XIWANG SPECIAL STEEL COMPANY LIMITED
西王特鋼有限公司

(incorporated in Hong Kong with limited liability)

Stock Code: 1266

Environmental, Social And Governance Report 2019

CONTENTS

ABOUT THE COMPANY

Xiwang Special Steel Company Limited (the "**Company**") was founded in December 2003, as a controlled subsidiary of Xiwang Group Company Limited (the "**Xiwang Group**"). The Company was listed on the main board of the Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") in February 2012. In January 2014, it was accredited by the Ministry of Industry and Information Technology as a corporation that meets the industry standards. The annual steel smelting and rolling capacity of the Company's design are 3,300,000 tons and 3,000,000 tons respectively, and its major products include various high-quality steel rods and wires, such as high-quality carbon steel, structural alloy steel, pinion steel, spring steel and ball bearing steel, high-strength building materials, and various types of special steel ingots and forged bars for high-end uses.

The Company maintains its transformation strategy of "from general steel to special steel, then to steel products and to products for public use". It has cooperated with the Institute of Metal Research of Chinese Academy of Sciences to establish a clean and intelligent high-end special steel production demonstration line. The production facilities and processes are gradually becoming more stable and mature, and the steel production capacity is improving steadily. More than 80 types of high-end special steel products are placed in the market now and are highly recognized by high-end customers in the PRC and across Asia.

PROMOTION OF SOCIAL RESPONSIBILITY

The Company implements effective management of social responsibility. To carry out and drive forward the Company's social responsibility work, the Company has established a system for promoting social responsibility with management participation and coordination of various departments. This report contains information and data on the Company's environmental, social and governance performance during the period from 1 January 2019 to 31 December 2019 (the "**Report**"). This Report has been prepared in accordance with the "Environmental, Social and Governance Reporting Guide" in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange. This Report sets out the approach, strategy, priorities and objectives of the Company's management on environmental, social and governance (the "**ESG**") relating to its business, and measures and systems adopted by the Company to implement and monitor the ESG strategy. As the board of the Company (the "**Board**") is responsible for assessing and determining the Company's risks related to ESG, and ensuring that proper ESG risk management and internal control systems are in place, the Board, with the confirmation from the management, considers that the ESG risk management and internal control systems are effective. The Company values your feedback on its sustainable development. If you have any comments and suggestions for this Report and the Company's ESG performance, please feel free to send the Company your feedback to wangjianxiang@xiwang.com.cn.

ENGAGEMENT OF STAKEHOLDERS

The Company considers that stakeholders of the Company include government, shareholders and investors, employees, customers, suppliers, peers and industry associations. Expectations and opinions from the Company's stakeholders are important and valuable. The Company welcomes the participation of its stakeholders through different channels, such as publication of annual reports, official website, general meetings, training and seminars, feedback forms and industry conference. By engaging various stakeholders, the Company understands their expectations and concerns so as to facilitate the formulation of strategies for sustainable development.

HUMAN RESOURCES

I. Employment and Labor Standards

A. Employees

The Company upholds the business philosophy of "Health, Integrity, Hardship and Happiness", stresses on a people-oriented and harmonious development, and pays heed to maintaining and safeguarding employees' rights and interests. The Company abides by the employees' standards, providing them with a pleasant work environment, competitive salary and benefits and a reasonable promotion path, which nurture its healthy, pragmatic, innovative, hardworking and enterprising staff members.

The Company fully recognizes the importance of talents. In order to facilitate the transformation and advancement of its products, the Company specifically hires senior metallurgical technicians from large steel enterprises to set up product research and development teams and enhance its technological R&D capabilities. At the same time, the Company visits major colleges and universities to recruit talents in specific disciplines, such as metallurgical materials and metal machinery and adopts a college-enterprise cooperation model, which strengthens its foundation, broadens its market, upgrades the overall education levels of staff members, and provides quality human resources for further transformation and upgrade of the Company.

In order to nurture its own talents team, the Company constantly developed trainings for the improvement of foundation management, actively drove forward skills assessment of key technical positions, and finally assessed 151 assistant technicians for 2019 on the basis of the assessment in the previous year. The Company worked with the Institute of Metal Research of Chinese Academy of Sciences to carry out the Chinese Academy of Sciences – Xiwang Special Steel Master of Engineering Training Course, nurturing 11 post-graduates on-the-job. The Company selected its talents and built a talent pool with 4 levels, selecting 280 reserve talents and creating a team of reserve talents who are loyal, passionate, and innovative.

An effective salary incentive mechanism has been established to stabilize and retain the talents needed by the Company, allowing employees to share the profits from the development of the Company. In accordance with the relevant national and regional laws and regulations and the relevant management systems of the Company, a salary management mechanism based on job performance with various means of allocations was established to guarantee the realization of employees' value.

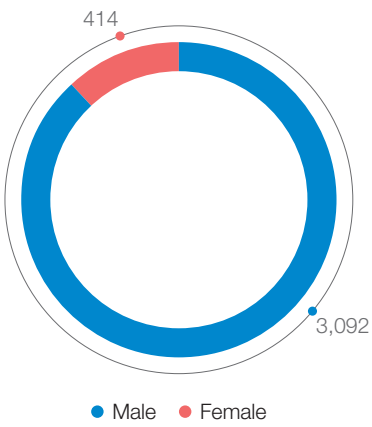
The Company takes "efficiency" as priority, and conducts assessments based on the profit margin etc. All employees contribute to the Company's profitability performance. The key performance indicators assessing the performance of production staff are the production volume, quality and safety of products, while that of other functional management departments are the individual key performance indicators, capabilities, behavior and attitudes. At the same time, salaries of all staff are linked to the operating profits of the Company so as to promote employees' awareness of increasing efficiency and creating income, sharing corporate profits and benefits.

In accordance with the principle of "openness, fairness, and impartiality", the Company has formulated "Regulations for Promotion of Junior Management Personnel". To select junior management personnel, comprehensive evaluation is conducted in various ways such as open position competition, equal competition, recommendation by seniors, and self-nomination. A clear and smooth promotion path is in place, which is subject to the supervision of all staff members and is incentive-oriented, to encourage career advancement.

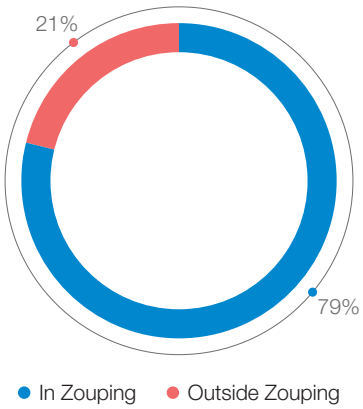
The Company strictly implements the "Labor Law of the People's Republic of China", the "Labor Contract Law of the People's Republic of China", the "Social Insurance Law of the People's Republic of China", the "Law of the People's Republic of China on the Protection of Rights and Interests of Women" and other national laws and regulations, and has established relevant measures, such as "Employees Recruitment Management System", "Remuneration Management System", "Employees Leave Management Measures", "Social Security Management System" and "Employment Contract Management Measures". The Company standardizes the process of recruitment, appointment, selection, assessment and leave-taking of employees through various management policies.

The Company strictly follows the requirements of relevant laws, regulations and policies on national and local social insurance by paying the social insurance contributions for all staff in full and on time to protect their rights and interests. As of 31 December 2019, the Company has a headcount of 3,506, including 160 management personnel and 494 technicians. In terms of education level, 1,116 employees are tertiary educated or above.

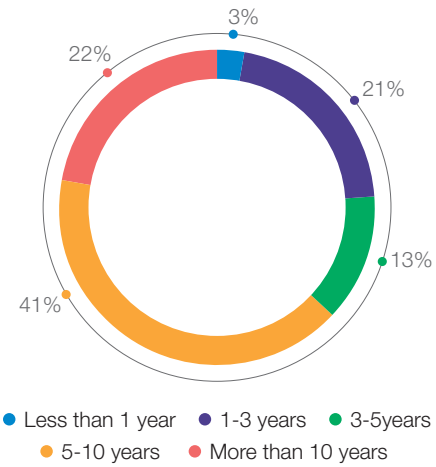
Gender of employees



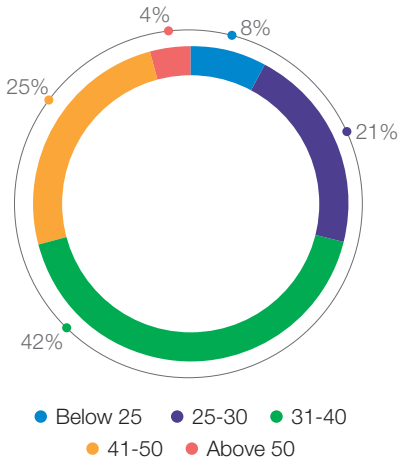
Birth place of employees



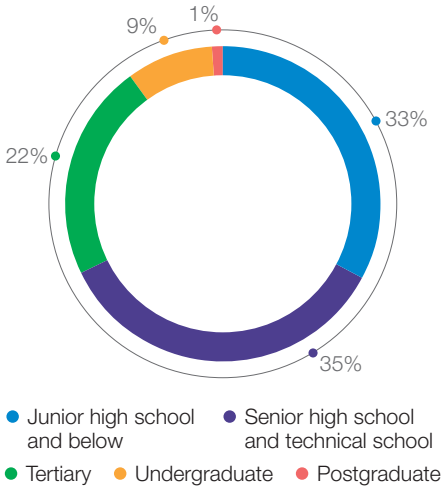
Length of service



Age of employees



Education level



As shown from the staff composition, the Company's staff tends to be younger, with higher education level, is engaged for a length of service of 3 years or above, possesses certain particular work experience, and boasts strong creativity and productivity.

Turnover rate

The staff turnover number and percentage in 2019:

	Number of employees	Percentage
Gender profile		
Male	103	89.56%
Female	12	10.44%
Age profile		
Below 35	68	59.13%
36-50	47	40.87%
Education level		
Below technical school	81	70.43%
Tertiary or above	34	29.57%
Length of service		
Less than 3 years	66	57.39%
3-5 years	38	33.04%
More than 5 years	11	9.57%
By district of domicile		
In Zouping	79	68.70%
Outside Zouping	36	31.30%
Total	115	100%

B. Health & Safety

In order to better manage occupational safety and health works, the Company strictly implements the Production Safety Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, the Fire Control Law of the People's Republic of China, the Regulations of Shandong Province on the Obligations of the Safety Production Main Body of Production and Operation Entities, Production Safety Regulations of Shandong Province and other national or local laws and regulations.

During the year of 2019, there were no incidents of large scale in safety production and there were no new cases of occupational illness. The occupational illness reporting rate, on-site detection and evaluation rate of occupational hazard factors and employees' occupational health checkup rate were 100%. A series of activities including risks rating control, examination and management of hidden hazards, safety emergency drills, safety education for all staff, monitoring and management of key hazards, contest on safety knowledge and activities on "learning about the procedures and avoiding three violations" were continuously held to manage and eliminate hidden hazards of production safety, which have achieved good results and provided strong back up for the realization of business objectives.

Comprehensive emergency drill for gas tanks

Promotion of Safety knowledge

To avoid the incidence of occupational illness, in terms of system, a sound occupational health and safety management system is in place, occupational health safety management system certification has been awarded, and secondary safety standardization review and dual prevention system assessment has been passed. In respect of the process, each staff member is regularly provided with a series of protective equipments including uniform, shoes, helmet, mask and gloves. At the same time, workshops are furnished with necessary emergency medicine. In respect of the prevention, the Company held an annual occupational health body check and regular training on occupational health to continuously enhance the self-protecting capability and safety awareness of staff members against occupational hazards.

The Safety Division of the Company has signed the "Responsibility Letter of Safe Production Objectives Management" which covers every aspect of operations and every staff members of the Company, in order to optimize the safe production accountability system and enhance the strength of implementation of responsibility, which are the keys to safety management. The Company further clarified the safe production obligations at various levels and strictly upheld the principle of "the head of a production unit is the first responsible person of safe production" to strengthen the safety obligation of personnel at different levels. The Company has guided and supervised various departments to continuously carry out safety production and occupational health examination according to their respective actual production situations. Safety inspection and supervision of production plants were conducted daily, with a total of 55 safety supervision orders issued and more than 1,250 hidden safety hazards rectified.

Employees Health and Safety Data Indicators	**2019**	2018
Number of trainees in safety production	**3,506**	4,198
Special training for all staff	**2,650**	2,790
Number of job-related deaths	**0**	0
Proportion of job-related deaths to total workforce (%)	**0**	0
Lost work days as a result of job-related injuries	**0**	0

C. Development & Training

Development and training is one of the key factors to the Company's success. In 2019, to satisfy the development needs of staff at various levels of the talent team, the Company constantly carried out trainings for the improvement of foundation management, actively drove forward skills assessment of key technical positions on the basis of 2018 review. In May and June 2019, "One Question Per Day" learning activity was carried out to consolidate the knowledge that the staff members should know and understand; in July, a learning question bank was formed and more than 660 employees were organized to take part in the elementary written test; in August, 509 employees applied for the position of assistant technician and 428 employees took part in the assistant technician written test; in September and October, employees who passed the written test were selected to attend the oral defense on the ratio of 1:1.5, and 151 assistant technicians for 2019 were finally selected and assessed. After two years' training for the improvement of foundation management, 292 assistant technicians, 1 technician and 9 professional technician leaders were assessed in total. The training goals that by the end of 2019, assistant technicians would account for 20% of key technical positions and technicians would account for 5% of key technical positions had been successfully achieved.

The learning spot of "One Question Per Day"

The presentation of appointment certificates of assistant technicians for key technical positions

On the basis of completing the assessment of key technician positions, the Company organized "Learning Course for Management", "Training Course for Group Leaders in Gold Class", "Training for CPC Membership Applicants" and so on to enhance its staff's management standard, operation capability, technical operation, manner and awareness as well as to improve the performance of the organization. In 2019, the Company organized training totaling 208 hours with 7,953 person-times receiving training in aggregate and 100% of completion rate.

Training	Training hours	Enrollment/competition status
Learning Course for Management	39 training hours	139 trainees graduated
Training Course for Group Leaders in Gold Class	32 training hours	58 trainees graduated
Training for CPC Membership Applicants	24 training hours	67 trainees graduated
Training for Key Positions	113 training hours	2,705 person-times
Total	208 training hours	264 persons per training class with 7,953 person-times

Launching "Learning Course for Management". The Company constantly promoted the construction of "Learning Organization", implemented the strategic deployment of "Producing Refined and Special Steel", and carried out 39 hours of learning course for management, in which the management team taught and communicated about the current management situation, thus effectively enhanced horizontal learning and communication in the organization as well as the judgement, decision-making, and appealing of the management team, contributing to the high-quality development of the Company.

With the goal of enhancing the management capability and skills of the group leaders in Base Class, the course "**Training Course for Group Leaders in Gold Class**" closely integrated with the actual demand of production management. The Company carefully selected economic and management courses and organized 32 hours of courses on management practice, quality management, safety knowledge, performance motivation, communication and so on for the students. The lecturers are all experienced in company management practice and the training course is easy to understand, which effectively facilitates the students to apply what they have learned into practice. During the year, 58 students successfully completed the course in total, who filled up various units and groups and thus enhanced the vitality of the enterprise.

"**Training for CPC Membership Applicants**" was carried out in two sessions, including group training and "One Lecture Per Month". Training was conducted by way of lecture, watching educational videos, voluntary labor and so on, which guides CPC Membership Applicants to correct their motives.

Trainees going out to explore

The Group Leader in Gold Class training and explaining on site

For training of new staff, the Company constantly carried out apprentice activities, encouraging outstanding staff to play a role in mentoring. During probation, one-to-one assistance was provided to new staff in terms of safety, skills, life, and other aspects. When becoming a regular employee, staff would be assessed in respect of their knowledge that should have been known and understood, practice skills, capability and attitude. During the year, 101 employees passed the assessment by way of mentor grading in teaching, which effectively improved the retention rate of new staff after being employed.

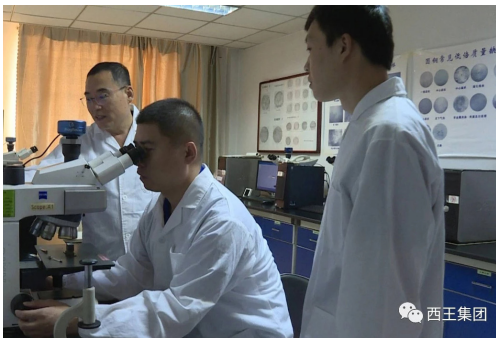
New staff orientation training

One mentor to one apprentice

For external training, the Company worked with the Institute of Metal Research of Chinese Academy of Sciences to carry out "Chinese Academy of Sciences – Xiwang Special Steel Master of Engineering Training Course", nurturing 11 post-graduates of master's degree on-the-job. At present, the training has come to the stage of the mid-term dissertation oral defense. The Company will continue to provide conditions and support to the institute for learning and research, encouraging the students to devote themselves to learning and research, as well as applying the learned knowledge into practice.

The independent training of talents of the Company also yields fruitful results. Zhang Lingtong, Director of Technology Center, was admitted by the University of Science and Technology Beijing with excellent results, and became the first targeted doctoral candidate nurtured by the Company. The Company strived to apply the research results to its production line, thus providing science and technology support for the high-quality development of the Company.

The mid-term dissertation oral defense of the on-the-job engineering master



Targeted doctoral candidates nurtured by the Company

In 2019, the relevant indicators of the participation in training of the Company's staff are as follow:

Categorized by staff gender

	Total person-times	Percentage	Average training hours per person
Female	832	10.46%	29 training hours
Male	7,121	89.54%	22 training hours

Categorized by staff type

	Total person-times	Percentage	Average training hours per person
Senior management	44	0.6%	39 training hours
Middle management	272	3.4%	41 training hours
Junior management	486	6.1%	58 training hours
Junior staff	7,151	89.9%	25 training hours

D. Labor Standards

All employees of the Company are located in China and there has been no breach of the Labor Law or any other applicable standards and regulations during their employment. Salary, overtime pay and benefits are based on local minimum (and maximum) standards. Employees are generally aged between 18 and 45, with special employees aged between 45 and 60. Any form of child labor or forced labor is forbidden in the Company. The Company adheres to an open, fair and impartial recruitment procedure on the principles of equal competition, merit-based selection and priority to internal candidates, which enables its human resources system to be more scientific and reasonable.

The Company implements an 8-hour working day system and its production frontline staffs are on 3 shifts. The Company strictly complies with the national statutory holidays and the day-off system stipulated by the Company in order to safeguard employees' proper working hours and rest days.

The Company adheres to equal employment policy and treats each staff member equally. Their nationality, race, gender, religion, age, sexual orientation, political affiliation and marital status will not affect their employment, compensation and promotion. An inclusive win-win work environment is created.

"The Law on Employment Contracts" is strictly complied with and employment contract is entered into with each staff member on their joining day. Contributions into basic pension insurance, basic medical insurance, unemployment insurance, injury insurance and maternity insurance are paid according to the laws. Financial gains of the Company are shared with the staff, contributing to harmonious labor relations.

For timely identification of problems in the Company, the Company conducts staff satisfaction survey or solicits constructive advice quarterly to provide its staff with a platform to participate in the management of the Company, which is conducive to identifying problems and making suggestions. A record of staff suggestions or advice will be kept in the departments concerned on a quarterly basis, corrective measures will be formulated by the departments within a week and the progress of the correction will be published thereafter.

II. Business Management

A. Supply chain management

The Company has adopted the "Procurement Management Procedure or Manual" in accordance with the Contract Law of the People's Republic of China, the Bidding Law of the People's Republic of China, the Special Equipment Safety Law of the People's Republic of China, the Regulations on the Safety Administration of Dangerous Chemicals and other laws and regulations, which specifies the criteria for selecting suppliers, including (1) A good track record in the industry, with financial statements available. Priority will be given to suppliers with continuous business with large steel factories; (2) Suppliers with solid financial strength. Registered capital ranking the top 10 in the industry is one of the conditions of priority inspection. (3) Suppliers recommended by other steel factories. The Company considers factors including credit standing, service quality and delivery time after consulting steel factories that the Company has close relationship with. Before making the final selection, the prospective supplier is asked to provide a sample for examination or trial to ensure the good quality of the parts supplied and the Company conducts site visit to the supplier to confirm its delivery capability, the soundness of quality assurance system and financial strength etc.

The e-commerce platform was constantly optimized. Suppliers meeting the Company's conditions are managed in a centralized manner by setting up a procurement and trading platform on which price inquiry, tender invitation and signing of procurement contract are conducted. Suppliers' services are tracked throughout the procurement process for monitoring and evaluation of the suppliers based on their financial strength, delivery capability, advance payment capability, quantity and quality of delivery, contract performance, after-sales service and business integrity. The evaluation results determine whether the prospective suppliers meet the entry requirements, according to which a "contract supplier register" is established. Suppliers not meeting the requirements will be disqualified. As at December 2019, there was a total of 14,765 suppliers, 30% of which are located in the same province as the Company and 70% in other provinces.

The Group continues to improve its supply chain management and quality of the supplier team. In order to ensure a stable production and to enhance cost effectiveness, the Company has established a communication system with suppliers and conducted benchmarking against outstanding enterprises in the industry. Supply-chain related environmental protection laws, quality management system requirements and industry entry standards formulated by the government and applicable to the Company are all incorporated into the Company's procedures for the entry and dynamic management of all its suppliers. The survival of the fittest principle is applied in the Company's selection of suppliers in order to prompt suppliers to enhance their compliance and competitiveness, which enables the Company to further prevent social and environmental risks relating to the supply chain.

B. Product Responsibility

1. Maintenance and Protection of Intellectual Property

The Company strictly complies with laws and regulations such as the "Trademark Law", the "Patent Law", the "Copyright Law", the "Law against Unfair Competition", the "Foreign Trade Law" and the "Intellectual Property Law". In the continuous pursuit of innovation and excellence, the Company restlessly enhances its development, use and protection of intellectual properties. The value of proprietary intellectual properties are fully leveraged when the Company expands markets at home and abroad and adjusts the industry structure, which effectively enhance the Company's core competitiveness. In 2019, the Company was granted the China Scientific and Technological Invention in the Machinery Industry First Award, the National Advanced Collective Entity in the Steel Industry, and so on. Up to now, the Company has acquired 18 scientific and technological innovations, passed 15 new appraisals for products and new technologies and applied for 120 invention and utility model patents, with 112 said patents granted. Utilizing the advantage that the "National Standard Special Steel R&D Workstation" was established in Xiwang Special Steel, the Company held and participated in 43 amendments of national standards and industry standards, which facilities the conversion of new products and new technology into productivity with standards and guides the transformation and upgrade of the steel industry with standards. The Company participated in 1 key national R&D project of the Ministry of Science and 1 national foundation fortification project of the Ministry of Industry and Information Technology, and undertook 2 major science and technology projects of Shandong Province and key R&D projects of Shandong Province, as well as 1 key R&D project of Binzhou City.


中国机械工业科学技术奖
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为表彰中国机械工业科学技术
奖获得者，特颁发此证书。

First Prize of the China Scientific and Technological Invention in the Machinery Industry


荣誉证书
授予：西王特钢有限公司技术研发中心
"全国钢铁工业先进集体"
称号
二〇一九年七月

The National Advanced Collective Entity in the Steel Industry

2. Quality Testing and Products Recall

As the Company attaches high importance to product quality, the Company has formulated and executed quality testing systems and relevant procedures for its products in accordance with the standards in the Product Quality Law of the People's Republic of China, the Standardization Law of the People's Republic of China, the Metrology Law of the People's Republic of China and its Rules for Implementation, the Law of the People's Republic of China on the Protection of Consumer Rights and Interests, the Regulations of the People's Republic of China on Certification and Accreditation and other laws and regulations. The Quality Test Center of the Company is certified by CNAS national laboratory, which demonstrates the accuracy and reliability of the test data. The Company stresses on the advanced certifications of management system and products system to strengthen its processes and systems. The certifications the Company obtained include ISO9000 Quality Management System, GJB Quality Management System, Armament Quality Management System, IATF16949 Quality Management System, general hot rolled steel bar products certification of MCC (Beijing) Metallurgical Product Certification Centre Co., Ltd（中國中冶（北京）冶金產品認證中心有限公司）, as well as LZ50 axle products certification and Supplier Qualification of CRRC Changchun Railway Vehicles Co., Ltd.（中車長春機車有限公司）. Information management system of the Company was built by Baosight Software of Baosteel Group. A dedicated quality management and testing system is embedded in the business management and control system which enables various functions including the applying of metallurgical specification and quality design to the process, automatic collection, transmission, determination, analysis of data and issuance of warranties and reports. Products are manufactured in the production process according to the metallurgical and product specifications in the information system and the standards established for each process. Those passing the appearance and performance indicators test will be automatically determined to be stored while the unqualified products will be subject to material blockade in the information system and be dealt with according to the "Unqualified Product Management System". No products sold or delivered has ever been recalled due to safety and health concerns so far.

National Laboratory Certificate

Quality Management System Certificate

IATF 16949 Certificate

3. Products and Customer Complaints

As the Company attaches great importance to customer complaints, it has formulated and strictly enforced the "Rules of Customer Service Management". In order to strictly manage customer information, since the launch of the Baoxin System（寶信系統）, all customer information in the directory has been uploaded to the system. The information of all new customers was added by the staff of the Information Department to safeguard confidentiality. The level of permission to access the Baoxiu System is assigned in accordance with the job duties. In case of any violation of the rules or loss or leakage of confidential information, the persons concerned will be dealt with seriously by their immediate superiors. The Company cares about the after-sales service and the feedback from customers on their use of products, and provides its customers with professional technical support. There have been no significant litigations or complaints arising from the product quality or services.

As the Company puts much emphasis on the prevention of legal risks relating to the advertisement and promotion of products and services, it strictly complies with the Advertising Law of the People's Republic of China, the Regulations on Control of Advertisement, the Implementation Rules for the Regulations on Control of Advertisement, the Anti-Unfair Competition Law of the People's Republic of China and other laws and regulations. As of the date of this Report, there were no significant litigations or complaints arising from the advertisement and promotion of products and services.

C. Anti-corruption

There were no cases of corruption, bribery, fraud, illegal fundraising, or money laundering in the Company this year. In order to strengthen the supervision of staff members and combat financial crimes, the Company has established the Inspection Office directly managed by the General Managers. Staff members can report by mail, telephone or face-to-face meetings on any violations of laws and regulations which is detrimental to the Company's interest, including any breach and dereliction of duty, abuse of power, fraud, money laundering and offering and acceptance of bribe as may be committed by various staff members of the Company. An online "Xiwang Forum" has also been established to allow the supervision of the Company by staff members' opinions online. In order to change the behavioral patterns of the management and to eliminate any corruption, the Company has introduced "Code of Ethics of the Management" and implemented five "Anti-corruption Declarations of the Management".

III. Society

A. Social Responsibility

As part of its commitment to social responsibility, the Company has assumed more social responsibilities and made further contributions to society while growing its business.

1. Environmental Protection

The Company adheres to the environmental protection philosophy of "saving energy and reducing consumption and waste, developing circular economy, and creating environmental-friendly Xiwang". The Company has strictly complied with the requirements of the "Environmental Protection Law of the People's Republic of China", "Law of the People's Republic of China on Prevention and Control of Air Pollution", "Law of the People's Republic of China on Prevention and Control of Water Pollution", "Law of the People's Republic of China on Prevention and Control of Soil Pollution", "Law of the People's Republic of China on Prevention and Control of Solid Waste Pollution", the "Emission Standards for Pollutants in the Steel Industry of Shandong Province" (DB 37/990-2013), the "Regional Comprehensive Emission Standards for Air Pollutants of Shandong Province" (DB 37/2376-2013), and the "Emission Standards for Air Pollutants in the Steel Industry" (DB 37/990-2019). The Company acted upon the "Complementation Plan for intensive Environmental Governance in the Steel Industry of Shandong Province" (Letter of Lu Environmental Office [2016] No. 159), the "Opinion on Promoting the Implementation of Ultra-low Emission in the Steel Industry" (HuanDaQi [2019] No.35), and other laws, regulations, standards and local norms on environmental protection. The Company faithfully fulfilled corporate social responsibility and actively tackled the pollution created in the production process. The Company's discharge volume of major pollutants is lower than the special emission limits under the current standards of the State and Shandong Province. The execution of environmental management has significantly improved, with significant improvement in the appearance of the factories. The Company continuously contributes to improving the air quality. The Company's emission levels of sulfur dioxide, nitrogen oxide and PM10 all meet the national standards and requirements and the total emission of pollutants has continued to decrease.

The Company adheres to the principle of "Environmental Protection is the First Priority in Corporate Development"(企業發展、環保先行), with the goal of improving environmental quality and creating a beautiful environment. The Company continued to increase investment in environmental protection and comprehensive environmental governance. A number of intensive environmental control measures have been implemented, including sealed and closed storage of all raw fuels, low temperature oxidation and SCR denitrification for smoke emission of sintering machine heads, wet desulfurization with lime and plaster desulfurization twin towers, electrostatic + wet electrostatic dust removal to remove particulates and de-whitening on smoke emission to achieve ultra-low emission of sintered flue gas and removal of white steam in sintering machine. Efficient Gore filter bags were used in other dust collectors for dust removal. Cast Iron field of Blast Furnace was fully closed. Dry dust removal method was used to recycle gas from both blast furnace and converter, which are equipped with recycling systems for sintering residue heat and cooling steam in converters. Through deepening the organized emission control, strengthening the unorganized emissions control and implementing clean transportation, sintering, ironmaking, steelmaking and other bulk material transportation all achieved an ultra-low emission level. As Xiwang Steel actively builds green factories, implements "Industrial Green Development Plan" (2016-2020)(工業綠色發展規劃(2016-2020年)) and "Green Manufacturing and Engineering Implementation Guide (2016-2020)", it was rated as a "Green Factory" (The Third Batch of Green Manufacturer List) by the Ministry of Industry and Information Technology.

The green area of the Company representing over 26% of its floor area

Ecological protection and green factory

2. Social Charity

With respect to charity work, the Company combines charity work with its business development strategies and spiritual development, and continuously enriches its development. The Company regularly conducts charitable donations of the staff and poverty alleviation activities for the underprivileged annually. Every year, the staff also supports communities with difficulties including the disaster-stricken people, the out-of-school children and employees with financial difficulties by organising the "Donation of One day's Salary" activity, in which staff members donate more than their one day's average salary. The atmosphere of charity is strong in the Company, with solidarity, harmony and mutual support between staff members. Open, equal, impartial and effective support is given to those with difficulties. Values of giving back to society, caring about charity, and sharing of social responsibility have been internalized in the "Code of Conduct" of the Company and have grown to become "self-initiated actions" of its staff members.

Staff in difficulty, Xiwang with love

Caring and Charitable donation to the community

In August 2019, under the influence of super typhoon Lekima, a number of places in Zouping City were affected by serious floodings, causing great damage and threat to people's lives and property. The militia of the Company took the initiative, rushed to the front-line of the disaster-stricken area, and fought non-stop for three days and nights to provide disaster relief. The Company helped evacuate the disaster victims and protect the victims' life and property, which was praised by the governments and people in various places. Meanwhile, the volunteer team of the Company also actively donated money and goods, and went to the disaster-stricken area to send food, water and so on to the disaster victims, helping them overcome the difficulty and dedicating love and care of the Company.

The militia of Xiwang fighting against disaster

The volunteer team of Xiwang

B. Caring for Employees

In order to enrich the spiritual lives of the management and staff members, motivate them to advance their careers and enhance cohesiveness of the Company, the Company cares about staff members in terms of physical and social environment.

In terms of physical environment, the Company provides a comfortable, bright, safe and healthy work environment, with amenities including dormitory, canteen, bathrooms, library, toilets, badminton and table tennis courts for employees to enjoy a safe, carefree and comfortable Xiwang Special Steel community.

Cozy and convenient staff dormitory

Safe and reassuring staff canteen

In terms of social environment, staff activities are regularly organized to promote exchanges, learning and growth of staff members, improve their physical and mental health, enrich their lives and inspire their creativity. Staff committee was established to organize regular meetings to listen to employees' opinions.

Enjoy the Lantern Festival with the non-local staff

Basketball competition between staff of the Company

ECOLOGICAL COMMUNITY

The Company adheres to the environmental protection philosophy of "saving energy and reducing consumption and waste, developing circular economy, and creating environmental-friendly Xiwang" to protect the environment and give back to society.

The Company strictly fulfills the requirements of the "Environmental Protection Law of the People's Republic of China", "Law of the People's Republic of China on Prevention and Control of Air Pollution", "Discharge Standard of Pollutants for the Steel Industry of Shandong Province" (DB 37/990-2013) and "Comprehensive Emission Standards for Regional Air Pollutants in Shandong Province" (DB 37/2376-2013) and implements the documents such as "Jingjinji Air Pollution Prevention and Control Enhancement Measures (2016-2017)" and the "Phase II Action Plan (2016-2017) of 2013-2020 Air Pollution Prevention and Control Plan of Shandong Province", the "Implementation Plan of Environmental Intensive Treatment of Steel and Iron Industry of Shandong Province" (Letter of Lu Environmental Office [2016] No. 159), "Opinion on Promoting the Implementation of Ultra-low Emissions in the Steel Industry" (HuanDaQi [2019] No. 35) and other laws and regulations, standards and local norms for environmental protection. The discharge volume of major pollutants is lower than the current standards of the State and Shandong Province.

1. Environmental protection performance

The Company strictly implements the philosophy of "Environmental Protection is the First Priority in Corporate Development" and continues to increase its investment in environmental protection and the relevant comprehensive control and management, with its efforts well recognized by the government and the community. The Company was honored with the title of "Green Factory" by the Ministry of Industry and Information Technology of the PRC and became an exemplary enterprise in terms of environment protection and governance in the industry. The company team won the national quiz competition on environmental protection in the steel industry. The Company successfully passed the review of ISO14001: 2015 environmental management system, ISO50001: 2011 Energy Management System and "Clean Production Review".

There were no major environmental and public pollution incidents in the Company. The safe use of radioactive sources and the disposal of hazardous wastes in compliance with regulations have eliminated environmental risks. The execution of environmental management has significantly improved, with significant improvement in the appearance of the factories; total emission of pollutants has continued to decrease and air quality has continued to improve, with the emission of dust at 0.42 kg/ton steel, sulfur dioxide at 0.1 kg/ton steel and nitrogen oxide at 0.37 kg/ton steel, which are far below the emission levels of dust at 0.6 kg/ton steel, sulfur dioxide at 0.8 kg/ton steel and nitrogen oxide at 1.2 kg as required by the "Implementation Plan of Environmental Intensive Treatment of Steel and Iron Industry of Shandong Province" (Letter of Lu Environmental Office [2016] No. 159), as shown in Table 1:

Table 1: Emission of pollutants per ton steel

2019

Type of pollutants	National emission standards (kg/ton steel)	Actual Emission of Xiwang Steel (kg/ton steel)	Reduction in emission (kg/ton steel)
Smoke dust	0.6	0.42	0.18
Sulfur dioxide	0.8	0.1	0.7
Nitrogen oxide	1.2	0.37	0.83

2. Sewage permit

The Company passed the review of Binzhou Environmental Protection Bureau（濱州市環保局）in November 2017 and was granted a sewage permit (certificate no.: 91371600670505049378001P). The Company's total air emission limits are 1,591 tons/year for particulates, 1,517 tons/year for sulfur dioxide, and 4,313 tons/year for nitrogen oxide.

3. Intensive environmental treatment projects

A. Environmental protection investment

Since 2013, the total investment of the Company amounted to approximately RMB1.43 billion, and has implemented a number of intensive environmental treatment projects, resulting in the actual emissions of pollutants in various processes being far below the national special emission limits. The current operation costs of environmental protection is RMB156.3 per ton steel.

B. Sintering process

To sinter the flue gas, the 360m^2 sintering machines of Xiwang Metal Science & Technology Company Limited*（西王金屬科技有限公司）have adopted technologies including heating SCR denitrification, desulfurization with lime and plaster desulfurization twin towers, high voltage double chamber and four electric field + wet electrostatic dust and particulates removal and de-whitening on smoke emission, to achieve an effective ultra-low emission with the "four in one" feature (i.e. desulfurization, denitrification, removal of particulates and flue gas whitening). The effect is satisfactory, and it fully fulfilled the ultra-low emission standards of the steel industry. The Company is the first steel enterprise in the province to simultaneously achieve ultra-low emission and de-whiten smoke emission in the steel industry.

Closed conveyors such as closed belts and corridors are used in the transportation of raw materials and fuel used in the sintering process and the transportation of ingredients, blends and finished products. Closed cover and dust removal facilities are equipped at the unloading and receiving points of conveyors while the existing dust removal facilities are upgraded to adopt the US Gore dust bags, which are currently of advanced international standards, for effective collection of smoke dust. The concentration of particulates is lower than 10mg/m^3.

Through deepening the organized emission control, strengthening the unorganized emissions control and implementing clean transportation, sintering, ironmaking and steelmaking and other bulk material transportation all achieved an ultra-low emission level, with concentration of pollutants emission stably lower than the national limit of air pollutant emission, as shown in Table 2.

Table 2:

2019

Production facilities	Type of pollutants	DB37/990-2013 Special Emission Limits under the Pollutants Emission Standard for the Steel Industry in Shandong Province (mg/m^3)	DB37/990-2019 Emission Standards for Pollutants in the Steel Industry of Shandong Province (implemented after 1 November 2020) (mg/m^3)	Concentration of pollutants emission (mg/m^3)
Sintering machine heads	Particulates	20	10	3.45
	Sulfur dioxide	100	35	19.1
	Nitrogen oxide	300	50	31.6
Sinter machine tails	Particulates	20	10	6.79

C. Ironmaking process

In the blast furnace ironmaking raw material system, a closed design is used for storage tanks, coke troughs, trough transport equipment, shakers under ore and coke trough, belt conveyors and discharge ports for returning ore and coke, and weighing equipment for furnace ore and coke. Top suction hoods are equipped for outlets of cast iron, tanks and nozzles. A covered or closed design is used for iron and slag trenches while cast iron field of blast furnace is completely closed and configured with particulates collection and treatment measures. Existing dust removal facilities are upgraded and transformed to adopt the US Gore dust bags, which are currently of advanced international standards, for effective collection of smoke dust. The particulates concentration is lower than 10mg/m^3, which ensures that the concentration of particulates emission is lower than the national limit of air pollutant emission. All emission values of the ironmaking process are lower than the national special emission limits, as shown in Table 3.

Table 3:

2019

Production facilities	Type of pollutants	GB28663-2012 Special Emission Limits under the Air Pollutants Emission Standard for Steel Sintering and Pellet Industries (mg/m^3)	DB37/990-2019 Emission Standards for Pollutants in the Steel Industry of Shandong Province (implemented after 1 November 2020) (mg/m^3)	Emission after intensive treatment (mg/m^3)
Feed Launder Dust Removal in Blast Furnace	Particulates	10	10	3.80
Cast Iron Dust Removal in Blast Furnace	Particulates	15	10	4.38

D. Steelmaking process

Dry-type electrostatic dust removal technology is used for primary flue gas of converters, and after the upgrade, the concentration of particulates is kept steadily below 50mg/m^3. The facilities for secondary dust removal of converters, dust removal of refining furnace and dust removal of electric furnace are upgraded and reconstructed to adopt the US Gore dust bags, which are currently of advanced international standards, for effective collection of smoke dust. The particulates concentration is lower than 10mg/m^3. Tertiary dust removal system of converter is constructed to eliminate the unorganized emission of smoke dust, and ensure there is no escape of factory smoke dust. The reconstruction of the feeding system for steel-making lime and light-burning dolomite effectively collects smoke dust, and as a result, all emissions of the steel-making process are lower than the national special emission limits. This ensures the concentration of particulates emission is lower than the relevant limit of air pollutant emission for the steel industry of Shandong Province (15mg/m^3) as shown in Table 4.

Table 4:

2019

Production facilities	Type of pollutant	GB28664-2012 Special Emission Limits under the Air Pollutants Emission Standard for Steel Sintering and Pellet Industries (mg/m^3)	DB37/990-2019 Emission Standards for Pollutants in the Steel Industry of Shandong Province (implemented after 1 November 2020) (mg/m^3)	Emission after intensive treatment (mg/m^3)
Primary dust removal of converter	Particulates	50	20	9.4
Secondary dust removal of converter	Particulates	15	10	2.57
Tertiary dust removal of converter	Particulates	15	10	4.4
Dust removal of electric furnace	Particulates	15	10	3.30
Dust removal of refining furnace	Particulates	15	10	2.85

E. Unorganized emission treatment

Closed treatment of raw materials. Various kinds of raw materials, such as iron ore concentrate, coal and coke powder, are all fully enclosed in the site, and the exit of the site is equipped with cleaning devices to clean the wheels and body of vehicles. Waste water generated from cleaning will be recycled after sedimentation. Ground and roads are hardened and the number of fixed sprinklers is increased, and wind and dust-proof nets are constructed.

Treatment of coke. Strategic partnership of coke supply was established and logistics management has been strengthened. Direct feeding of coke from the coking factory to the blast furnace feeding system has been achieved.

Treatment of iron ore. Production units are optimized to increase the direct proportion of sintering ingredients to iron ores. The amounts of sintering ore on the ground and secondary dust are reduced.

Cleaning of road surface. Five road sweepers, three water-spraying vehicles and one fog cannon dust-suppression vehicle were purchased for continuous cleaning, water spraying and dust suppressing on the road surface of factories to control road dust effectively.

Road vehicles management. Most of the vehicles and forklifts of the Company use the new energy LNG. Stagger shift of transport is strictly implemented during the warm season. The exits of the raw materials sites are equipped with vehicle cleaning devices.

F. Online monitoring

According to the "Implementation Plan of Intensive Environmental Treatment for the Steel Industry of Shandong Province" (Lu Environmental Office Letter [2016] No. 159), online monitoring devices of advanced national standards have been installed in 10 monitoring points, including flue gas at the heads of sintering machines, dust removal at the tail of the machines, dust removal from ore tank and blast furnace of iron site, secondary dust removal of converters and dust removal of electric furnace. The Company established an online network with provincial, municipal, and county environmental protection departments as required for 24/7 online monitoring of pollutants discharge.

G. Greening of factory area

To create a green and ecological landscape, the green area of the Company is currently more than 26%.

4. Comprehensive utilization of resources

A. Solid waste treatment

Treatment of slag of blast furnace. Slag produced during the ironmaking process of blast furnace is all grinded by mills to produce slag powder, which is used for industrial purpose such as construction.

Treatment of Steel Slag. Steel slag produced in the steel smelting process goes through a hot slag process. While magnetic filtered slag steel and steel granules are directly used for smelting again. Magnetic filtered steel slag is used for the production of slag powder, which is used as raw materials for sintering.

Recycling of Dust Ash. Dust ash containing iron is used again as raw materials for sintering. Pneumatic conveying and suction trucks are used in unloading and transport of dust ash to eliminate secondary dust pollution.

Disposal of Hazardous Wastes. The Company attaches high importance to the generation and disposal of hazardous wastes. All wastes produced were properly disposed of. For example, only companies with qualifications in handling hazardous wastes were engaged to handle hazardous wastes such as waste engine oil and oil drums produced in the production process of the Company. 29.42 tons of waste mineral oil were disposed of in compliance with the law in 2019, which were 0.0118 kg per ton steel.

Measures for reducing hazardous wastes include: (1) improving mineral oil quality to reduce consumption; (2) enhancing management to prevent dripping and seepage; and (3) increasing recycling of mineral oil.

Achievements of reducing hazardous wastes: The consumption of mineral oil has decreased. 29.42 tons of waste mineral oil were disposed of in compliance with the law in 2019 with a reduction of 20.76 tons of waste mineral oil compared with last year.

Disposal of Non-hazardous Wastes. A total of 974,200 tons of blast furnace slag were produced, which were 426 kg per ton iron; and a total of 399,400 tons of steel slag were produced, which were 160 kg per ton steel.

Measures for reducing non-hazardous wastes include: (1) improving quality of raw materials, such as quality of lime and overall grade of blast furnace feed; and (2) enhancing smelting standards.

Achievements of reducing non-hazardous wastes: The output of blast furnace slag and steel slag has decreased. At the same time, the blast furnace slag and steel slag produced by the Company were further processed as the powder for use as construction raw materials.

B. Water recycling

Processing, cascade recycling and cycle utilization rate of cooling water generated from processes and equipments of the Company are all ≥95%. Waste water produced in the production process is collected and processed in a centralized manner, and subsequently used for slag flushing in blast furnaces and dust reduction in raw material sites. Waste water generated in daily lives is collected and transported to water treatment plant of the Group. The treated waste water is in compliance with the "Comprehensive Discharge Standards for Water Pollutants in Xiaoqing River Drainage Area of Shandong Province" (DB37/656-2006) and its amendments. Water treated by the water treatment plant will be recycled to the Company for flushing slag in blast furnace and converters. Fresh water consumption was 1.95 tons per ton steel. In 2019, the Company did not encounter any issues about sourcing water that is fit for purpose.

C. Coal gas recycling

Coal gas from both blast furnace and converter is recycled using dry dust removal technology to improve gas recycling rate. Recycled coal gas from blast furnace and converter is used internally for dry-heating of hot metal tank, steel ladle and intermediate ladle, heating of billet in heating furnace for steel rolling, hot-blast furnace and fume furnace of the coal injection system, and lime production by calcination in limestone kiln, or externally supplied to power plants for power generation.

D. Comprehensive utilization of residue heat

The steam generated from residue heat in sintering, electric furnace, converters and furnace for steel rolling, etc. will be completely fed into the main steam pipeline of Xiwang Group, for the use of the corn processing. Low-quality residual heat from flushing slag of blast furnace and low-temperature flue gas will generate hot and cold water through the cooling and heating cogeneration project of the Company, which are used for production as well as heating in the office and the communities.

E. The consolidated electricity consumption in total was 391.5kWh/ton steel.

F. The oxygen consumption in the steelmaking process was 54.9 m^3/ton steel.

5. Reduce energy consumption and carbon emissions

The Company has established an energy management system and an energy management department which is responsible for the overall energy management of the Company and for implementing a three-tiered management system, namely "The Company-Energy Management Department-Production Plant" system.

High-performance, energy-efficient and environment-friendly technology and equipment are used in project construction. The Company aggressively develops a circular economy by combining the industrial features of intensive corn-processing business of Xiwang Group with that of the steel production industry, and achieved a comprehensive utilization of resources such as steam, water and gas to form a unique external and internal recycling system.

In terms of raw materials, the Company only uses high grade and low sulfur imported iron ore powder with low content of hazardous elements from Brazil and Australia, and a small amount of domestic iron ore powder in order to raise the quality of sinter and feed materials of blast furnace, to lower the water content of coke fed into blast furnace and to reduce energy consumption.

In terms of technologies, thick layers sintering, hot air sintering, mixture pre-heated by high-temperature steam, and steam generated by residue heat of smoke of sintering flue and ring cooler are applied to reduce energy consumption in the sintering process.

For blast furnace, the Company uses high furnace top pressure, high temperature, high injection of coal, high content in oxygen, use of residual heat from flushing water of blast furnace and BPRT technology to improve utilization rate of blast furnace gas and reduce energy consumption in blast furnace process. The use of one single tank of molten iron from start to finish in blast furnace increases the physical heat in converters. The system is optimized and smelting technologies with less slag are used to lower energy consumption in converters. Energy consumption is reduced by the use of technologies such as hot loading and hot conveyance of continuous casting billet, dual regenerative heating furnaces for steel rolling and recycling of water.

In 2019, the Company successfully passed the greenhouse gases inspection of Shandong Provincial Development and Reform Commission. The total greenhouse gas emission in 2019 is 4,503,636 tons carbon dioxide equivalent, corresponding to 1.799 tons of carbon dioxide equivalent emission per ton of steel. The Company strictly complies with the Interim Measures for the Administration of Carbon Emission Permit Trading (Order No. 17 of the National Development and Reform Commission of the People's Republic of China), the Notice of the General Office of the Ministry of Ecology and Environment on Exerting More Efforts in Formulation of the Carbon Emission Report and the Inspection and Emission Monitoring Plan (Letter of Climate of Environmental Office [2019] No.71) and other relevant regulations which control the carbon dioxide emissions.

In 2019, the Company was not involved in any issues about packaging materials used in finished products.

6. Formulate emergency plans for environmental pollution to ensure environmental safety

The Company attaches great importance to environmental safety. In order to prevent the occurrence of environmental pollution incidents, relevant technical personnel are joined together to look into the factors and production steps which are more prone to environmental pollution incidents in various production processes, to formulate more than 10 emergency rescue plans for environmental pollution according to factors identified and the features of production processes, such as "Emergency plans for environmental pollution incidents", "Emergency plans for radioactive sources", "Emergency plans for coal gas incidents", and "Emergency plans for special weather for production bodies", and to organize drills.

Adhering to the spirit of "Environmental Protection is the First Priority in Corporate Development" with the goal of improving environmental quality and creating a beautiful environment, the Company has actively responded to the stricter requirements of the new environmental protection law on steel companies and duly fulfilled its social responsibility.

ABOUT THE REPORT

The 2019 Environmental, Social and Governance Report of the Company sets out the principles adopted by Xiwang Special Steel Company Limited and its subsidiaries in 2019 in fulfilling social responsibility and the performance of the work, including the topics about sustainable development of economy, environment and society that may be of concerns of the important stakeholders.

BASIS OF COMPILATION

The Report is compiled based on "Environmental, Social and Governance Reporting Guide" in Appendix 27 to the Rules Governing the Listing of Securities on the Stock Exchange. The contents disclosed in the Report are in compliance with the disclosure requirements of "Comply or Explain" in the "Environmental, Social and Governance Reporting Guide" under Appendix 27 of the Listing Rules.

RANGE OF REPORTING

Range of coverage:	The Report is mainly about Xiwang Special Steel Company Limited and its subsidiaries.
Range of Data:	All data in the Report shall be collected from the Company, unless with special explanations.
Range of Period:	1 January 2019 to 31 December 2019.
Duration of Publication:	The Report is an annual report.

DESCRIPTION OF DATA

All data and cases are collected based on the original records and financial report about the actual operation of the Company and its subsidiaries.

The online version of the Report is published on the Stock Exchange's website (www.hkexnews.hk) and the Company's website (www.xiwangsteel.com).

XIWANG SPECIAL STEEL COMPANY LIMITED

西王特鋼有限公司