



CHINA SHANSHUI CEMENT GROUP LIMITED

中國山水水泥集團有限公司

(Incorporated in the Cayman Islands with limited liability)

Stock Code: 691

China Shanshui Cement Group Limited

Environmental, Social, and Governance Report



2017

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About this Report

This 2017 Environmental, Social and Governance Report (the “Report”) provides the latest information of China Shanshui Cement Group Limited (the “Company”) and its subsidiaries (the “Group” or “China Shanshui Group”) on its efforts for sustainable development in 2017. The Report mainly includes environmental, social and governance issues related to the Group’s sustainable development that the Group’s stakeholders are concerned about, so that the Group’s aspirations, management, measures and performance on sustainable development could be better understood by the stakeholders. The Report should be reviewed together with the Company’s *2017 Annual Report* (particularly the “Corporate Governance Reports” therein, Pages 71 to 89 of 2017 Annual Report) for a full understanding of the Group’s relevant performance. The Report will be published in both Chinese and English. In case there be any discrepancy between the Chinese and the English versions, the Chinese version shall prevail.

Reporting Period

The Report covers the period from 1 January 2017 to 31 December 2017 (the “Reporting Period”), unless otherwise mentioned. The information presented in this Report includes the Group’s specific policies and performance in environmental, social and governance aspects. To maintain the continuity and comparability of some statistics disclosed, selected contents of the Report is adjusted where necessary.

Reporting Boundary

This Report covers the Company and its subsidiaries. Unless otherwise mentioned, the material content of the Report is derived from China Shanshui Cement Group Limited and its subsidiaries.

Reporting Guideline

The Report is prepared in accordance with the *Environmental, Social and Governance Reporting Guide* under Appendix 27 of the *Main Board Listing Rules* (“Listing Rules”) of The Stock Exchange of Hong Kong Limited (“SEHK”).

Response to the Report

If you have any comments on the Group’s Environmental, Social and Governance Report, please contact the Group through E-mail: wangjinxiang@sdshanshuigroup.com, geaiping@sdshanshuigroup.com.



2 / About Us

China Shanshui Group is a large-scale enterprise group with cement and clinker production as its main businesses. It is one of the earliest cement manufacturers engaged in cement production with new dry process cement production and it is also one of the 12 national large-scale cement enterprises with key supports received from the country.

The subsidiaries of the Group covered more than 10 provinces (municipalities, autonomous regions) including Shandong, Liaoning, Shanxi, Tianjin, Inner Mongolia and Xinjiang. The products of the Group are widely used in key projects of the country such as railways, highways, airports, real estates and other infrastructure construction, and the products have been successfully exported to more than 60 countries and regions, including the U.S., Australia, Russia, Europe, Middle East, Africa, etc.

All along, China Shanshui Group adheres to the concept of scientific development and strives to build itself as a resource-saving and environment-friendly enterprise. All the subsidiaries on cement products and most commercial mixing stations of the Group have acquired the Certification of ISO 9001, ISO 14001 and OHSAS 18001. In addition, our cement brand “Shanshui Dong Yue” is rated as Shandong Famous Trademark and acquired National Certified Quality Credit AAA Gold Medal.



3 Green Development

China Shanshui Group pursue consistently on green development, continuously reinforces energy conservation and emission reduction, mitigates the impacts to the environment during production, and enhances ecological values. Meanwhile, the Group actively adopts new technologies and applies new equipment to promote energy conservation and emission reduction in order to produce cement that is environmental friendly.

The Group follows the national integrated plan of industrial development and the overall deployment of urban air pollution prevention and control, and strictly complies with the *Environmental Protection Law of the People's Republic of China*, *Atmospheric Pollution Prevention and Control Law of the People's Republic of China*, *Water Pollution Prevention and Control Law of the People's Republic of China*, *Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes*, *Law of the People's Republic of China on Prevention and Control of Pollution from Environmental Noise*, *Emission Standards of Air Pollutants for Cement Industry* and other related national laws and regulations. The air pollution control equipment is well- furnished in each cement production line and the emissions are strictly controlled according to the latest requirements of national and local environmental protection, so that, the levels of nitrogen oxides, sulfur oxides and particulate pollutants emitted are complied with and well below the national environmental protection requirements. In addition, China Shanshui Group has formulated the *Shan Shui Group Environmental Protection and Energy Management System*, which stipulates the work processes, job responsibilities and management standards of the Group's environmental and energy management. During the Reporting Period, the Group had not been accused of violating laws and regulations relating to environmental protection.



In addition, the Group also strictly abides by the local emission standards of where the production sites are located, and these emission standards are related to and have a material impact on the operation, such as the *Emission Standard of Air Pollutants in Building Materials Industry in Shandong Province*, *Comprehensive Emission Standard for Regional Air Pollutants in Shandong Province*, etc. It is stipulated that from January 1, 2017, regardless of area of control, the existing cement kiln and kiln grinding machine of all its enterprises will implement a new emission standard of nitrogen oxides (NO_x) emission concentration from 400mg/m³ to 300mg/m³, and the emission limit of sulfur dioxide (SO₂) will reduce from 200 mg/m³ to 100 mg/m³.

Major emissions of the cement industry are exhaust gases and greenhouse gases ("GHGs"). Whereas the major air pollutants produced by the Group's operations include NO_x, SO₂, particulate matters, etc. All the cement clinker plants of the Group have obtained the local pollutant discharge permits and independent certified environmental monitoring agencies are deployed regularly to conduct emission monitoring of the plants, with the monitoring results all in line with related national emission standards.

3.1 Emission Control

In order to reduce emissions, China Shanshui Group adopts new technologies and equipment to strictly control the emissions of pollutants in accordance with the *Work Plan for Greenhouse Gas Emission Control during the "13th Five-Year Plan Period"* and the related requirements of national and local laws and regulations on environmental protection.

For air pollutants generated during cement production, the Group promotes the increasing adoption of denitrification, desulfurization and dust removal equipment to mitigate the potential environmental impacts from production activities.

- The online monitoring system has been installed to all the cement rotary kilns of each subsidiary, and the system is connected to the local environmental protection department to enable real-time monitoring and proactive pre-warning of pollutant emission indicators.
- All production lines of the Group have been equipped with Selective Non-Catalytic Reduction (SNCR) denitrification system and achieved the emission reduction objective of nitrogen oxides.
- In order to solve the problem of high-level emissions of sulfur dioxide during cement production, which was caused by the high sulfur content of mines in a few subsidiaries, the Group developed new desulfurization technology, improved desulfurization equipment, and effectively reduced sulfur dioxide emissions.
- The Group increased its capital investment in the increasing adoption of environmental protection facilities. In 2017, the Group invested more than RMB 11 million to upgrade the dust removal equipment of the Group's



Zibo Company and Yantai Company, which effectively reduced the dust emission concentration; the Group invested more than RMB 41 million to 17 environmental protection facilities transformation projects such as transforming and constructing material sheds, which reduced the dust emission at the production sites.



Case study: Clinker production enterprises pay attention to environmental impacts

The environmental impacts generated during the operation of the clinker production enterprises of the Group mainly include dust, noise, domestic wastewater and production wastewater. The Group has taken corresponding control measures for different impacts.

- **Dust:** Build fully enclosed steel structure sheds to store materials; harden the roads surface and greening the ground; spray the roads by sprinkler; set atomizing spraying in the storage sheds to reduce dust.
- **Noise:** Fully enclosed rooms are applied for high-noise facilities to isolate vibration; the factories are built more than 800 meters away from the surrounding residential areas.
- **Wastewater:** Reused wastewater for greening irrigation after treatment and zero discharge.



① Using atomizing spraying to remove dust (The eastern commercial mixing station of Shandong Cement Factory Co., Ltd.)

② The fully enclosed steel structure shed for raw materials storage (Taiyuan Shanshui Cement Co., Ltd.)

3.2 Promote Energy Conservation and Consumption Reduction

In order to promote green and low carbon development, China Shanshui Group seriously abides by the *Energy Conservation Law of the People's Republic of China*, and has established the *Shan Shui Group Environmental Protection and Energy Management System* according to the *13th Five-year Plan for Economic and Social Development of the People's Republic of China* with due consideration given to the actual situation of the Group, has standardized the Group's aspects of energy statistics, energy equipment management, energy-conservation target management, carbon emissions, etc. The Group also requires all its subsidiaries to improve energy efficiency, reduce energy consumption and achieve energy saving in their operation.

The main work of the Group's environmental protection and energy management includes:

- Implement an accountable system with clear energy saving target. Strictly control the total energy use and improve energy efficiency.
- Strengthen internal management. Develop a reasonable production plan to reduce energy consumption; Recycle and reuse the industrial wastes.
- Carry out technological transformation. Upgrade production equipment to reduce coal consumption and power consumption per unit product.



In order to reduce the consumption of coal, electricity and water resources, during the Reporting Period, China Shanshui Group invested a total of more than RMB 50 million in technological upgrade and transformation, which helps to effectively reduce the energy consumption per unit of product.

In 2017, China Shanshui Group's comprehensive energy consumption of clinker was more efficient than the advanced benchmark of national standard, which saved **43,000** tons of standard coal compared with advanced benchmark.



In 2017, China Shanshui Group's electricity production from waste heat recovery amounted to **1.137** billion kWh, which is equivalent to a saving **139,700** tons of standard coal or reducing carbon dioxide emissions by **339,600** tons.



3.3 Promote Circular Economy

The waste generated by the production process of China Shanshui Group is treated in accordance with the related national environmental protection requirements, and is prioritized for reusing and recycling. The non-hazardous waste generated by the Group, which is mainly the general production waste and domestic waste, is burned in the kiln or entrusted to a qualified institution for disposal depending on its nature. The main hazardous waste, waste engine oil, is reused for mechanical lubrication by the Group, and the waste oil barrels¹ are handled by qualified recycling institutions.

Integrated Utilization of Industrial Waste

China Shanshui Group actively utilizes and eliminates industrial waste. Industrial waste generated in the production process is used as raw materials, and applied with advanced production technology to produce various types of high-quality cement. The Group handled more than 11.23 million tons of industrial solid waste throughout the year, achieving a win-win situation for both economic and environmental benefits.

Recycle of Water Resource

The Group can meet the production needs in sourcing water that is fit for purpose. At the same time, the Group has adopted a series of water conservation measures.

- The Group's water consumption is mainly from waste heat recovery process. In order to improve the efficiency of water consumption, in 2017, the Group invested more than RMB 8 million to improve the waste heat recovery system, to upgrade water treatment technology, so that the drainage water reached the acceptable standard for grey water reuse, and achieved zero discharge of wastewater.
- All the cement clinker production enterprises apply the technology of recirculating cooling water.
- The treated domestic sewage is used for irrigating greenery in the plant area and spraying to remove dust on the roads. There is no discharge into the municipal sewage pipeline, and achieves zero discharge.



① Semi-automatic water treatment system by waste heat recovery process



② Automatic water treatment system by waste heat recovery process

Note:

1: As the quantity of waste oil barrels is rarely, no statistic has been made yet, and the statistics system will be gradually improved in the future.

3.4 Care for the Beautiful Eco-environment

China Shanshui Group has earnestly practiced the concept of “lucid waters and lush mountains are invaluable assets” and is committed to operating mines that are green and ecological. In the process of mining activities, the Group abides by the *Green Mine Convention*, and strictly control the environmental impacts on mining working area and the surroundings. At the same time, the Group inputted a large amount of manpower and material resources to actively carry out mine ecological restoration works. For example, the Group takes measures such as spraying, sprinkler watering, equipping a high-power dust collector and fully enclosed belt transporting in the mine production process to reduce dust; recovering the ecosystem promptly after mining works being completed to realize mine reclamation and vegetation restoration.



① Fully enclosed belt transporting

③ Achievement in mine management and greening

② Dust removal by sprinkler in mining areas

④ Achievement in mine management and greening





3.5 Transparent Environmental Performance²

The environmental performance data on emissions and resource consumption by China Shanshui Group during the Reporting Period is listed in the table below.

Environmental Performance	Unit	Quantity
Basic Information		
Clinker production	Tonnes	35,225,700
Pollutant Emissions ³		
Carbon dioxide equivalent ⁴	Tonnes	30,145,500
Carbon dioxide emissions per clinker production	Tonnes / Tonnes	0.86
Nitrogen oxides ⁵	Tonnes	16,979.71
Sulphur dioxide ⁶	Tonnes	1,140.28
Smoke ⁷	Tonnes	752.32
Resource Consumption ⁸		
Electricity	Kilowatt-hours	3,198,347,817.42
Electricity consumption per clinker production	Kilowatt-hours/Tonne	90.80
Coal	Tonnes	3,786,290.67
Coal consumption per clinker production	Tonnes/Tonne	0.11
Water consumption	Tonnes	12,175,033
Water consumption per clinker production	Tonnes/Tonne	0.35
Cement packing bags	Pieces	251,142,600
Resource Recycling		
Waste heat recovery	Kilowatt-hours	1,137,062,055.22

Note:

2: As the Group's environmental impact is mainly from production activities, environmental performance only includes relevant data from the Group's production facilities.

3: As the Group's pollutant emissions mainly come from the clinker production process, the pollutant-related performance only includes 33 clinker production enterprises.

4: The calculation of carbon dioxide equivalence is based on the *Accounting Method and Reporting Guideline for Greenhouse Gas Emissions of Cement Production Enterprises in China*.

5: Due to the short operating period of Hequ Company and Wuxiang Company in 2017, the online monitoring systems of these two companies have not yet been operational, so the nitrogen oxides emission data of this year does not include these two companies.

6: Due to the short operating period of Hequ Company and Wuxiang Company in 2017, the online monitoring systems of these two companies have not yet been operational, so the sulphur dioxide emission data of this year does not include these two companies.

7: Due to the short operating period of Hequ Company and Wuxiang Company in 2017, the online monitoring systems of these two companies have not yet been operational, so the smoke emission data of this year does not include these two companies.

8: As some of the Group's subsidiaries are not engaged in production activities, the resource consumption data only includes 89 companies of the Group, including the business aspects of comprehensive cement kiln and grinding enterprises (including cement kiln enterprises), cement grinding enterprises (some with aggregate production lines), concrete aggregate enterprises and commercial mixing stations.



Employee Care

4.1 Harmonious Employment Relationship

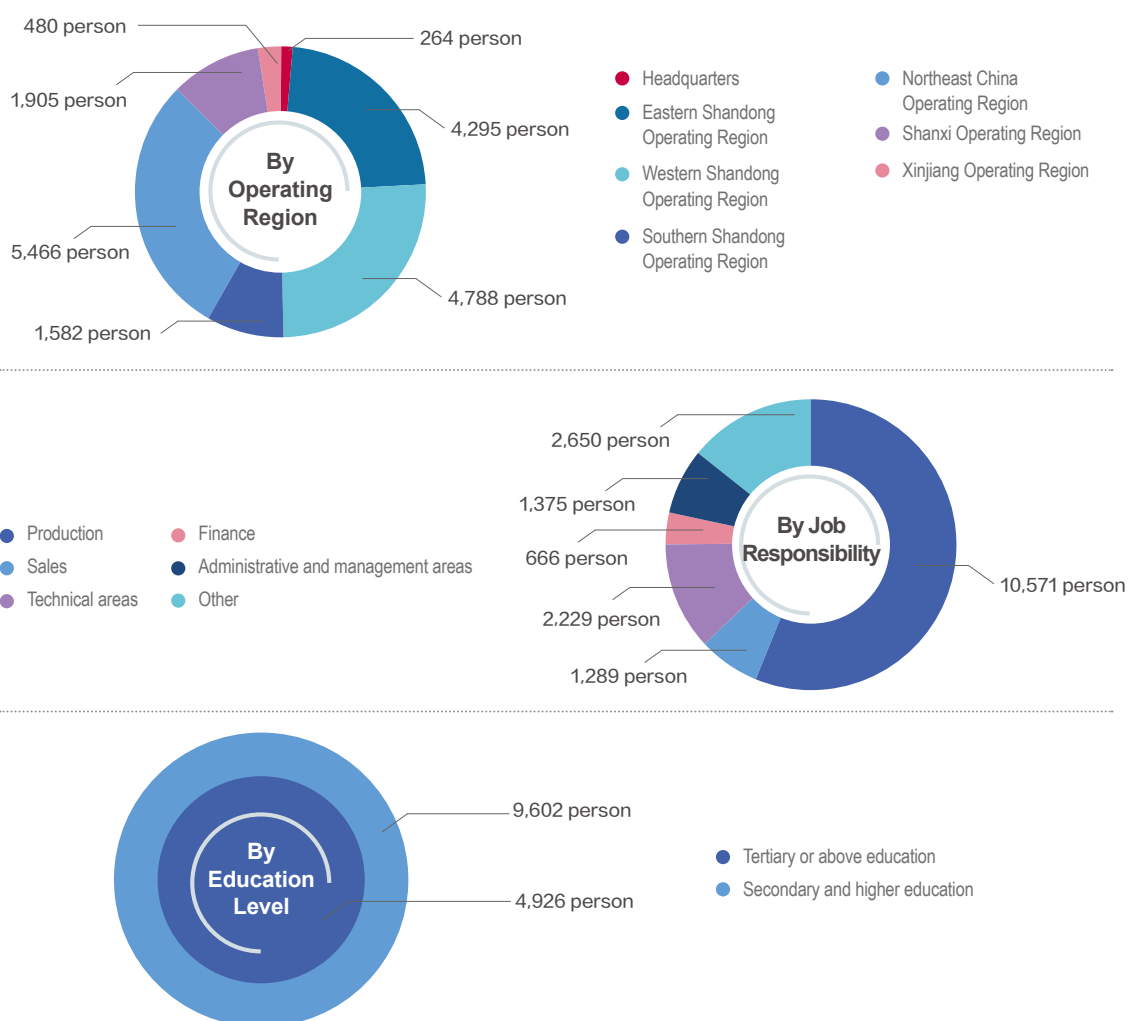
The Group regards employees as the single most important resource and always adheres to the development philosophy of “people-oriented”, and strives to create an equal, respectful and diverse working environment for employees.

China Shanshui Group strictly abides by the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China*, *Social Insurance Law of the People's Republic of China*, Hong Kong's *Employment Ordinance* and other related laws and regulations. The Group has developed the *Regulations on Recruitment Management of Shanshui Group*, adhering to the principles of openness, fairness, justice, fair competition, and merit-based recruitment. The Group respects the diversity of employees and does not differentially treat employees based on their race, gender, age, religion, ethnicity and other factors. The recruitment of the Group is based on the individual performance, education level, work experience, morality and comprehensive assessment of the candidates. In addition, the Group has established a reasonable remuneration system to regularly adjust its remuneration package according to market pay levels, corporate economic benefits and employee income levels; the employees are also promoted according to their capabilities and job performance.



At the same time, the Group has also formulated the *Regulations on Resignation Management of Shanshui Group* in accordance with relevant laws and regulations, and during the existence of the labor relations, the Group has no instances of dismissal and malicious termination of the labor, except under the situation due to negligence of the employees themselves; the Group also formulated the *Measures for the Management of Employee Attendance of Shanshui Group*, which stipulated that employees should work no more than 8 hours per day and no more than 40 hours per week; besides, the Group formulated the *Implementation Measures for the Paid Annual Leave of Shanshui Group* to guarantee the rights to take vacations of employees; and the Group pays basic pension insurance, basic medical insurance, unemployment insurance, maternity insurance, work-injury insurance and housing funds for all employees according to the relevant laws. As of December 31, 2017, the Group had 18,780 in-service employees. During the Reporting Period, the Group and its subsidiaries strictly abided by the relevant laws and regulations of the country and the relevant regulations of the Group, paid employees on time and in full, and effectively protected the legitimate rights and interests of employees.

Number of Employees by Type



In addition, in accordance with the *Labor Law of the People's Republic of China*, *Provisions on the Prohibition of Using Child Labor*, *Law of the People's Republic of China on the Protection of Minors* and other laws and regulations and the *Regulations on Recruitment Management of Shanshui Group*, in the recruitment process, the Group strictly reviews the identity information of candidates to ensure that the information provided by the applicants is true and correct, in order to strictly prevent from the situation of recruiting child labor and resolutely prevent forced labor. During the Reporting Period, the Group did not find any cases involving forced labor or child labor.

4.2 Implement Work Safety

Health and safety are the cornerstones of enterprise development and the guarantee of employees' happiness. In order to well implement work safety, China Shanshui Group strictly abides by the *Work Safety Law of the People's Republic of China*, *Labor Law of the People's Republic of China*, *Law of the People's Republic of China on Safety in Mines*, *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* and other relevant laws and regulations, and established the internal policies of the *Regulations on the Work Safety Management of Shanshui Group* and *General Rules for the Use of Safety Labels of Shanshui Group* to constantly promote the standardization and institutionalization of safety management.

In order to implement the requirements of work safety, all subsidiaries of the Group have established their work safety committees, built safety management networks, carried out responsibility system for safety management and assessed the completion of safety target monthly. These are linked to monthly performance appraisal, so that this can help to effectively ensure the smooth implementation of safety management works. The Group continues to strengthen the development of standardization for work safety. And the Group continuously improves the safety conditions of on-site operations through setting position standard, hidden risk investigation and management, risk identification, and safety training, etc.



Activity for work safety 1: Conducted "work safety month" activities and organized employees to conduct safety oaths, safety-related speech competition, safety knowledge competition, safety emergency drills, etc.



The Group is committed to providing a safe working environment for its employees. The subsidiaries of the Group continuously explore technological transformation measures to reduce occupational health hazards such as dust and noise. Meanwhile, quality personal protective equipment such as safety helmets, dust masks, heat-insulating suits, etc. has been provided for employees; physical examination is regularly organized for employees in general positions, and occupational physical examination for employees in special positions is also arranged; cooling supplies are distributed for employees during the hot season and air conditioners are installed in the dormitory to prevent sunstroke.

In addition, the Group organizes occupational health and safety training from time to time to enhance employees' awareness of occupational health and safety. During the Reporting Period, no safety liability accidents classified as above general level occurred in the Group.



Activity for work safety
2: Distributed heatstroke prevention drinks and emergency medicines to employees



Activity for work safety 3: Arranged physical examinations for employees

4.3 Strengthen Development and Training

China Shanshui Group is keenly aware that the competition of enterprises is the competition of talents, and the Group attaches great importance to the development and training of the employees. In light of the Group's current development requirements, employee trainings are divided into two main categories, the new employee induction training and the on-the-job training.

New employee induction training

This training targets new employees of the Group. It aims to enable new employees to fully understand the Group's development, corporate culture, business processes, management systems, etc., and to help them to adapt to their jobs as soon as possible and to integrate into the Shanshui family.

On-the-job training

This training is for on-service employees of the Group. It aims to enhance the professional skills of on-service employees, improve their work performance and meet the development requirements of the Group. The training adheres to the principle of equal emphasis on both theoretical and practical skills in order to enhance employees' knowledge and skills comprehensively.



Training activity 1: Held activities such as the Shanshui Group's 2017 Clinker Production Technology Exchange Conference and the 2017 Annual Technical Exchange Seminar



Training activity 2: A series of training activities were held on specific topics like quality, raw materials and inspection analysis, focusing on "improving quality level, strengthening quality control"



Training activity 3: The employees of the Group achieved outstanding results in the 2017 "Shanshui Cup" National Building Materials Industry Vocational Skills Competition

4.4 Enrich Employee Life

The Group encourages work-life balance for employees, and has organized a variety of employee activities during the Reporting Period.



Employee activity 1: In June 2017, the Group held “Shanshui Cup” the first employee sports competition and organized a trip for employees



Employee activity 2: In October 2017, the Group organized a calligraphy, painting and photography exhibition for employees



Employee activity 3: The Group's Spring Festival party



Operation Management

5.1 Achieve Win-win Cooperation

Achieving continuous win-win development with partners is the goal of the Group's supply chain management. With regard to this, China Shanshui Group always upholds the basic principles of “openness, fairness and justice”, and in accordance with the Group's four basic regulations, namely: the *Management Measures for Monitoring and Control of Procurement and Supply of Shandong Shanshui Cement Group Company Limited*, *Management System for Monitoring and Control of Resources Procurement and Supply of Shandong Shanshui Cement Group Company Limited*, *Bidding Management System of Shandong Shanshui Cement Group Company Limited* and *Management System for Large Facility Central Warehouse of Shandong Shanshui Cement Group Company Limited*, to standardize supply chain management.

In the selection of suppliers, the Group will take full account of the following factors in order to reduce potential environmental and social risks along the supply chain: whether the supplier is a legally approved manufacturing/operating enterprise by relevant state departments and complies with national and local laws and regulations; whether products supplied by the supplier meet the quality and price standards, obtain relevant production qualification certificates and pass relevant tests; whether the supplier has adequate technical capacity, delivery capacity, financial ability and good social reputation; and whether the supplier obtains the relevant environmental certificates. Selection factors will be adjusted from time to time according to market conditions and production needs.

In the procurement of raw materials, the Group attaches great importance to the quality of raw materials provided by suppliers and strictly controls the risks associated with the raw material supply. The Group's Procurement Management Department will perform market research in the initial stage of procurement, and thereafter will work with the quality control laboratory to conduct on-site sampling and testing. The tendering process is then conducted based on the required raw material quality standard of each subsidiary; If the products are found not to meet the contractual requirements during the product delivery period, China Shanshui Group will establish measures and rectify the problems according to the Group's internal regulations of *Control Procedures for Nonconformity, Corrective and Preventive Measures, Control Procedures for Monitoring and Measurement of Products* and *Technical Requirements for Procurement of Materials*. If any quality objection incident arises, the product quality arbitration inspection will be carried out by the provincial or higher level nationally recognized cement quality supervision and inspection agency.

5.2 Create Responsible Quality

The Group strictly complies with the *Advertising Law of the People's Republic of China, Trademark Law of the People's Republic of China, Patent Law of the People's Republic of China, Anti-Unfair Competition Law of the People's Republic of China, Law of the People's Republic of China on the Protection of Consumer Rights and Interests* and relevant laws and regulations regarding health and safety, advertising, labelling and remedial measures for the products and services provided by the Group. In addition, according to the Group's internal document *Notice on Regulating the Group's External Propaganda Work*, China Shanshui Group has stipulated the external advertising content and advertising format to regulate external advertising work; the Group has developed the *Work System for Trademark Maintenance in Cement Market* and *Operation Regulation for Anti-Counterfeiting in Cement Market* to maintain the Group's brand image, and has zero tolerance towards counterfeiting, infringement and activities that damage the rights and interests of customers; the Group attaches importance to protect the privacy of the Group and its customers, and implemented a strict confidentiality policy on the personal data of customers. Moreover, all the subsidiaries on cement products and most commercial mixing stations of the Group have acquired the Certification of ISO 9001 Quality Management System, ISO 14001 Environmental Management System and OHSAS 18001 Occupational Health and Safety Management System. During the Reporting Period, the Group did not receive any complaints about the health and safety, advertising, labelling and privacy of products and services that had a significant impact on the Group's productions and operations.

5.3 Insist on Integrity

China Shanshui Group strictly abides by the *Anti-Money Laundering Law of the People's Republic of China* and *Criminal Law of the People's Republic of China* and other relevant laws and regulations, and highly values the employees' ethical principles and codes of conduct on the sense of honesty, trustworthiness and responsibility. The Group and its subsidiaries have formulated the *Regulation on the Integrity and Self-discipline of Leading Party Members of Shandong Shanshui Cement Group Company Limited, Regulations on the Work of disciplinary inspection and petition of Shandong Shanshui Cement Group Company Limited* and other relevant code of conduct, to thoroughly implement the responsibility system of clean government and further improve the anti-corruption system. In 2017, the Group held more than 30 integrity trainings and more than 2,000 participants took in these trainings. There were no major cases of corruption in the Group during the Reporting Period.



Case: The Group organized employees to study the *Regulation on the Integrity and Self-discipline of Leading Party Members of Shandong Shanshui Cement Group Company Limited* and watch warning education film

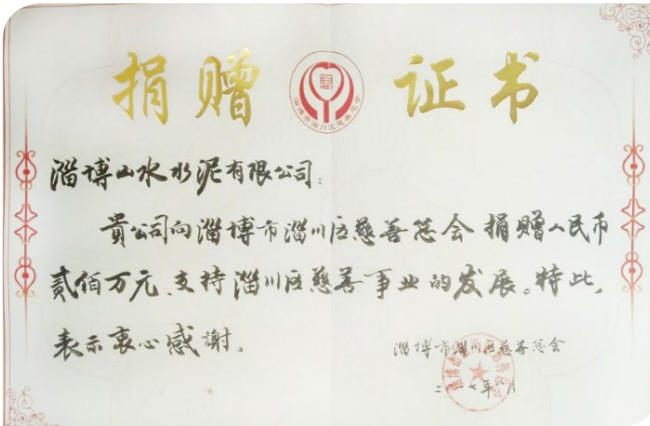




Community Contribution

China Shanshui Group actively participates in social welfare activities and devotes into corporate social responsibility. In accordance with the *Welfare Donations Law of the People's Republic of China*, *Company Law of the People's Republic of China* and other relevant laws and regulations, the Group has formulated the *Management Measures for External Donation and Sponsorship of China Shanshui Group (Provisional)* which further standardized the Group's external donation process, donation scale, donation scope, etc. to strengthen the management of the Group's external donation activities, so that to enhance the corporate image and better fulfill corporate social responsibility.

In 2017, the Group actively participated in social welfare activities and organized various types of donation activities to charities, educational institutions, and employees at the location of the business operation.



Social welfare activity 1: In 2017, Zibo Shanshui Cement Co., Ltd. ("Zibo Shanshui") donated RMB 2 million to Zichuan District Charitable General Union for charitable purpose



Social welfare activity 2: Zibo Shanshui donated RMB 1 million to the local Lingzi Town Central School to help the school improve the educational environment and purchase teaching hardware facilities



Social welfare activity 3: During the year from 2016 to 2017, Zibo Shanshui raised more than RMB 18 million to carry out heat recovery system transformation in the production line, which ensured winter heating supply in the 180,000 square meters area of surrounding schools and villages



Social welfare activity 4: In August 2017, Jinan Shi-ji Chuang-xin Cement Co., Ltd. ("Shi-ji Chuang-xin") donated a total of 230 tons of cement to Mengzhuang Village, with a total value of RMB 82,800, supporting the construction projects of cultural courtyard and cultural square at Mengzhuang village



Social welfare activity 5: In August 2017, Shi-ji Chuang-xin donated 150 tons of cement to Huangya Village, with a total value of RMB 54,000, helping Huangya Village's roads repairing works



Social welfare activity 6: In November 2017, Shi-ji Chuang-xin donated 130 tons of cement to Xiaoli Town, with a total value of RMB 53,300, helping poor households to renovate the dangerous houses



Social welfare activity 7: In 2017, Shandong Shanshui Cement Group Company Limited Shanghe Branch donated a total of RMB 8,000 to Yuhuangmiao Town. In addition, the company's professional and technical personnel formed a supporting group with the Yuhuangmiao Town government staff to help the Yuhuangmiao Guojia Village. The company's technical personnel replaced the aging power cords and old plugs in some households, and taught the electricity safety knowledge to the residents to ensure their safety when using electricity



Social welfare activity 8: In March 2017, Yingjisha Shanshui Cement Co., Ltd. ("Yingjisha Shanshui") held the "national unity" activity. The employees of the company visited 16 poor households in Yigeziya Town, donated more than RMB 2,000 of gifts, and paired helping relatives with more than 100 people in poor households



Social welfare activity 10: In response to the national strategy of "Targeted Poverty Alleviation" and to guarantee the living standard of the needy employees, in 2017, the Group completed the assistance of 156 needy employees and distributed more than RMB 300,000 as relief funds. In addition, the Group also distributed relief funds of more than RMB 150,000 to employees with severe illnesses, needy single mother employees, and needy college students, etc.



Social welfare activity 9: In May 2017, Yingjisha Shanshui installed 54 street lamps for some roads in Yingjisha County, with an investment of about RMB 500,000



7 HKEX Environmental, Social and Governance Reporting Guide Index

		"Comply or explain" Provisions	Disclosure Location
A Environment			
Aspect A1: Emission	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer		P04
	KPI A1.1	The types of emissions and respective emissions data.	P09
	KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P09
	KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Not applicable ⁹
	KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Not applicable ¹⁰
	KPI A1.5	Description of measures to mitigate emissions and results achieved.	P05
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	P07
Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc		P06
	KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	P09
	KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P09
	KPI A2.3	Description of energy use efficiency initiatives and results achieved.	P07
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	P07
	KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	P09
Aspect A3: The Environment and Natural Resources	General Disclosure Policies on minimising the issuer's significant impact on the environment and natural resources.		P08
	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P08

	"Comply or explain" Provisions	Disclosure Location
B Social		
Aspect B1: Employment	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, antidiscrimination, and other benefits and welfare.	P10
Aspect B2: Health and Safety	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	P12
Aspect B3: Development and Training	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	P14
Aspect B4: Labour Standards	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	P11
Aspect B5: Supply Chain Management	Policies on managing environmental and social risks of the supply chain.	P16
Aspect B6: Product Responsibility	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	P17
Aspect B7: Anti-corruption	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	P17
Aspect B8: Community Investment	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P18

Note:

9: The waste oil generated in the process of production is recycled for lubrication of production equipment, and the oil barrels are handled by qualified institutions, thus this KPI is not applicable.

10: The non-hazardous solid waste generated in the process of production are all recycled, thus this KPI is not applicable.



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