wealth of the Company. We establish harmonious relations with employees through mutual respect, mutual trust and common growth. We respect each employee for his/her contribution to the value of the Company, actively provide employees with a quality, healthy and safe working environment, strengthen their training of employees and enable each employee to deliver their value at their respective positions, so as to make good use of talents and put suitable talents to proper functions. In terms of employee rights and interests, the Company keeps improving employee benefits, timely understands the needs of employees through meetings and questionnaires and provides timely feedback to improve employees' cohesiveness and sense of belonging. Asia Cement (China) has won excellent social reputation and universal acclaim in all its business locations, and has become the benchmark for local companies and a first choice for employment. Everyone is proud to be an "Asian Cement employee".

Evaluation Methods	 KPI appraisal for senior directors has been introduced. pegged to performance-based bonuses, with the annual CSR report keeping track of the attainment of goals and action plans.
Policy and	 Establishing a competitive compensation system and sound employee benefits and retirement benefits.

- e compensation system and sound employee benefits and retirement benefits.
- (2) Providing a complete education and training system for employee growth.
 - (3) Establishing a complete performance management and promotion system.
 - (4) Shaping a safe and healthy organizational culture.
 - (5) 100% equality between men and women.
 - (1) No major occupational injuries every year. (2) Zero occupational diseases every year. (3) The salary of employees will rise to 75 point.

※ Specific Actions

- A comprehensive salary adjustment took place in 2019, with revision to the current salary and benefits system according to actual needs.
- 2 Projects such as new personnel training, QCC, TWI, and training for second-generation talents and key positions.
- Introducing KPI appraisal for senior directors.
- Promoting the factory safety scheme.

Happy Workplace—Description of highlights

Capacity Competitiveness

- Due to the performance in 2018, Asia Cement (China) issued an additional special bonus which were in total of RMB24.76 million yuan to encourage the all the staff to create new profit record in 2019.
- Introduce KPI (Key Performance Indicator) assessment.
- Increased key talented person training to train the new generation successors.

Occupation Health and Safety

 Asia Cement (China) has formulated occupational safety and health policies and management mechanism for its employees to set up the organizational culture of safety and health.

Special Report on Accidents

• Asia Cement (China) review and improve occupational safety and health management in a timely manner, and analysis the causes of occupational accidents in order to find the improvement solutions.

Overview

Commitment

Goals

2.1 Employee Structure

Due to the labor characteristics of the cement industry, employees working at the production site have to be arranged into three shifts and undertake outdoor work, with high work intensity. As such, most of the employees are male and the types of employees are mostly production personnel.



Ratio of each employee type

Note: The competent employee is the staff of the Company with employee tenth (including tenth) position or above.

Gender trends for long-term borrowed workers in the past four years



Gender trends for long-term borrowed workers in the past four years



Number of Employees

Asia Cement (China) has entered into labour contracts with its employees according to relevant laws all the time. The Company respects employees' working willingness, follows the principle of equal employment, respect for human rights, diversity of employees and prohibition of forced labor, and establishes a harmonious and stable relationship with employees.

Company		Total staff		Off	ficial emplo	yee	Borrowed employee		
Company	Male	Female	Subtotal	Male	Female	Subtotal	Male	Female	Subtota
Jiangxi Yadong	927	152	1,079	918	104	1,022	9	48	57
Huanggang Yadong	268	40	308	265	24	289	3	16	19
Nanchang Yadong	42	13	55	42	7	49	0	6	6
Nanchang Yali	80	29	109	80	23	103	0	6	6
Jiangxi Yali	119	14	133	119	6	125	0	8	8
Yangzhou Yadong	142	26	168	142	26	168	0	0	0
Taizhou Yadong	27	7	34	27	5	32	0	2	2
Hubei Yadong	379	98	477	371	64	435	8	34	42
Wuhan Yaxin	232	63	295	231	47	278	1	16	17
Wuhan Yadong	75	11	86	73	4	77	2	7	9
Wuhan Yali	42	8	50	42	8	50	0	0	0
Hubei Yali	88	14	102	86	4	90	2	10	12
Sichuan Yadong	524	59	583	524	59	583	0	0	0
Sichuan Lanfeng	326	81	407	326	79	405	0	2	2
Sichuan Yali	46	12	58	45	7	52	1	5	6
Chengdu Yali	41	12	53	36	7	43	5	5	10
Sichuan Yali	83	9	92	81	3	84	2	6	8
Total	3,441	648	4,089	3,408	477	3,885	33	171	204

Sustainable Governance Circulation2: Happy Workplace

New and Resigned Staff

Asia Cement (China) employees staff on a permanent basis. As a result, the Company enjoys a stable workforce with a long tenure, high loyalty and a low turnover rate.

Male and female Numbers of new and former employees



Number of new and former employees by age

Company	Total in	New	staff	Employm	Resign	ed staff	Turnover
Company	2018	Male	Female	ent rate	Male	Female	rate
Jiangxi Yadong	1,028	40	3	4.2%	45	4	4.8%
Huanggang Yadong	286	12	0	4.2%	9	0	3.1%
Nanchang Yadong	50	1	0	2.0%	2	0	4.0%
Nanchang Yali	109	4	0	3.7%	10	0	9.2%
Jiangxi Yali	123	6	0	4.9%	4	0	3.3%
Yangzhou Yadong	164	15	2	10.4%	11	2	7.9%
Taizhou Yadong	31	7	1	25.8%	7	0	22.6%
Hubei Yadong	400	39	5	11.0%	8	1	2.3%
Wuhan Yaxin	288	0	0	0.0%	7	3	3.5%
Wuhan Yadong	81	0	0	0.0%	0	4	4.9%
Wuhan Yali	58	3	0	5.2%	10	1	19.0%
Hubei Yali	99	7	0	7.1%	15	1	16.2%
Sichuan Yadong	568	24	6	5.3%	14	1	2.6%
Sichuan Lanfeng	417	1	0	0.2%	9	4	3.1%
Sichuan Yali	48	5	1	12.5%	2	0	4.2%
Chengdu Yali	39	6	0	15.4%	2	0	5.1%
Sichuan Yali	84	26	0	31.0%	25	1	31.0%
Total	3,873	196	18	5.5%	180	22	5.2%

Note: dimission rate = dimission personnel ÷ the total number of this type people, new entry rate = new arrivals ÷ the total number of this type people.

2.2 Welfare Competitiveness

Asia Cement (China) always insists that employees' efforts are in direct proportion to their returns, work more get more, fairness and justice. We expects to attract outstanding talents to join the Company through competitive compensation and benefits. At the same time, the Company actively implements people-oriented management, continuously increases benefits, takes care of employees like family members, and creates a well-coordinated and cohesive team.



Remuneration-related Systems

Asia Cement (China) is committed to developing a fair and just assessment, reward and punishment and salary system to continuously strengthen the construction of talent echelon, so that each employee can enjoy the company's operating results, share the glory and disgrace with the company, and grow together.

Remunerati on System	The basic remuneration of Asia Cement (China) mainly consists of salary, allowance (housing allowance plus regional allowance) and duty allowance. In addition, the Company distributes monthly production and sales bonus, full and annual attendance bonus, year-end bonus, employee reward (i.e., bonus) and other bonus systems.
Appraisal System	The annual performance appraisal shall be conducted from the aspects of work performance, attendance, working ability and attitude, learning and development potential, etc., and the salary shall be raised according to the performance appraisal results.
	Exceptional performers get a special promotion every 2 to 3 years, and salary increases of 10-20%.
Subsidy System	In view of the three shifts and employees on night shifts, we have a night shift subsidy system for employees on the second and night shifts, coupled with such systems as high-temperature allowance for special work positions, license allowance, allowance for external
	dispatching and regional allowance in accordance with national laws and regulations.
Others	Asia Cement (China) conducts comprehensive salary adjustment on a regular basis, which renders its salary payment higher than local counterparts and industry peers.

On - the - job Employees Welfare System

In order to comfort the staff hard work, each company under Asia Cement (China) has set up the Staff Welfare Committee (SWC for short) and formulated the "Measures for Operation and Administration of the Staff Welfare Committee", appropriating 1.8% of total amount of the staff's salary as welfare fund for the matters related to the staff's benefits. And the "self-help benefits" system was widely praised. On this basis to deepen and enrich every year, to meet the needs of employees in various aspects.

Asia Cement (China) gives employees a variety of welfare programs. Mainly includes : food subsidies, benefits for three national holidays, year-end banquet, work uniform, traffic subsidies, flexible benefits, communication subsidies, tourism, cash gifts for birthday, wedding, funeral, and birth etc..

Various welfare subsidies (Unit: RMB0'000)





Sustainable Governance Circulation2: Happy Workplace

Tourist Activities

Asia Cement (China) and its subsidiaries regularly host various tourist activities every year. On the one hand, it provides a communication platform for employees and enhances their cohesion; On the other hand, it helps employees relax, restore their energy, and their pride. So that the company and employees to seek a win-win situation.

NO.	Company	Tourist destination	Enrolment	Amount borne by the Company (RMB)
1		Thailand	62	¥ 14,400
2	liangvi Vadong	Hainan	85	¥ 12,000
3	Jiangxi Yadong	Huizhou	71	¥ 8,400
4		Huangshan	36	¥ 7,500
5	Nanchang Yadong	Mingyueshan	38	¥ 20,920
6	Nanchang Yali	Sanqingshan	20	¥ 6,000
7	Jiangxi Yali	Tiantangzhai of Hubei	43	¥ 8,510
8	Yangzhou Yadong	Guilin	15	¥ 4,950
9	Taizhou Yadong	Fangtawild	16	¥ 8,608
10	Uubai Vadang	Four days in Qingdao	50	¥ 28,000
11	Hubei Yadong	Four days in Zhangjiajie	27	¥ 16,000
12	Wuhan Yaxin	Shanghai, Beijing, Qingdao	153	¥ 207,090
13	Wuhan Yadong	Wuyishan	30	¥ 34,800
14	Wuhan Yali	Xiamen	18	¥ 18,000
15	Hubei Yali	Tiantangzhai of Luotian	7	¥ 1,400
16	Huber Yan	Xi'an	11	¥ 3,300
17	Sichuan Yadong	Vietnam Nha Trang	28	¥ 39,200
18	Cieburg Lonford	Beihai	26	¥ 20,800
19	Sichuan Lanfeng	Thailand	34	¥ 27,200
20	Sichuan Yali	Jiulong ditch	46	¥ 7,204
21	Charache Val'	Gexianshan	42	¥ 3,240
22	Chengdu Yali	Wuzhai of Taoping	41	¥ 19,742
23	Sichuan Yali	Thailand	5	¥ 5,000
	Tot	al	904	¥ 522,264



Social Club Activities

Each company is furnished with various sports and leisure facilities, including night tennis courts, basketball courts, indoor badminton courts, football fields, table tennis rooms, billiard rooms, laundry rooms, library, screening rooms, karaoke rooms, bridge rooms, gymnasium, etc. A variety of recreational activities take place on a regular basis, such as ball games, bridge games, fishing and mountain climbing, through which employees can enrich their life in spare time, have more communication with each other, and grow a more harmonious work atmosphere.





Leave System

Asia Cement (China) strictly implements the vacation system stipulated by the state. All the employees of the Company could enjoy all kinds of paid leave such as marriage leave, official leave, bereavement leave, maternity leave, nursing leave, annual leave. All employees who worked on official holidays due to jobs demand, the Company would compensate them with overtime pay according to national regulations.

Туре	Number of applicants	Actual number of applicants	Number of employees returning to work after leave	Number of employees still on the job after 12 months subsequent to leave	The percentage of the employees returning to work after leave and keeping jobs
Maternity leave (Female)	477	46	44	42	91%
Nursing leave (Male)	3,408	208	208	208	100%



Person-time and total hours of all kinds of paid leave

⊖Overview

⊚Green

Circulation

Appendic

Gender Equality

Asia Cement (China) respects the rights and interests of every worker, treats them equally regardless of gender differences, and always practices the equal development for employees' career development. Men and women have equal access to opportunities such as occupational training and promotion.

Normal Labor Union Operation to Ensure the Welfare of Employees

All companies under Asia Cement (China) set up labor unions according to the regulations, and all employees are members of the labor unions. The total union fees in 2019 were more than RMB7.68 million, and each union convened meetings and held parties from time to time.

Transparency of Salary Structures

Starting salaries of basic staff in each of business area of Asia Cement (China) were higher than the local minimum wage standard with the highest rate up to 1.72. In addition, the Company has set up a system to control minimum wage, by which the Company would make up the difference if the employees' salaries were lower than the local minimum wage standard due to frequent sick and personal leaves or decline in the performance of the Company, which was also agreed by the employers and employees in the labor contracts, and were carried out consistently in the payroll settlement system.

Complaint Cases of Employee

Asia Cement (China) has established a number of unimpeded employees' communication channels to ensure that employees' needs and suggestions are met. If employees are unreasonably treated in the workplace, or if they discover that the Company has irregularities or infractions, complaints and reports may be filed through the Company's website or the audit office. Asia Cement (China) will carefully and actively handle and investigate according to the relevant operating regulations and handling principles. If the verification is indeed a violation, it will be discussed according to the circumstances to regulate the practitioners to act according to regulations, maintain company discipline, and safeguard employees' rights and interests, promoting the Company image.

Comparison of Starting Salary and Minimum Wage in Operation Locations

Company	Starting salaries of basic staff	Local minimum wage standard	Ratio
Jiangxi Yadong	2,148	1,470	1.46
Huanggang Yadong	2,148	1,250	1.72
Nanchang Yadong	2,148	1,680	1.28
Nanchang Yali	2,148	1,680	1.28
Jiangxi Yali	2,148	1,470	1.46
Yangzhou Yadong	2,393	2,020	1.18
Taizhou Yadong	2,393	2,020	1.18
Hubei Yadong	2,148	1,500	1.43
Wuhan Yaxin	2,148	1,500	1.43
Wuhan Yadong	2,148	1,500	1.43
Wuhan Yali	2,148	1,500	1.43
Hubei Yali	2,148	1,500	1.43
Sichuan Yadong	2,148	1,650	1.3
Sichuan Lanfeng	2,148	1,650	1.3
Sichuan Yali	2,148	1,650	1.3
Chengdu Yali	2,148	1,650	1.3
Sichuan Yali	2,148	1,650	1.3

Sustainable Governance Circulation2: Happy Workplace

Company	Ratio of annual income of the highest paid individual to the average annual income of other employees	Ratio of percentage of increase in annual income of the highest paid individual to percentage of increase in the average annual income of other employees
Jiangxi Yadong	6.48	0.86
Huanggang Yadong	3.59	0.64
Nanchang Yadong	5.23	1.21
Nanchang Yali	3.85	0.57
Jiangxi Yali	3.42	1.27
Yangzhou Yadong	3.99	1.05
Taizhou Yadong	2.73	0.37
Hubei Yadong	5.72	1.07
Wuhan Yaxin	3.21	0.72
Wuhan Yadong	3.08	1.47
Wuhan Yali	2.23	-0.18
Hubei Yali	3.86	1.45
Sichuan Yadong	6.41	1.27
Sichuan Lanfeng	6.57	1.37
Sichuan Yali	4.47	1.15
Chengdu Yali	2.12	1.10
Sichuan Yali	3.33	1.30

2.3 Capacity Competitiveness

Systematic Training

In order to meet the needs of corporate operation and allow employees to grow together with the Company, continuous training has been provided for employees of different ranks and functions, constructs and improves the training system, to form a team with management function and the professional skills



In order to establish a sound management system and in response to the market competition and challenge, the Company designed systematic promotion channel to management position for the employees, and developed a management echelon from basic to medium and senior with the implementation of all kinds of training and rotating.



In addition to the management promotion channel, the company also strengthens the training of professional and technical personnel. The Company provided promotion channel for technical positions for these employees to build the technical, project-oriented and advisor-oriented teams with technicians, engineers, administrators and specialists and provided corresponding training and rotating for their transition to management cadres.



To accelerate the training of personnel and meet the Company's operation requirement, the Company promoted the establishment of a sound training system. at present, the construction of training system mainly includes: on job mentoring training(teach, help and lead), intensive training for new comers, various professional skills training for corresponding positions, environmental protection and working safety training, QCC courses, TWI leaders training, medium supervisors' MTP training, Second-generation elite talent training, key talent training, industry exchange and participation in the Group's joint meeting in Taiwan and further study in colleges and universities. In 2019, the Company total investment in training was over RMB2.4 million.

Major project-oriented trainings in 2019 are as follows:

Project	Echelon Completed	Number of employees	Total length of time (day)	Expenditure (RMB0'000)
New comers training	165	2	10	14.8
QCC training	436	8	24	23.7
TWI	259	6	18	24.7
Elite class training	46	1	16	76.2
Key personnel training	63	1	22	38.6
Participation in the Group's joint meeting in Taiwan	41	10	13	62.7
MTP	47	4	12	31.1
	Total			271.8

Overview

Training Hours and of each Companies of Asia Cement (China)

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Total: 21,129 Hours

					Unit: Hour		
Southeastern region		Central reg	;ion	South western	South western region		
Company	Training hours	Company	Training hours	Company	Training hours		
Jiangxi Yadong	4,844	Hubei Yadong	372	Sichuan Yadong	750		
Huanggang Yadong	2,348	Wuhan Yaxin	2,417	Sichuan Lanfeng	3,228		
Nanchang Yadong	96	Wuhan Yadong	1,600	Sichuan Yali	948		
Nanchang Yali	216	Wuhan Yali	168	Chengdu Yali	1,530		
Jiangxi Yali	416	Hubei Yali	189	Sichuan Yali	1,276		
Yangzhou Yadong	459						



Management of Employee's Occupational Skills and Lifelong Learning

In addition to systematic education and training, Asia Cement (China) has set up a reading room, encourage colleagues to study by themselves in their spare time and develop good reading habits. Besides this, Asia Cement (China) has organized a number of government, university and industry exchanges to broaden horizons and grasp cutting-edge information, and support innovation in daily work, adapt to new norms, requirements and normality of the new era.

A Sound Performance Management Cycle

To evaluate employees' performance and contribution objectively, encourage and find out their potential and strengthen their sense of competition and responsibility, Asia Cement (China) will assess the performance of each employee regularly every year, determine personal goals at the end of the year, track assessment regularly at the middle of the year, and conduct assessment summary and evaluation at the end of the year, to reflect the principle of rewarding the good and publishing the bad so that the overall efficiency of the Company can be improved. Moreover, each department also formulated Management Measures for Routine Assessment, pursuant to which the employees' daily behaviors would be assessed and accumulatively recorded and excellent employees would be rewarded by giving award or recording the merits which would be announced to the public. In 2019, the company reward 299 employees and demerit 1 employee.



Taizhou Yadong

Sustainable Governance Circulation2: Happy Workplace

2.4 Occupation Health and Safety

Management Policy on Safety and Hygiene

In terms of management policy on safety and hygiene, the Company has adopted the founding spirit of the Far Eastern Group of "Sincerity, Diligence, Thrift, Prudence and Innovation" to sincerely fulfill its corporate social responsibility and to abide by regulations to establish and improve management organizations and systems. It made risk assessment carefully to each operation, set up standard operating procedures and adopted appropriate safe construction approach. All employees are required to be involved in the system and to receive the training in order to attain the habit of safety as the first priority. Through the way of walking management, the Company is able to predict and to take appropriate measures in order to prevent the disaster from happening. It endlessly drives innovative R&D and improves safety measures to create a working environment of zero disaster in order to protect the safety and health of the laborers. A part of Asia Cement (China) organizational culture is to create a safe and healthy work place, thus, each employee feels safe working here.





A Complete Occupational Safety and Hygiene Management Organization and System

Organization of Occupational Safety and Hygiene

Asia Cement (China) have assigned unit and the staff to be responsible for occupational safety and hygiene management by law. Depending on the nature and number of employees of the business unit, an appropriate management system is introduced and implemented; each unit has established a work safety committee by law, the general manager and vice general manager of each business unit acted as the chairperson, the members included the department head, professionals and staff representatives. The committee holds a meeting at least once each month to propose reviews to policies on safety and health, operational behavior, safety hazard, to form a perfect opinion. And according to the resolution to arrange the rectification work . Shanghai Yali is no disclosure as it has not set up a special work safety committee.

Composition table of "Safety Production Committee" :

Company	Chairperson	Number of manager and professionals	Number of staff representatives	Staff representatives ratio
Jiangxi Yadong	General Manager	78	19	20%
Huanggang Yadong	General Manager	22	8	27%
Nanchang Yadong	General Manager	7	2	22%
Nanchang Yali	General Manager	12	2	14%
Jiangxi Yali	Vice General Manager	12	7	37%
Yangzhou Yadong	General Manager	25	8	24%
Taizhou Yadong	Vice General Manager	6	0	0
Hubei Yadong	General Manager	18	6	25%
Wuhan Yaxin	General Manager	15	0	0
Wuhan Yadong	Manager	18	6	25%
Wuhan Yali	Vice General Manager	11	10	48%
Hubei Yali	Vice General Manager	13	12	48%
Sichuan Yadong	General Manager	30	10	25%
Sichuan Lanfeng	General Manager	18	6	25%
Sichuan Yali	General Manager	5	5	50%
Chengdu Yali	General Manager	13	3	19%
Sichuan Yali	General Manager	5	3	38%

Occupational Safety and Hygiene Management System

Asia Cement (China) have established a sound occupational safety and hygiene management system. And passed the certification of HOSAS18001: 2007 occupational health and safety management system of Beijing Guojian Lianxin Certification Center once each year. Or obtained a certificate of standard enterprise for work safety standardization issued by work safety supervision and management department every 3 years.

Table of Occupational Safety and Hygiene Management System of Asia Cement (China)

Company	Occupational safety and hygiene management system
Jiangxi Yadong	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine) Occupational health & safety management system, Work safety standardization secondary enterprise(Transportation)
Huanggang Yadong	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine), Occupational health & safety management system
Nanchang Yadong	Work safety standardization secondary enterprise(building materials)
Nanchang Yali	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary transport enterprises (Port ordinary cargo transport) Occupational health & safety management system
Jiangxi Yali	Work safety standardization secondary enterprise(Transportation)
Yangzhou Yadong	Work safety standardization level 3 enterprises (building materials)
Taizhou Yadong	Work safety standardization level 3 enterprises(Other building materials)
Hubei Yadong	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine), Occupational health & safety management system
Wuhan Yaxin	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine), Occupational health & safety management system
Wuhan Yadong	(In the process of reassessment, it has passed the expert evaluation of Hubei Safety Association, and is waiting for evidence collection)Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine) Occupational health & safety management system
Wuhan Yali	Work safety standardization level 3 enterprises (building materials)
Hubei Yali	Work safety standardization level 3 enterprises (Transportation)
Sichuan Yadong	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise(Non-coal mine), Occupational health & safety management system
Sichuan Lanfeng	Work safety standardization secondary enterprise(building materials), Work safety standardization secondary enterprise, Occupational health & safety management system
Sichuan Yali	Work safety standardization enterprise(level 3)
Chengdu Yali	Work safety standardization level 3 enterprises (Industry and Trade)
Sichuan Yali	Work safety standardization level 3 enterprises (Transportation)

Collective Agreement Incorporated in the Norm of Safety and Hygiene

Jiangxi Yadong Cement Co., LTD. Ruichang factory entered into Construction Safety and Hygiene Regulations of Contractors with contractors, in which the norm of safety and hygiene accounted for 56.5% of a total of 69 regulations, and the training for contractors will be conducted annually. It is a safety and hygiene norm for the group to obey.

Management Performance of Safety and Hygiene

Management of Plans and Appraisal of Performance

Asia Cement (China) manages its operational procedure under the direction of annual safety production guidelines, objectives and indicators and establishes safety production goals and appraisal standards of performance. The environmental protection and working safety department of the Company conducts regular inspection on each unit and evaluation monthly (including proactive and passive performance) and reports the effective implementation of each unit to the Production Safety Committee.

Training of Occupational Safety and Hygiene Management

Asia Cement (China) has a highly-skilled occupational safety and hygiene management team. Every year, high-quality talents are introduced from colleges and universities, and a sound personnel training and incentive system has been established. Regular or irregular implementation of on-the-job education and training, selecting excellent

supervisors and colleagues as the teachers, effectively improved the awareness of safety prevention and production skills. In view of the low quality of the contractor's staff, it has formulated a safety "threelevel education and training" tailored to it, organizing a review meeting on corporate security accidents (events), which was chaired by the general manager and special assistant general manager, and attended by supervisors and safety management personnel of each unit. It publicized the concept of "safety first" and required all employees to strictly implement various safety management systems and accountability system.



The statistics of 2019 occupational safety and hygiene management performance appraisal of Asia Cement (China):

Company	Safety level	Material occupational disasters	Ordinary occupational disasters	Total working hours	FR	SR	FSI
Jiangxi Yadong	safe	0	4	2,698,080	1.48	22	0.18
Huanggang Yadong	safe	0	1	752,400	1.33	74	0.31
Nanchang Yadong	safe	0	0	129,360	0	0	0
Nanchang Yali	safe	0	5	269,280	18.56	1125	4.56
Jiangxi Yali	safe	0	0	330,000	0	0	0
Yangzhou Yadong	safe	0	2	438,240	4.56	185	0.92
Taizhou Yadong	safe	0	0	84,480	0	0	0
Hubei Yadong	safe	0	4	1,148,400	3.48	36	0.35
Wuhan Yaxin	safe	0	0	733,920	0	0	0
Wuhan Yadong	safe	0	2	203,280	9.83	192	1.37
Wuhan Yali	safe	0	0	132,000	0	0	0
Hubei Yali	safe	0	3	237,600	12.62	55	0.83
Sichuan Yadong	safe	0	5	1,525,920	3.27	9	0.17
Sichuan Lanfeng	safe	0	3	1,066,560	2.81	117	0.57
Sichuan Yali	safe	0	0	137,280	0	0	0
Chengdu Yali	safe	0	0	110,880	0	0	0
Sichuan Yali	safe	0	2	221,760	9.01	36	0.57
Total	safe	0	31	10,219,440	3.03	72	0.47

Note: The relevant formulas of assessing occupational disaster are as following:

FR (Frequency Rate)=times of disability injury × 1000000/total working hours

SR (Severity Rate)=lasting days of disability injury × 1000000/total working hours

FSI (Frequency-Severity Indicator)= $\sqrt{(FR \times SR/1000)}$

AR(Absenteeism rate)=(Total sick leave + Total industrial injury leave + Total personal leave)/ Total working hours ×100%

Sustainable Governance Circulation2: Happy Workplace



Demonstration of Occupational Safety and Hygiene Management

On 30th June, 2019, Ruichang plant 1 of Jiangxi Yadong united exercise "High temperature heat stroke" comprehensive emergency response program and shared the rescue experience by manufacturing group 1, secretariat, environmental protection and workers safety department.

Regarding to contractors: we treat workers from the contractors as our own staff. Besides of on-site inspecting and offering necessary guidance, we also provide relevant education and training to improve their safety and hygiene performance so as to reduce working accidents and health hazards.



Monitor and Improve the Environment of High-risk Workplaces and Significant Health-harming Workplace

Each plant of Asia Cement (China) had set up relevant safety and hygiene operation standards based on the risk assessment conducted in respect of the health-harming environment caused by noise, dust, drinking water and others, and monitors the environment internally and regularly engages external party to carry out environment monitoring and personnel health examination as required. There was no occupational disease as determined according to the regulations and the occupational disease rate (ODR) was 0% in 2019. In addition, we not only improve the environment safety but also provide essential harness in high-risk operational sites such as overhead, electric shock, scaffolding and flying objects. Educational training and danger prediction training were carried out to arouse employees' safety awareness so as to reduce unsafe behavior. We conduct examination inside the plant and daily on-site inspection and supervision to prevent the occurrence of harm effectively.
Asia Cement (China) health check number of employees in significant healthharming workplace in 2019:

Company	Dust	Noise	High temperature
Jiangxi Yadong	700	152	50
Huanggang Yadong	205	144	0
Nanchang Yadong	32	32	0
Nanchang Yali	26	16	0
Jiangxi Yali	0	0	0
Yangzhou Yadong	105	66	0
Taizhou Yadong	30	30	0
Hubei Yadong	398	398	398
Wuhan Yaxin	220	220	45
Wuhan Yadong	75	54	0
Wuhan Yali	48	48	0
Hubei Yali	0	0	0
Sichuan Yadong	287	227	20
Sichuan Lanfeng	275	275	46
Sichuan Yali	15	15	0
Chengdu Yali	12	12	0
Sichuan Yali	68	68	0



Employees' Health Promotion and Management

Health Check and Management for Labor

According to the rules of "Measures for the Administration of Occupational Health Examination" and "Law on Prevention and Control of Occupational Disease", and for the purpose of enhancing the work of occupational health check to prevent and eliminate the occupational hazards and protect the health rights of workers, the health checks (to be accepted by employees on a voluntary basis) were offered to all employees for free by the Company before the post, during the post and upon leaving the post. A medical treatment or rehabilitation program will be proposed by the Company depending on employees' examination reports and clinical situations, and the Company will arrange an appropriate work adjustment according to the actual situation.

Employee Health Promotion Activities

For enhancing healthy diet of employees, the Company operates its own cafeteria and restaurants to focus on hygiene and nutrition of food. In response to the food safety crisis, the Company will conduct examination or sample tests on each kind of food materials and send the same to quality control department for chemical examination every day, and the substandard food materials (such as excessive agricultural residues, etc.) will be returned to the suppliers. Furthermore, the Company will check the tap water of the living quarters every day to ensure the healthy water source.

Prohibition on Using Child Labor and Forced Labor

According to the "Provisions on the Prohibition on Using Child Labor" the Company engage no minors under the age of 16. The employees employed by the Company are all voluntary to be employed. The force and fraud in labor employment shall not be allowed.

Overview

Statistics of Occupational Disasters

Based on the important occupational disaster disabling statistics index announced by labor department and GRI G4, in the analysis of occupational hazard statistics, Asia Cement (China) selected Disabling Frequency Rate (FR), Disabling Severity Rate (SR), Frequency-Severity Indicator (FSI) and Attendance Rate (AR) as the basis (the data does not include traffic accidents outside of the plant). In 2019, there were 31 cases of employee injury and disability, without any occupational disasters cases.

Asia Cement (China) Occupational Disaster and Attendance Statistics in 2019:

Compony		FR			SR			FSI		
Company	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Jiangxi Yadong	0.21	2.10	0.38	62	126	68.18	0.11	1.63	0.16	
Huanggang Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Nanchang Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Nanchang Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Jiangxi Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Yangzhou Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Taizhou Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Hubei Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Wuhan Yaxin	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Wuhan Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Wuhan Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Hubei Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Sichuan Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Sichuan Lanfeng	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Sichuan Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Chengdu Yali	0.00	75.76	75.76	0	1515	1515	0.00	0.00	10.71	
Sichuan Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	
Total	0.13	1.73	0.34	40	69	44	0.07	0.35	0.12	
Subtotal	0.34				44			0.12		

Asia Cement (China) Occupational Disaster and Attendance Statistics of "Laborers of Contractors" in 2019:

Company		FR			SR			FSI		ŀ	AR
Company	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Jiangxi Yadong	1.65	0.00	1.48	24	0	22	0.20	0.00	0.18	0.02%	0.00%
Huanggang Yadong	1.44	0.00	1.33	81	0	74	0.34	0.00	0.31	0.06%	0.00%
Nanchang Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Nanchang Yali	19.18	16.45	18.56	1242	725	1125	4.88	3.45	4.56	0.99%	0.58%
Jiangxi Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Yangzhou Yadong	2.71	14.57	4.56	95	670	185	0.51	3.12	0.92	0.08%	0.54%
Taizhou Yadong	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Hubei Yadong	4.06	0.00	3.48	42	0	36	0.41	0.00	0.35	0.03%	0.00%
Wuhan Yaxin	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Wuhan Yadong	10.37	0.00	9.83	202	0	192	1.45	0.00	1.37	0.16%	0.00%
Wuhan Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Hubei Yali	13.21	0.00	12.62	57	0	55	0.87	0.00	0.83	0.05%	0.00%
Sichuan Yadong	3.59	0.00	3.27	9	0	9	0.18	0.00	0.17	0.01%	0.00%
Sichuan Lanfeng	3.49	0.00	2.81	146	0	117	0.71	0.00	0.57	0.12%	0.00%
Sichuan Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Chengdu Yali	0.00	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00%	0.00%
Sichuan Yali	9.35	0.00	9.01	37	0	36	0.59	0.00	0.57	0.03%	0.00%
Total	3.22	1.63	3.03	72	73	72	0.48	0.34	0.47	-	-
Subtotal		3.03			72			0.47		-	-

Note: The relevant formulas of assessing occupational disaster are as following:

FR (Frequency Rate)=times of disability injury × 1000000/total working hours

SR (Severity Rate)=lasting days of disability injury imes 1000000/total working hours

FSI (Frequency-Severity Indicator))=V((FR×SR/1000))

AR (Absence Rate)=(total sick leave hours+total injury leave hours+total personal leave hours)/total working hours×100%

The major sustainability topic management of Asia Cement (China) is a continuous improvement cycle. To ensure the implementation of the sustainable development, Asia Cement (China)'s sustainable topic management is achieved through 4 steps, include: Sustainable Topics Identification, Stakeholders Assessment and Engagement, Sustainable Topic Impact Assessment and Material Topic Management and Disclosure. And assess sustainability impact through a questionnaire survey for the purpose of sustainable topics management and the sustainable operations of Asia Cement (China).

3.1 Sustainable Topics Identification

Asia Cement (China)'s procedure for the identification of material topics was based on the framework of GRI sustainability report and under the guidance of its reporting principles and defined content. The sustainability topics identify covered internal and external topics, which are sources for collecting and organizing the relevant topics.



Sustainable Governance Circulation3: Sustainable Topics Management



To ensure the related topics sustainable impact analysis is correct, the CSR Committee of Asia Cement (China) designed a questionnaire to analyze the sustainable impact of 26 related topics by the degree of concern of stakeholders. A total of 245 valid questionnaires were recovered. We add the weight of stakeholders to calculate their behavior and concerns.



3.2 Stakeholders Assessment and Engagement

Stakeholder Identification and Assessment

We identified five categories of stakeholders, namely, employees, investors/shareholders, customers, communities and suppliers with reference to the five major aspects of AA 1000 Stakeholder Engagement Standard-2015 for stakeholder [negotiation] (namely, dependency, responsibility, tension, influence and diverse perspectives) as well as stakeholder discussion and assessment by the CSR Committee.

Stakeholders Engagement and Response

Saved for the various interactions with the stakeholders through the normal business, Asia Cement (China) also carried out Stakeholders Engagement through all kinds of virtual and real integration ways including actual face-to-face communication platform and online monitoring network, to achieve the best communication benefits.

"Mailbox for corporate sustainability (achc@achc.com.cn)" was set up corresponding to the commencement of the sustainability management of the organization, and will be managed by the relevant competent department of the Company to address all topics concerned by stakeholders.





Level of Concern of the Stakeholders

For the 26 topics identified, Asia Cement (China) collected the level of concern of the stakeholders through questionnaires, judged the relationship between the stakeholders and Asia Cement (China) and arrived at the weighted average of the concerning points of each topic and the level of the relationship to understand the level of concern of the stakeholders.

Sustainable Governance Circulation3: Sustainable Topics Management

Stakeholders	Issues concerned	Frequency and platform of communication	Implementation in 2019	Responding chapter
Staffs	Employment relationship Occupational health and safety Talent attraction and retention Training and education Benefits and interest of staff Forced labor	Trade union meetings and fellowship activities New recruits interview and online announcements from time to time Updating staff codes of practice from time to time Staff interviews and performance interviews conducted by supervisor each year Planning and occasional educational training for staff Electronic bulletin board All kinds of meetings	The trade unions held meetings and fellowship activities irregularly, and paid more than 7.68 million yuan in membership fees in 2019. Annual training for all types of staff lasts 10 hours on average Provide staff with complete benefits and bonuses Implement the 8-hour working system	Sustainable Governance Circulation 2
nvestors / shareholders	Economic performance Company's operating strategies Risks and opportunities Resources Water Emissions Compliance with environmental laws	Holding of Annual General Meeting Investor zone on the Company's website Public information observatory Communication and feedback by phone or e-mail Regular declaration of energy efficiency	Achieve dividend payout ratio of 25% More than 80% of the water is recycled Carbon reduction of 23,300 tons/year Meet energy efficiency indicators	Sustainable Governance Circulation 1 Green Sustainable Circulation 2
Customers / partners	Customer Service Product liability Product quality and technology research and development Mine vegetation and greening Recycling economy	Annual customer satisfaction survey Quality certification Website feedback and inspection report download Visiting customer on a regular/ irregular basis Communication and feedback by phone or e-mail	96% customer satisfaction ISO product certificate A total of 60.9 hectares of land has been restored Comprehensive utilization of resources promotes recycling economy	Sustainable Governance Circulation 1 Green Sustainable Circulation 1 Green Sustainable Circulation 3
Community/local groups/the general public	Community participation Social public welfare Environmental protection laws and regulations Sustainable environment education Air pollution prevention	Participation in residents' activities in neighborhood from time to time Public welfare activities Visiting local groups Company's website Communication by phone or e-mail	In 2019, there were 21 meetings and communications among local residents, totaling 140 participants. Continuous social participation Continuous care for community Transform mine agriculture park About 203 million yuan has been spent on pollution prevention in 2019.	Green Sustainable Circulation 4 Green Sustainable Circulation 5 Green Sustainable Circulation 2
Suppliers	Company's operating strategies Supply chain management Procurement behavior Cement 4.0	Company's website Supplier Evaluation Supplier on-site audits or visits Supplier management platform (Ecome) Questionnaire on suppliers' opinion	Supplier's social responsibility commitment	Sustainable Governance Circulation 1 Green Sustainable Circulation 2
Government authorities	Compliance with regulations Transparent and timely information disclosure Recycling economy	Explanation sessions, seminars or forums of regulations Public information observatory and the Company's website Official document	Publish the significant information in accordance with the provisions in time. Comprehensive utilization of resources promotes recycling economy	Green Sustainable Circulation 3
Non-profit organizations	Environmental protection investment Commitment to greenness Climate change Mine vegetation and greening	Company's website Participating in NGO activities Seminars/forums	Green mines invested 65.95 million RMB in 2019	Green Sustainable Circulation 1
Industrial circles /academic institutions	Industry-academy cooperation Technology research and development Cement 4.0	Industry-academy cooperation projects Seminar Regular exchanges Scholarships and grants	Construction and education cooperation - Yuan Ze University, Yadong institute of technology Mine internship -Environment and Resource of Southwest University of Science and Technology, Southwest University of Science and Technology Mining Engineering University, Wuhan University of Technology majoring in inorganic nonmetallic materials	Green Sustainable Circulation 4

Sustainable Governance Circulation3: Sustainable Topics Management

Identification of the Impact

For the 26 relevant issues above, the CSR committee of Asia Cement (China) accessed the influence level of each consideration of Asia Cement (China) on the impact of economy, environment and society based on the opinion of the operation management personnel within the organization, and identified the impact on the material aspects of sustainable development of Asia Cement (China) after summarizing all the points.

3.3 Management and Disclosure of Significant Topics

Identification of Material Topics

A matrix of material issues was identified based on the level of concern of the stakeholders and the impact on various sustainable issues. The CSR Committee discussed the degree of concern of stakeholders above 3.9 and the analysis of sustainable impact above 2.6 were defined as the material issues of Asia Cement (China), We have 17 material issues in total under the matrix.

Confirmation and Review of the Completeness of the Material Aspects

CSR committee would submit the identified material topics of Asia Cement (China) to the chairman for review and confirmation after summarizing the relevant information to ensure all topics and considerations were covered.



ESG Material Topics of Asia Cement (China):



Asia Cement (China) Holdings Corporation 78

3.4 Sustainable Topic Validation and Report Management

The Significance of Major Topics for Asia Cement (China)

In terms of the material themes identified by us, the management policy and implementation status of each material theme will be disclosed in reports. Apart from active responses on the communication platform, Asia Cement (China) set up a complete link function to facilitate reading and information retrieval.

ESG Types	Significant topics	GRI standards	Impact boundary	Chapter	Management policy	Execution status
	Raw Material	GRI 301	ALL	Green Sustainable Circulation 3.2	19	37-38
	Energy	GRI 302	ALL	Green Sustainable Circulation 2.3 Green Sustainable Circulation 3.2	19	25-26,37-38
E	Water	GRI 303	ALL	Green Sustainable Circulation2.4	19	27-30
Environmental Topics	Emission	GRI 305	ALL	Green Sustainable Circulation 2.3	19	22-25
	Environmental Compliance	GRI 307	ALL	Green Sustainable Circulation 2.4	19	34
	Low-carbon Green Process	Custom	ALL	Green Sustainable Circulation 2	19	20-21
	Sustainable Environmental Education	Custom	ALL	Green Sustainable Circulation 5	44	44-45
	Employment Relationship	GRI 401	ALL	Sustainable Governance Circulation2.1	47	60-66
S	Employee/Employer Relationship	GRI 402	ALL	Sustainable Governance Circulation 2	47	47
Social Topics	Occupational Health & Safety	GRI 403	ALL	Sustainable Governance Circulation 2.4	47	68-73
	Training & Education	GRI 404	ALL	Sustainable Governance Circulation 2.3	47	66-67
	Local Communities	GRI 413	ALL	Green Sustainable Circulation 1.5 Green Sustainable Circulation 4	10,39	17-18,40-41
	Economy Performance	GRI 201	ALL	Sustainable Governance Circulation 1.2	47	53-54
	Indirect Economic Impact	GRI 203	ALL	Green Sustainable Circulation 1.5 Green Sustainable Circulation 4	10,39	17-18,40-41
G Governance Topics	Sustainable Mines	Custom	Jiangxi Yadong Huanggang Yadong Wuhan Yaxin Sichuan Yadong Sichuan Lanfeng	Green Sustainable Circulation 1	10	11-18
	Recycling Economy	Custom	ALL	Green Sustainable Circulation 3	35	36-37

Note: ALL for "ALL operating sites".

4.1 Disclosure of Projects and Indicators on Sustainable Mine



The implementation in 2019: In 2019, adhered to the Green Mine Construction Specification of Cement Limestone Industry (水泥灰岩绿色矿山建设规范) (DZ/T 0318-2018), mines of Asia Cement (China) implemented the development concept of innovation, coordination, green, openness and sharing, realizing the overall development of the whole process of mine resources development, such as resource utilization, energy conservation and emission reduction, environmental protection, land reclamation and building a harmonious relationship between the enterprise and the local community. We set 8 indicators for self-evaluation and fully achieved its goal in 2019.

4.2 ISO 26000 Corporate Social Responsibility Guidelines

ISO 26000 Related Topics of Asian Cement (China)	Chapter and related description of the report		
Recognizing and understanding of corporate social responsibility	CSR Operator Words		
Identification and participation of stakeholders	CSR-Sustainable 3.1 Sustainable Topics Management		
Governance of the organization	CSR-Sustainable1 Corporate Governance		
Human rights			
Labor practices	CSR-Sustainable2 Happy Workplace		
Environment	CSR-Green2 Low-carbon Green Intelligent Manufacturing		
Fair operation practice	CSR-Sustainable1 Corporate Governance		
Participation and development of the community	CSR-Green4 Social Care		
Relevant action plan	CSR'S management strategy of each chapter		
Social responsibility communication	Communicate through annual CSR and private networks		
Review and improve corporate social responsibility	Review, analyze and improve CSR topics regularly, and authorize the CSR committee to implement relevant action plans.		

4.3 Environment, Society and Governance (ESG) Report Index

Category	Aspects	Key performance indicators	ESG indicators	Page/Notes
	A1: Emissions	A1.1	Types of emissions and relevant data	22-23,3-33
		A1.2	Total volume of greenhouse gas emissions (calculated by ton) and (if applicable) its density (if calculated by capacity per unit, each infrastructure)	22-23
		A1.3	Total volume of hazardous wastes (calculated by ton) generated and (if applicable) its density (if calculated by capacity per unit, each infrastructure)	36-37
		A1.4	Total volume of harmless wastes (calculated by ton) generated and (if applicable) its density (if calculated by capacity per unit, each infrastructure)	36-37
ant		A1.5	Stating measures and achievements of reducing the volume of emission	24
me		A1.6	Stating the methods of dressing hazardous and harmless wastes, measures of reducing the volume and achievements obtained	36-37
Environment	A2: Resources usage	A2.1	Total consumption (calculated by 1000 KW·h) of direct and / or indirect energy (e.g. electricity, gas or oil) and its density (if calculated by capacity per unit, each infrastructure) by category	25-26
Б		A2.2	Total volume of water consumption and its density (if calculated by capacity per unit, each infrastructure)	27
		A2.3	Stating the efficiency plan of energy usage and achievements obtained	25
		A2.4	Stating if any problems exists when seeking for available water source, and the plan of improving water using efficiency and achievements obtained	28
		A2.5	Total amount of packaging materials used by finished goods (calculated by ton) and (if applicable) amount attributable to per production unit	58
	A3: Environment and natural resources	A3.1	Stating the significant impacts on environment and natural resources of business activities and actions taken to manage such impacts	14-15,24
	B1: Employment	B1.1	Total number of employees categorized by gender, employment type, age groups and regions	60-61
		B1.2	Turnover rate of employees categorized by gender, age groups and regions	61
	B2: Health and safety	B2.1	Mortality rate of work due to work injuries	70
		B2.2	Number of lost work days as to work injuries	73
		B2.3	Stating the measures taken for occupational health and safety and relevant implementation and monitoring methods	69-70
	B3: Development and	B3.1	Percentage of trained employees categorized by gender and employee type (e.g. senior management, medium management and so on)	67
	training	B3.2	Average hours of each employee to finish the trainings categorized by gender and employee type	67
	B4: Labor standards	B4.1	Stating the measures of reviewing recruiting practices to avoid child labor and compulsory labor	72
		B4.2	Stating measures adopted for identifying the non-compliance conditions when such non-compliance occurs	65
	B5: Supply Chain	B5.1	Number of suppliers by region	57
Social	Management	B5.2	Stating the management related to engaging suppliers, number of suppliers conducting relevant management as well as implementation and monitoring plan of such management	56-57
5	B6: Product	B6.1	Percentage of products in the total sold or delivered which need to be called back for health and safety problems	No recovery
	responsibility	B6.2	Investments obtained for products and services and the corresponding response programs	52
		B6.3	Stating the management only related to the maintaining and protection of intellectual property rights	
	B7: Anti-corruption	B6.4	Stating the processes of quality examination and procedure of calling back products	
		B6.5	Stating the consumers' information protection and privacy policy as well as the implementation and monitoring approach	58
		B7.1	The number of corruption proceedings cases claimed against issuers or its employees and adjudicated and the proceedings results during reporting period	50
		B7.2	Stating the precautionary measures and reporting procedures and relevant implementation and monitoring approach	50
	B8: Community investment	B8.1	Focusing on the fields invested (e.g. education, pleasurable environment, labor needs, health, culture, sports)	16-18,40- 43,44-45
		B8.2	Utilizing resources (e.g. money or time) in the focused fields	16,43,45



PART 04

Appendix

◆ Appendix1: GRI Guidelines Content Index: General Standard Disclosure

Appendix2: GRI Guidelines Content Index: Specified Standard Disclosure

Appendix1: GRI Guidelines Content Index: General Standard Disclosure

		GRI 102 : 2016	Page/Notes
	102-1	Name of the organization	48
	102-2	Activities, brands, products, and services	48,53
	102-3	Location of headquarters	48
	102-4	Location of operations	48
	102-5	Ownership and legal form	48
	102-6	Markets served	48
Organizational	102-7	Scale of the organization	48,60-61
profile	102-8	Information on employees and other workers	60-61
	102-9	Supply chain	56-57
	102-10	Significant changes to the organization and its supply chain	No change
	102-11	Precautionary principle or approach	52
	102-12	External initiatives	81-82
	102-13	Membership of associations	51
	102-14	Statement from senior decision-maker	4
Strategy	102-15	Key impacts, risks, and opportunities	54-55
Ethics and	102-16	Values, principles, standards, and norms of behavior	50
integrity	102-17	Mechanisms for advice and concerns about ethics	50
	102-18	Governance structure	47
	102-19	Delegating authority	47
	102-20	Executive-level responsibility for economic, environmental, and social topics	74-76
	102-21	Consulting stakeholders on economic, environmental, and social topics	74-76
Governance	102-22	Composition of the highest governance body and its committees	48, More details in Annual Report
	102-23	Chair of the highest governance body	48
	102-24	Nominating and selecting the highest governance body	48
	102-25	Conflicts of interest	49
	102-26	Role of highest governance body in setting purpose, values, and strategy	48
	102-27	Collective knowledge of highest governance body	48, More details in Annual Report

		GRI 102 : 2016	Page/Notes
	102-28	Evaluating the highest governance body's performance	48, More details in Annual Report
	102-29	Identifying and managing economic, environmental, and social impacts	74-76
	102-30	Effectiveness of risk management processes	55
	102-31	Review of economic, environmental, and social topics	74-76
	102-32	Highest governance body's role in sustainability reporting	47
	102-33	Communicating critical concerns	47
	102-34	Nature and total number of critical concerns	78
	102-35	Remuneration policies	62
	102-36	Process for determining remuneration	49
	102-37	Stakeholders' involvement in remuneration	49
	102-38	Annual total compensation ratio	66
	102-39	Percentage increase in annual total compensation ratio	66
	102-40	List of stakeholder groups	77
	102-41	Collective bargaining agreements	65
Stakeholder engagement	102-42	Identifying and selecting stakeholders	76
	102-43	Approach to stakeholder engagement	76
	102-44	Key topics and concerns raised	76-77
	102-45	Entities included in the consolidated financial statements	48
	102-46	Defining report content and topic Boundaries	78
	102-47	List of material topics	79
	102-48	Restatements of information	None
	102-49	Changes in reporting	None
Reporting	102-50	Reporting period	3
practice	102-51	Date of most recent report	3
	102-52	Reporting cycle	3
	102-53	Contact point for questions regarding the report	3
	102-54	Claims of reporting in accordance with the GRI Standards	3
	102-55	GRI content index	84-86
	102-56	External assurance	None

Appendix2: GRI Guidelines Content Index: Specified Standard Disclosure

		Economic Topics GRI 200:2016					
Material Topics		MA and Indicators Page/Notes					
		МА	47				
	201-1	Direct economic value generated and distributed	53-54				
Economic Performance GRI 201	201-2	Financial implications and other risks and opportunities due to climate change	54-55				
	201-3	Defined benefit plan obligations and other retirement plans	64-65				
	201-4	Financial assistance received from government	Without subsidies				
		МА	59				
Market Presence GRI 202	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	66				
	202-2	Proportion of senior management hired from the local community	18				
		МА	10,39,44				
Indirect Economic Impacts GRI 203	203-1	Infrastructure investments and services supported	10-16,18,40-43				
	203-2	Significant indirect economic impacts	18,20-22,40-43				

Environment Topics GRI 300:2016					
Material Topics		MA and Indicators	Page/Notes		
		МА	35		
Materials	301-1	Materials used by weight or volume	37		
GRI 301	301-2	Recycled input materials used	38,58		
	301-3	Reclaimed products and their packaging materials	58		
		МА	19		
	302-1	Energy consumption within the organization	37		
Enorgy	302-2	Energy consumption outside of the organization	20-21		
Energy GRI 302	302-3	Energy intensity	22-23		
	302-4	Reduction of energy consumption	24		
	302-5	Reduction in energy requirements of products and services	25		
		МА	35		
Water	303-1	Water withdrawal by source	27		
GRI 303	303-2	Water sources significantly affected by withdrawal of water	None		
	303-3	Water recycled and reused	28-30		
		МА	35		
	305-1	Direct (Scope 1) GHG emissions	23		
	305-2	Energy indirect (Scope 2) GHG emissions	23		
Emissions	305-3	Other indirect (Scope 3) GHG emissions	None		
GRI 305	305-4	GHG emissions intensity	22-23		
	305-5	Reduction of GHG emissions	21		
	305-6	Emissions of ozone-depleting substances(ODS)	None		
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx) , and other significant air emissions	30		
Environmental		МА	35		
Compliance GRI 307	307-1	Non-compliance with environmental laws and regulations	34		

Appendix2: GRI Guidelines Content Index: Specified Standard Disclosure

		Social Topics GRI 400:2016			
Material Topics		MA and Indicators			
		МА	59		
Employment	401-1	New employee hires and employee turnover	60		
GRI 401	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	62		
	401-3	Parental leave	64		
Labor/Manageme		МА	59		
nt Relations GRI 402	402-1	Minimum notice periods regarding operational changes	By regulation		
		МА	59		
	403-1	Workers representation in formal joint management-worker health and safety committees	68		
Occupational Health and Safety GRI 403	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	70		
GRI 403	403-3	Workers with high incidence or high risk of diseases related to their occupation	71		
	403-4	Health and safety topics covered in formal agreements with trade unions	68		
		МА	59		
Training and	404-1	Average hours of training per year per employee	67		
Education GRI 404	404-2	Programs for upgrading employee skills and transition assistance programs	66-67		
	404-3	Percentage of employees receiving regular performance and career development revies	67		
		МА	10,39		
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	11-12,16-18		
GRI 413	413-2	Operations with significant and potential negative impacts on local communities	14-16		



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