



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

(incorporated in Hong Kong with limited liability)

Stock Code : 1266



2016

ENVIRONMENTAL, SOCIAL AND
GOVERNANCE REPORT



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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 in the main board of the Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) in February 2012, and is the only Hong Kong listed steel company in the Shandong Province. It was accredited by the Ministry of Industry and Information Technology as a corporate that meets the industry standards in January 2014. The Company’s designed annual steel smelting and rolling capacity are respectively 3,300,000 tons and 3,000,000 tons, major products include high-quality carbon steel, structural alloy steel, pinion steel, spring steel and ball bearing steel and various high-quality steel rods and wires, high-strength building materials, special steel ingots and forged bars and etc, for high-end uses.

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

PROMOTION OF SOCIAL RESPONSIBILITY

The Company implements effective management of social responsibility. During its work, the Company has established a system for promoting social responsibility in which management is involved and various departments coordinate in order to guarantee the implementation and advance of social responsibility tasks. This report is the first environmental, social and governance report (“the **Report**”) of the Company. It contains information and data on Company’s environmental, social and governance performance during the period from 1 January 2016 to 31 December 2016. 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 of Hong Kong Limited. 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 risk related to ESG, and ensuring that proper ESG risk management and internal control systems are in place, the Board, with confirmation from the management, considers that the ESG risk management and internal control systems are effective.

We value your feedback on our sustainable development. If you have any comments and suggestions for this Report and our economic, environmental and social performance, please feel free to send us your feedback to wangchao@xiwang.com.cn.

ENGAGEMENT OF STAKEHOLDERS

The Company considers that stakeholders of the Company include government, shareholders and investors, employees, customers, suppliers, peer and industry associations. Expectations and opinions from our stakeholders are important and valuable. The Company engages its stakeholders through utilizing different channels, such as, publication of annual reports, official website, general meetings, training and seminars, feedback forms and industry conference. Through stakeholders engagement, the Company understands the expectations and concerns from stakeholders so as to facilitate the formulation of strategies for sustainable development.



HUMAN RESOURCES

I. Employment and Labor Standards

A. Employees

The Company believes in the business philosophy of “Health, Integrity, Sense of Crisis and Happiness”, and it respects people and values the staff as its most valuable assets. The code of conduct of the Company for employees is strictly complied with. The pleasant work environment, competitive package of salary and benefits and a favourable career path together create a healthy, reliable, innovative, hardworking and ambitious character of Xiwang Group.

A performance-based compensation system combining various forms of distribution has been designed in accordance with national and local laws and regulations and internal rules and policies, with a view to attracting, recruiting and retaining the most talented people needed by the Company’s business, allowing employees to benefit from the continuous growth of the Company, bringing into full play the effect of incentives, realizing the strategic goal of the Company and helping employees attain self-fulfillment.

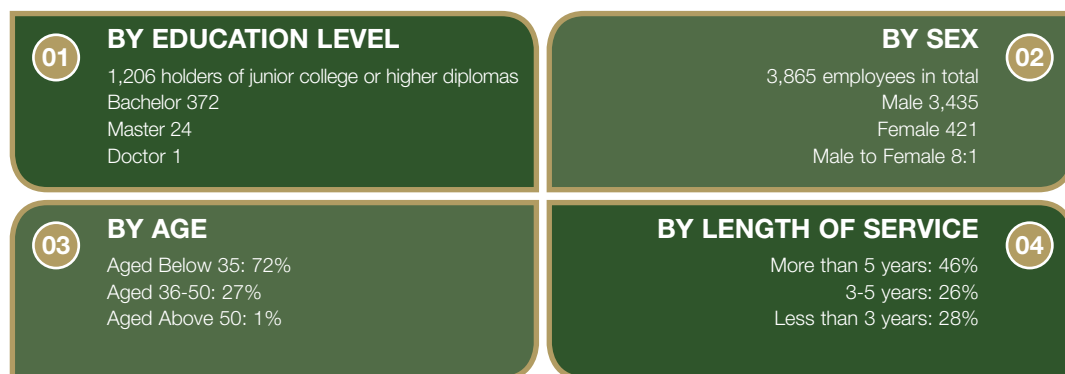
Business management is profit-oriented and performance assessment of the staff is, inter alia, mainly based on profit. Performance-based pay applies to every staff member. The performance-based pay of production personnel is determined by output, quality and safety, which are the key performance indicators (the “KPI”), while that of other production management and management functions are determined by individual KPIs, such as, competency, behavior and attitude. A proper performance communication and feedback mechanism are put in place to give employees’ feedback on performance rating and comparison of information, advising and assisting them on improvement and also motivating them to keep learning, managing themselves and working hard for a great career.

The Company observes national laws and regulations of the PRC strictly and has formulated “Employee Recruitment Management Rules”, “Compensation Management Rules”, “Employee Leave Management Measures”, “Employee Resignation Management Rules” and “Employment Contract Management Measures”. The Company manages, through these rules and measures, the recruitment, appointment, performance assessment, incentives and constraints, break and leave of employees and work hours, etc, at the same time, the Company establishes structures and policies to ensure its compensation and dismissal mechanism is reasonable and in compliance with applicable laws and regulations. Regular review are conducted by our management to ensure such rules and measures are closely followed and they are in line with the industry norms and meeting the regulatory requirements.

The Company pays social security contributions for the staff in full and timely as per national and local social security laws, regulations and policies.



The Company has a headcount of 3,865 persons as of December 2016, including 131 managers and 499 technicians, and there are 1,206 holders of junior college or higher diplomas.



The staff mix shows that the majority of the workforce of the Company is young, creative and productive.

The monthly average turnover rate in 2016 was 0.7%, with 332 resignations in total. A breakdown of these resignations by sex, age, education level, length of service and domicile is provided as follows.

	Total Resignations	Annual Turnover Rate
Sex		
Male	308	7.8%
Female	24	0.6%
Age		
Below 35	271	6.9%
36-45	54	1.3%
Above 46	7	0.1%
Education Level		
Below polytechnic school	233	5.9%
Junior college or above	99	2.5%
Length of Service		
Less than 3 years	136	3.4%
3-5 years	108	2.7%
More than 5 years	88	2.2%
Domicile		
In Zouping County	222	5.6%
Outside Zouping County	110	2.8%
Total	332	8.4%

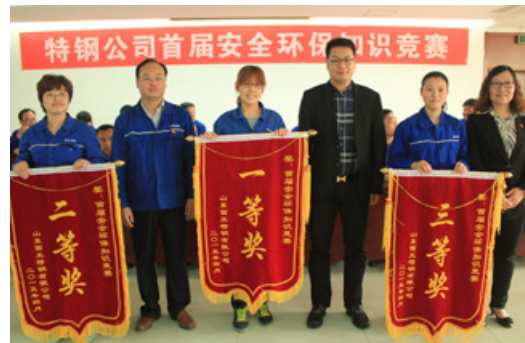


B. Health and Safety

The Company reported no incidence of production accident of materiality or new case of any occupational disease in 2016. The occupational disease awareness rate, the detection and evaluation rate and the employee health checkup rate were all marked positively at 100%. A raft of activities were organized to mitigate and eliminate hidden hazards and all production safety efforts were paid off and supported the realization of business goals, including hidden hazard identification and control, safety emergency response drill, employee safety education, close monitoring and management of key hazards and safety knowledge contest.



Safety Emergency Response Drill



Safety and Environment Knowledge Contest

The Company provides annual onsite checkup to protect the staff from occupational diseases and hazards. A sound occupational health and safety management system has been put in place. The Company passed OHSAS18000 certification since 2005. In terms of processes, every staff member is provided with a set of personal protective equipment (at work where appropriate), including uniform, shoes, helmet, mask and gloves, on a regular basis. Every workshop is furnished with necessary emergency kits. In terms of prevention, the staff receives regular occupational health trainings, to better protect themselves from occupational hazards.

The Safety and Environment Division of the Company has led the signing of “Safe Production Management by Objectives Commitment” that covers every aspect of operations and every staff member of the Company, in order to optimize the safe production accountability system, enforce responsibility, and highlight the importance of responsibility, hazard analysis and elimination of hidden hazards in safety management. By emphasizing the principle that the head of a production entity has the primary responsibility for safe production, the accountability of production entities for work safety has been further heightened. All plants have been designated to carry out 1800-plus safety examinations and address 2300-odd hidden troubles in compliance with the applicable laws and regulations.

Staff health and safety data are set out as follows:

Indicator	2016	2015
Participants in safe production trainings	32,400	30,432
Training of the staff		
Special training	20,090	17,144
Casualty arising from work	0	0
Casualty arising from work as a percentage of the headcount (%)	0	0
Lost work days as a result of work-related injury	495	945



C. Development and Training

Development and training for employees are key to the Company's success and have always been the Company's priority. Hence, we shall spare no effort and cost to create training opportunities for the staff, expand their career ladder and foster mutual growth of the staff and the Company.

The Company, by working with Jucheng Corporation, provided 70-plus external workshops to the staff, which has helped open up their minds and keep abreast with the latest management models; the Staff Learning System of Jucheng has been introduced and a learning system inclusive of the management team has been built. Every management team member has been assigned an online learning account, to meet their needs for development and to equip them with relevant skill sets for discharging their duties at work.

The Company has put together an in-house training team of 58 trainers. A set of incentives have been unveiled to motivate these trainers. The team is growing well and has become an integral part of the Company's training commitment. Meanwhile, the old-fashioned non-interactive lecture method of teaching has been changed totally. Brainstorming, group discussion, case study, role play and achievements sharing, among other new approaches, have been adopted and real world experience has been combined with practical training methods to make training more effective, create a company-wide passionate atmosphere of training and push forward all training programs.

The Company has attached great importance to training demand survey and has done survey thoroughly to avoid uninformed programs, to make trainings more relevant and train employees on things exactly they want to know. A Staff Forum has been launched by the human resources department at Xiwang Group and its subsidiaries. Xiwang Group takes charge of theoretical knowledge trainings, while branches organize hands-on knowledge trainings. In this way, theories and hands-on knowledge are combined to enable the staff to try and actually apply what they have learned. The content of training programs and the line-up of trainers have been well thought out to assure scientific arrangement, meaningful content and varied forms. At the same time, trainings cover production, logistics, finance, safety, quality and measurement management, among other functions, and 180 classes are put on the curriculum schedule. Three sessions of junior management workshop were completed successfully and 210 trainees, including shift leaders, workshop leaders and vice factory managers, attended 36 classes. These trainings prove to be highly fruitful.

To energize and galvanize the management team, enrich their experience, enhance their qualities and capacities and improve their efficiency, Management Rotation System has been designed to rotate management team members that have been in service for 3 to 5 years, develop their versatile skill set and boost the growth of the Company.



A breakdown of trainings by trainee category provided in 2016 is presented as follows:

Category	As a Percentage of the Headcount	Hours on Average (Per Annum Per Head)
Senior management	1%	30
Middle management	7%	96
Junior management	12%	216
Employees	80%	348



e-Learning platform powered by Jucheng



Leaderless group discussion



Prospective leader workshop



Graduation ceremony for the grassroots leader workshop



D. Labor Standards

All employees of the Company are domiciled in China. No breach of the Labor Law or any other applicable standards or regulations occurred in 2016. Salaries, overtime pays and benefits are all paid as per local minimum (maximum) pay standards. Employees are generally aged between 18 and 50, but manual workers (such as cleaners/loaders/unloaders) are between 50 and 60. The Company's recruitment process assures that no child and forced labor is used in any form or by any means. Employees are hired in a fair, open and impartial manner, on the basis of competition on equal footing, the fittest win, and internal candidates are generally considered prior to external candidates. The human resources system of the Company is becoming more and more scientific and appropriately designed.

The Company follows an anti-discrimination employment, diversity, and equal opportunity policy in compliance with the laws and regulations applicable to the Company. Every staff member is treated equally, free from any form of discrimination against nationality, race, sex, religion, age, sexual orientation, political party and marital status, among other social identity factors, when it comes to employment, compensation and promotion. An inclusive win-win work environment is created and valued. Compliance with the "Law on Employment Contracts" is highly respected. An employment contract is signed with every staff member within one month after they join the Company. Also, all employees are covered by basic pension insurance, health insurance, unemployment insurance, employment injury insurance and maternity insurance and share the achievements of the Company. This would contribute to harmonious employer-employee relations.

The Company carries out an employee satisfaction survey or a solicitation for rationalization advice on a quarterly basis. This gives the staff an opportunity to get involved in the Company's management, discover problems and give suggestion, so as to identify complaints or problems as early as possible and eradicate unfairness and malpractices existing in the Company. Those suggestions or comments received from the staff are collected on a quarterly basis and sent to those departments concerned. The latter is required to take actions and disclose what adjustment they have made within a week.



II. Business Management

A. Supply Chain Management

The Company has developed Procurement Management Procedure or Manual". In the manual, criteria that qualify a supplier are clearly defined: (1) The supplier must have a good track record and make available financial statements as status proof. A standing supplier of some large steel mill is preferred; (2) The supplier must be financially sound and those that rank one of the top 10 in terms of registered capital in the industry is preferred; (3) A supplier recommended by other steel mill is worth considering, after consulting and considering the reference of the credit standing, service quality, compliance with laws and regulations and delivery term of the prospective supplier, among other factors that are relevant to make an informed choice to minimize the environmental and social risks of the supply chain. Before finalizing, the prospective supplier is asked to provide a sample for testing or trial, for quality assurance of the part supplied; then a field survey of the supplier is carried out to confirm its supply capacity, the availability of a robust quality assurance system and financial soundness, among other things that may be relevant. In addition, our steel purchase agreement entered into with suppliers also contain provisions in relation to safety management and environmental protection.

Qualified suppliers are managed in a centralized manner using the procurement and trading platform. Inquiry, bid and contract signing are all processed on the trading platform. Suppliers' services are traceable throughout the process and their performance is monitored and assessed. The content of performance assessment may include suppliers' capital adequacy, delivery capability, credit terms, quantity, quality, contract execution, aftersales services, environmental protection and creditworthiness. As per the results of assessment, it is determined whether a supplier is qualified to remain admission into the contract supplier catalogue. Any supplier that is finally disqualified shall be removed from the catalogue. At the end of 2016, the Company had a total of 8,522 suppliers, 40% of which is located in the same province as the Company and 60% in other provinces.

B. Product Responsibility

1. *Maintenance and Protection of Intellectual Properties*

The Company strictly adheres to the "Trademark Law", the "Patent Law", the "Copyright Law", the "Law Against Unfair Competition", the "Foreign Trade Law" and the "Intellectual Property Law" of the PRC and so forth. The Company pursues innovation and excellence consistently, redoubles efforts on the development, use and protection of intellectual properties, brings into play its proprietary intellectual properties in its foray into the domestic or international market and restructuring of the industry mix, and builds up its core competence. A good management and protection of the Company's intellectual properties would enhance the advertising and promoting of its products and future marketing strategy in compliance with laws and regulations applicable to the Company.



2. *Quality Test and Recall of Products*

The importance of product quality cannot be overemphasized. As one of the major steel suppliers in the PRC, the Company adopts policies on managing quality control in order to minimise the social and environmental risks relating to the products supplied. The Company has developed and implemented product quality test rules and procedures and acquired certifications for Quality Management System, GJB Quality Management System, Armament Quality Management System, as well as general hot rolled bar certification by MCC (Beijing) Metallurgical Product Certification Centre Co., Ltd, reinforced bar for use in steel concrete certification by Korea-based KS and Japan-based JIS. The Quality Test Center of the Company is CNAS certified and able to produce accurate and reliable test data. All products are manufactured up to the internal control standards which are set higher than national standards. Only those products that measure up to the appearance, safety and performance indicators can be put into the warehouse, while any sub-standard product would be disposed of according to “Sub-standard Product Management Rules”. Products would then go through final check for compliance with national standards at the time of delivery, and defective products would be recalled. As of the date of this report, there has been no single incidence of recall of any product sold or delivered for safety and health concerns.

3. *Products and Customer Complaints*

Customer complaints are always taken seriously. The Company has laid down and strictly acted on “Customer Service Management Rules”. The sales department is required to complete the “Corporate Customer Directory” honestly and update the customer directory and customer profiles timely, so as to keep complete and proper customer records. The “Corporate Customer Directory” is maintained and managed by a designated employee and is confidential to the Company. Access to the customer directory without sales manager’s authorization is prohibited. In case of any breach of the rules, loss or divulgence, the person being found guilty shall be punished and his or her direct leader shall be severally held liable. The Company has a strong commitment to after-sales services, obtaining feedback from customers and providing customers with high-standard technical support. No lawsuit or complaint of materiality arises from product quality or service issues in 2016.

C. Anti-corruption

In order to tighten supervision over employees and combat financial crimes, the Company has formed the economic affairs discipline office reporting to the general manager directly. Any employee may report any breach of laws and rules, including dereliction of duty, money laundering, extortion, fraud and misconduct, abuse of power for personal gains or taking or offering bribe, committed by any other member of the Company to the detriment of the Company’s interests by mail, telephone or face to face, among other means. Meanwhile, the Company has launched the “Xiwang Forum” which serves as an online watchdog by employees. The Company has also unveiled “Leadership Code of Ethics” and imposed five “Leadership Anti-corruption Statements”, in order to change leadership style and completely eradicate corruption. No litigation involving corruption, bribery, fraud, illegal fund-raising or money-laundering, among other things, against the Company occurred in 2016.



III. Society

A. Corporate Social Responsibility

As part of our ongoing commitment to corporate social responsibility, the Company has assumed more and more social responsibilities and provided more services and contributions to the society while growing its business.

With respect to environmental protection, the Company intensifies resource saving and environmental protection efforts, discharges its energy saving and emission reduction responsibility diligently, develops the cyclic economy, implements clean production, maximizes energy efficiency and drives economic growth without putting the ecological environment at stake.

With respect to charity, the Company combines charity with its business development strategy and spiritual civilization development, and builds up its inner strength consistently. The Company organizes donations and poverty relief initiatives every year. Every year, donations are made to disaster-hit people, dropouts, disadvantaged employees and so forth. The Benevolence Day event is run lawfully and donations by the staff have exceeded one-day's pay on average.

Philanthropism spreads positively in the Company. The staff of the Company are solidaric and willing to help each other and have a bond of common interest. Aids are extended to disadvantaged employees in an open, equal, impartial and effective manner. Showing goodness, paying back the society, being willing to give and share social responsibility, these values have been instilled into the staff and become their spontaneous act.



Organized Benevolence Day event to express love and care to the supporting people in disaster areas



Visiting workers under difficulties to share the warmth from the Company



B. Care for Employees

The Company shows increasing care for employees in terms of both “hardware” and “software”, by enriching the cultural pastimes of the management and the staff, stimulating their passion for their career and making the Company more united and efficient.

In terms of hardware, the Company makes available a comfortable, well-lit, safe and healthy work environment, and a lot of amenities, including dormitory, canteen, bathroom, library, clinic, badminton and Ping-Pong facilities for the employees, in order to build a safe, carefree and comfortable Xiwang Group community.



Clinic to safeguard the health of the staff



Library to provide a better learning environment for staff



A tradition of morning exercise promotes good team work



Badminton court is a ground for employees to play a match and establish a rapport.



In terms of software, group and sport activities are organized frequently to boost communication, teamwork learning and growth of the staff, relieve them of stress, vitalize their life and stimulate their creativity.



Fantastic Youth, Wonderful Special Steel Vocal Concert



Field Trip in Autumn of Reporters



Celebrate Mid-autumn Festival



Morning Exercise "Unrivalled Wheel"



SAFETY AND ENVIRONMENTAL PROTECTION

As a member of the society, the Company cares about the environment protection and regards it as a way to protect its community and itself. The Company makes efforts to relieve the adverse impact of its operation over environment, and tries to influence and encourage other enterprises and individuals to take part in the environment protection, thus promoting sustainable development with reference to local laws and regulations.

In its day-to-day environmental protection efforts, the Company strictly adheres to the “Environmental Protection Law” of the PRC, the “Air Pollution Prevention and Control Law” of the PRC, “Shandong Provincial Emission Standards for Pollutants of the Steel Industry (DB 37/990-2013)”, “Shandong Provincial Comprehensive Emission Standards for Regional Air Pollutants (DB 37/2376-2013)” and other applicable laws, regulations, standards and local specifications relating to environmental protection. Unit emissions of main pollutants by the Company are all below national and Shandong provincial standards currently in force in 2016.

I. Emissions

A. Dust Control

1) *Organized Dust Control*

The Company has to date put into use 44 bag dust collectors, 2 sets of electric bag dust collectors, 4 electric dust collectors, 1 set of sintering flue gas wet electric dust collector and a number of gravity dust collectors, among other dust-proof facilities.

Key sources of pollution, including sinter feed, screening, desulfuration, transfer point, blast furnace cast house, hot metal pouring converter and hot metal ladle storage, have been optimized and reengineered to attain the emission reduction target.

2) *Unorganized Dust Control*

To manage and contain unorganized emissions, dust raised in transportation and unexpected emissions, raw materials store yards have been contained and rebuilt, added with regular water spray. Closed coke silo has been built. Coal injection from closed silo applies to blast furnace. Sinter fuel is fed through closed belt conveyor, to rule out the possibility of floating, spillage and leakage. Coke supply strategic partnership has been forged to strengthen logistics management and realize direct feed into the feeding system of blast furnace all the way from coke plants. Production organization has been optimized to minimize the loading of agglomerate and reduce secondary dust pollution.

3) *Operation of Environmental Protection Facilities*

Environmental protection facilities are properly operated, maintained and managed to overhaul and run environmental protection facilities and main production machinery in parallel, and maximize the emission reduction capacity of environmental protection facilities. State-of-art online flue gas monitoring equipment has been installed, and is interconnected to the network of county, municipal and provincial environment agencies, subject to 24-hour supervision by the public.



B. Sulfur Dioxide Control in Sintering Process

- 1) The Company applies lime-gypsum wet desulfurization to desulfurize flue gas emitted by the sintering machine head. This approach can effectively reduce the emission of sulfur dioxide from agglomerate and boasts a comprehensive desulfurization rate of higher than 93%. The sulfur dioxide effluent concentration fully meets the emission limit prescribed under the national and Shandong provincial “Emission Standards for Pollutants of the Steel Industry”.
- 2) Advanced pollution control processes have been introduced and appropriate nitrogen oxides removal technologies have been developed. Simultaneous multi-pollutants removal by bioactive molecule (ozone) is applied to denitrate flue gas emitted by the sintering machine head. At present, the nitrogen oxides effluent concentration (between 190 and 230 mg per m³) is kept below the emission limit of 300 mg per m³ as prescribed under the national and Shandong provincial “Emission Standards for Pollutants of the Steel Industry”.

C. Waste Water Treatment

The Company has always been and will be compliant with national laws and regulations relating to waste water treatment. Its water consumption per ton of steel is 2.3 m³, which is among one of the most optimistic utilization in the country. Main waste water treatment and recycling measures include:

- 1) Process cooling water and equipment cooling water used internally are all properly treated and recycled in a cascade manner by using separation and purification of waste water by rare earth magnetic disk, disc type oil remover and magnetic press dehydrator, among other technical processes and devices. The resulting recycling rate is estimated $\geq 95\%$.
- 2) Production waste water is collected and treated in a centralized manner and all processed water is then used in blast furnace washing and raw materials store yard spray to reduce dust.
- 3) Life sewage is collected and conveyed to Xiwang Group Sewage Treatment Plant (Figure 1). The processed water features COD 30-50 mg/l and ammonia nitrogen below 3 mg/l, being kept below COD 60 mg/l and ammonia nitrogen 10 mg/l specified in “Shandong Provincial Comprehensive Emission Standards for Water Pollutants in Xiaoqing River Drainage Area (DB37/656-2006)”. Reclaimed water is then used in blast furnace washing and converter steel slag hot stew, among other purposes.



Figure 1 – Xiwang Group Sewage Treatment Plant



D. Solid Waste Treatment

1) *Steel Slag Management*

Steel slag produced in steel smelting goes through a hot stew device, to increase metal reclamation. Magnetic filtered steel slag and steel particles go back to smelting directly. Steel slag fines are used as sintering raw materials, to reduce solid waste and secondary dust pollution.

2) *Recycling of Dust*

Dust containing iron arising from production (Figure 2) is reclaimed to sintering completely, as raw materials. Suction trucks are used to unload and transport dust, to eliminate secondary dust pollution.

3) *Disposal of Hazardous Wastes*

The Company pays much attention to the generation and disposal of hazardous wastes. All wastes produced in 2016 were disposed of properly. Waste engine oil and oil drums of the Company, for example, were all delivered to qualified operators for disposal.



Figure 2 – Feed Launder Dust Removal System in Blast Furnace



II. Comprehensive Utilization of Resources

A. Energy Saving

The Company aims to reduce energy and resource consumption and cut pollutant emission, by the following methods:

- 1) The Company has built an energy management system and formed an energy management department, which is responsible for comprehensive energy management. A three-tiered management system, “Company-Energy Management-Plants” is being implemented.
- 2) High-performance, energy-efficient and environment-friendly processes and equipment are preferred in project implementation. The Company develops cyclic economy by combining the corn deep processing business of Xiwang Group with steel production, and exploring comprehensive utilization of steam, water and gas, among other resources. A unique external and internal recycling system has come into place. In 2015, the Company was named “Shandong Cyclic Economy Model Unit”.
- 3) In terms of raw materials, iron ore fines of high grade, low sulfur and low content of hazardous elements imported from Brazil and Australia are mostly used, together with a small amount of domestic iron ore fines, to raise the grade of agglomerate and blast furnace feed, lower the water content of coke feeding into blast furnace and reduce energy consumption.
- 4) In terms of technical processes, deep-bed sintering, hot air sintering, mixture pre-heated by high-temperature steam, and steam generated by flue gas heat of sintering flue and annular cooler are applied to reduce energy consumption by sintering. In blast furnace, high top pressure, high blast temperature, coal injection, oxygen enrichment, utilization of residual heat from blast furnace flushing water and BPRT process can improve utilization of blast furnace gas and save energy. Hot metal is poured into blast furnace in a one-off manner, to increase the physical heat of hot metal blended into converter. Moreover, the system is optimized for smelting with less slag and lower energy consumption by converter. Energy consumption is further reduced by hot charging and hot conveyance of continuous casting billet, double regenerative heating furnace for steel rolling and reclaimed water recycling, among other technologies.



B. Other Resources (Figure 3)

1) Gas Recycling

Gas from both blast furnace and converter is reclaimed using the dry dust removal method to maximize gas reclamation. Reclaimed gas from blast furnace and converter is used in the Company in baking 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 being supplied to external power plants.

2) Comprehensive Utilization of Residual Heat

Residual heat is used to produce steam and steam is recycled directly and used in power generation. Steam generated by residual heat from sintering, electric furnace, converter and heating furnace for steel rolling is completely fed into the main steam pipeline of Xiwang Group, for use in corn processing. Residual heat from blast furnace washing is used in heating and cooling production process.

3) Water Recycling

Process cooling water and equipment cooling water used internally are all properly treated and recycled in a cascade manner. The resulting recycling rate is estimated $\geq 95\%$. Production waste water is collected and treated in a centralized manner and all processed water is then used in blast furnace washing and raw materials store yard spray to reduce dust. Life sewage is collected and conveyed to Xiwang Group sewage treatment plant. Reclaimed water is thereby used by the Company in blast furnace washing and converter steel slag hot stew, among other purposes.

4) Steel Slag Recycling

Steel slag produced in steel smelting goes through a hot stew device, to increase metal reclamation. Magnetic filtered steel slag and steel particles go back to smelting directly. Steel slag fines are used as sintering raw materials.



5) *Dust Recycling*

Dust containing iron is reclaimed to sintering completely, as raw materials.



Figure 3 – Xiwang Special Steel External Cyclic Economy Diagram

III. Ecological Environment Protection

The Company adopts policies on minimising its impact on the environment and natural resources as follows:

- 1) The Company first of all carries out an environmental impact evaluation of its processes, technologies, equipment and raw materials in the course of design, technical renovation and procurement of raw materials, to make sure every step complies with environmental protection standards.
- 2) The Company uses state-of-art technologies and high-quality raw materials for the purpose of energy saving. Moreover, increased investment in environment-friendly advanced machines and technologies aims to enhance environmental protection, develop the cyclic economy, reduce pollutants in a systematic way, minimize the Company’s impact on environmental and natural resources and protect the environment and eco-system.
- 3) The Company seeks to heighten the staff’s environmental awareness by means of holding environmental protection events, education and trainings. It strictly follows the philosophy of energy saving, consumption and waste reduction, cyclic economy, green and ecology-friendly Xiwang Group, which is designed to protect the environment and pay back the society.



PROSPECTS

In 2016, we optimized our compensation policies and arrangement of occupational trainings, with a view to providing better support for the Company's development and employees. Regular assessment on production procedures and the continuous improvement of our trainings on occupational health and safety show that work safety is the top priority of the Company.

As our business grows, we never stop caring for communities. We will help contribute local communities through donations, communications with people living there and community activities.

Through cooperation with colleges, research institutes and experts, we hope to maintain improvement and achieve better results in new technologies. New technologies are proposed to make operation and production more efficient and environmentally friendly, as environmental laws and regulations tighten in the PRC. Our energy-saving and technical modifications increased our operation efficiency while reducing the impact on the environment.

Looking forward, we will continue to improve in environmental, social and governance aspects.

ABOUT THE REPORT

2016 Environmental, Social and Governance Report of the Company states the principle adopted by Xiwang Special Steel Company Limited and its subsidiaries in 2016 in fulfilling social responsibility and the performance of the work, including the topics about sustainable development of economy, environment and society that attract attention of 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.

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 2016 to 31 December 2016

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.