

2019 Social Responsibility Report

H Share Code: 323
A Share Code: 600808



MAANSHAN IRON & STEEL COMPANY LIMITED



IMPORTANT NOTES

The Board of Directors and all directors of the Company guarantee that the report is free from any misrepresentation, misleading statement or major omission and accept joint and several responsibility for the truthfulness, accuracy and completeness of the content herein.

The Company adheres to the concept of “integrity, harmony, green and development” and fulfills its social responsibilities.

The report has been prepared in accordance with the *Circular on Enforcement of Social Responsibility of Listed Companies and Release of Shanghai Stock Exchange Guidelines for Environmental Protection Information Disclosure of Listed Companies* issued by Shanghai Stock Exchange and *Appendix 27. Environmental, Social and Governance Reporting Guide of Listing Rules* promulgated by The Stock Exchange of Hong Kong Ltd, had reference to GRI Sustainability Reporting Guidelines (G4) and is recommend to be read in conjunction with the Company’s *Annual Report 2019*.

The report has been prepared in Chinese and English. Where there is any discrepancy between the Chinese version and the English version, the Chinese version shall prevail.

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SECTION I DEFINITIONS

All references to the words listed in the table below have the following meanings throughout the report unless otherwise specified:

| | |
|---|---|
| The Company, Magang, Magang Company Ltd | Maanshan Iron & Steel Company Ltd |
| The Group, Magang Group | Magang (Group) Holding Company Ltd |
| Anhui SASAC, Provincial SASAC | State-owned Assets Supervision and Administration Commission of Anhui Province |
| China Baowu, Baowu | China Baowu Steel Group Corporation Limited |
| SASAC of the State Council | State-owned Assets Supervision and Administration Commission of the State Council |
| Baosteel Investment | Baosteel Hong Kong Investment Company Limited |
| Board of Directors | The Board of Directors of the Company |
| Directors | Directors of the Company |
| The Audit Committee under the Board, the Audit Committee | The Audit Committee under the Board of Directors of the Company |
| Supervisory Committee | The Supervisory Committee of the Company |
| Supervisors | Supervisors of the Company |
| HKEx | The Stock Exchange of Hong Kong Ltd |
| SSE | Shanghai Stock Exchange |
| PRC | The People's Republic of China |
| Yuan, RMB | Chinese Yuan, Renminbi |
| <i>The Labor Law</i> | <i>The Labor Law of the People's Republic of China</i> |
| <i>The Law on Employment Contracts</i> | <i>The Law of the People's Republic of China on Employment Contracts</i> |
| Reporting Period | From January 1 to December 31, 2019 |

SECTION II COMPANY PROFILE

I. BASIC FACTS

The Company was formerly known as Maanshan Iron Mill, which started up its business in 1953. Maanshan Iron & Steel Company then came into being in 1958 and was restructured as a joint-stock business in 1993. On September 1 in the same year, Maanshan Iron & Steel Company was demerged into Magang Head Office and Maanshan Iron & Steel Company Ltd. Magang Head Office, the controlling shareholder, was reorganized as Magang (Group) Holding Company Ltd in 1998. On 19 September 2019, Anhui SASAC, which holds 100% equity interest in Magang Group Company, transferred 51% equity interest in Magang Group Company to China Baowu. The immediate controlling shareholder of the Company which is Magang Group Company, remain unchanged. China Baowu has become the indirect controlling shareholder of the Company. The actual controller of the Company has been changed from Anhui SASAC to SASAC of the State Council.

II. OFFERING AND LISTING

The Company offered its H shares offshore between October 20 and 26, 1993, and was listed on the Stock Exchange of Hong Kong Ltd on November 3 in the same year; it then offered Renminbi common shares in mainland China between November 6 and December 25, 1993 and was listed on Shanghai Stock Exchange in three phases on January 6, April 4 and September 6 in the next year.

III. MAIN BUSINESS ACTIVITIES AND PRODUCTS

The Company is one of the largest iron & steel producers and distributors in the PRC. Its production activities include iron smelting, steel smelting and rolling. It mainly produces steel products, including plates, long products as well as train wheels and shafts.

SECTION III SHARE CAPITAL, SHAREHOLDERS AND RETURN

I. SHARE CAPITAL

There was no change in the Company's share capital in 2019 when compared with that in 2018.

Unit : Share

| | Before | | Change During the Reporting Period (+, -) | | | | | After | |
|---|---------------------|--------------|--|----------------|---------------------------------|--------|-----------|---------------------|--------------|
| | Number of Shares | Ratio (%) | New Issue | Bonus Issue | Capital Surplus to Shares | Others | Sub-total | Number of Shares | Ratio (%) |
| I. Restricted shares | - | - | - | - | - | - | - | - | - |
| II. Non-restricted shares | 7,700,681,186 | 100 | - | - | - | - | - | 7,700,681,186 | 100 |
| 1. RMB common shares | 5,967,751,186 | 77.50 | - | - | - | - | - | 5,967,751,186 | 77.50 |
| 2. Mainland-listed foreign - invested shares | - | - | - | - | - | - | - | - | - |
| 3. Overseas-listed foreign - invested shares | 1,732,930,000 | 22.50 | - | - | - | - | - | 1,732,930,000 | 22.50 |
| III. Total number of common shares | 7,700,681,186 | 100 | - | - | - | - | - | 7,700,681,186 | 100 |

II. TOP 10 SHAREHOLDER AND ACTUAL CONTROLLER

1. Top 10 Shareholders as at the end of report period

| Name of Shareholder | Number of shares held |
|---|-----------------------|
| Magang (Group) Holding Co., Limited | 3,506,467,456 |
| Baosteel Hong Kong Investment Company Limited (Note) | 894,718,458 |
| Hong Kong Securities Clearing Company (Nominees) Limited (Note) | 822,352,592 |
| Central Huijin Investment Ltd. | 142,155,000 |
| Hong Kong Securities Clearing Company Ltd. | 115,225,937 |
| Fujian Gunxueqiu Investment Management Co., Ltd. – Jiayao | 55,604,486 |
| Gunxueqiu Securities Investment Fund No.1 | 55,604,486 |
| Bank of China Ltd. – Fullgoal CSI SOE One Belt One Road ETF | 34,038,300 |
| Tibet Futongda Investment Co., Ltd. | 29,610,600 |
| China Merchants Bank Ltd. – SSE Dividend Index ETF | 29,521,813 |
| Agriculture Bank of China Ltd. – CSI 500 ETF | 29,348,549 |

Note: As at the end of the Reporting Period, Baosteel Hong Kong Investment Company Limited held 896,387,958 H shares of the Company, including 894,718,458 shares directly held and 1,669,500 shares held through HKSCC Nominees Limited. HKSCC Nominees Limited held 822,352,592 H shares of the Company on behalf of multiple clients.

2. Controlling Shareholder and Actual Controller

➤ Controlling Shareholder

| | |
|--|---|
| Name | Magang (Group) Holding Company Ltd |
| Head or Legal Representative | Wei Yao |
| Date of Incorporation | September 1, 1993 |
| Main Activities | Mining and ore dressing; construction contract; building materials, machinery manufacturing, servicing and design; foreign trade; domestic trade; distribution and warehousing of materials; property management; consulting; lease; agriculture and forestry |
| Controlling interest or minority interest held in any other Company listed in or outside the PRC during the reporting period | As at the end of 2019, Magang Group did not directly or indirectly hold more than 5% equity interest in other listed companies. |



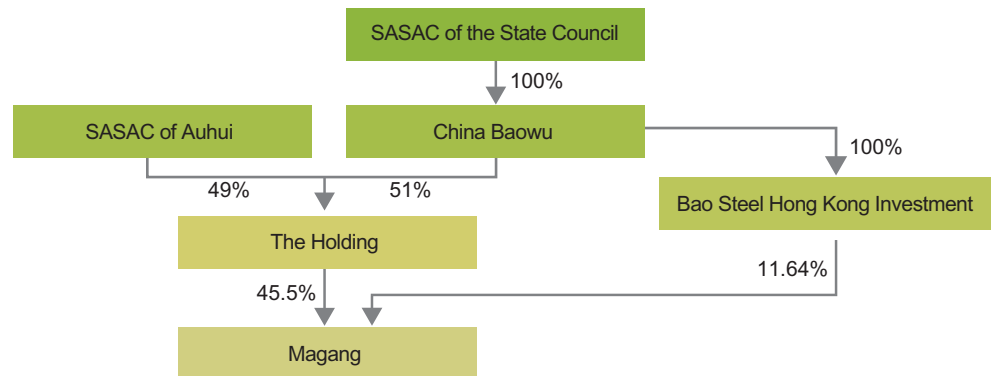
➤ **Indirect Controlling Shareholder**

| | |
|--|--|
| Name | China Baowu Steel Group Corporation Limited |
| Head or Legal Representative | Chen Derong |
| Date of Incorporation | January 1, 1992 |
| Main Activities | China Baowu is a state-authorized investment institution and a state-owned holding company, which operates state-owned assets within the scope authorized by the State Council, and carries out relevant state-owned capital investment and operation business. Items which are subject to approval according to law can be carried out only after approval by relevant departments |
| Controlling interest or minority interest held in any other Company listed in or outside the PRC during the reporting period | As at the end of 2019, more than 5% of the equity interests in other listed companies were directly or indirectly held by China Baowu Steel Group Corporation Limited as follows: 64.12% of the equity interests in Baoshan Iron & Steel Co., Ltd., 50.02% of the equity interests in Xinjiang Bayi Iron & Steel Co.,Ltd., 53.05% of the equity interests in SGIS Songshan Co.,Ltd., 50.81% of the equity interests in Shanghai Baosight Software Co.,Ltd., 59.89% of the equity interests in Shanghai Baosteel Packaging Co., Ltd., 14.93% of the equity interests in China Pacific Insurance (Group) Co., Ltd (CPIC), 12.09% of the equity interests in New China Life Insurance Company Limited and 15% of the equity interests in Beijing Shougang Co., Ltd. |

➤ **Actual Controller**

As at the end of 2019, the actual controller of the Company is the State-owned Assets Supervision and Administration Commission of the State Council. During the Reporting Period, the actual controller of the Company changed: on 19 September 2019, Anhui SASAC transferred its 51% equity interest in Magang Group to China Baowu pursuant to the equity transfer agreement entered into between Anhui SASAC and China Baowu on 31 May 2019. After the equity transfer, China Baowu held 51% equity interest in Magang Group, became the controlling shareholder of Magang Group, and indirectly controlled 45.54% of the shares of the Company through Magang Group, thus realizing the control over the Company. Given that China Baowu is wholly-owned by the SASAC of the State Council, the actual controller of the Company was changed from Anhui SASAC to the SASAC of the State Council; The equity interest held by Anhui SASAC in Magang Group has decreased from 100% to 49%. The immediate controlling shareholder of the Company remains unchanged as Magang Group, which still holds 45.54% of the shares of the Company.

➤ **Ownership and Control between the Company and the Actual Controller**





3. SHAREHOLDERS' RETURN

According to the *Articles of Association*, the Company shall give priority to cash dividend distribution in accordance with the principle of focusing on shareholders' reasonable investment return while taking into account the reasonable capital needs of the Company, and the profit to be distributed in cash shall not be less than 30% of the distributable profit realized in the year in the annual profit distribution; The cash dividend policy shall maintain continuity and stability, and the conditions and procedures for the adjustment or change of the profit distribution policy shall also be compliant and transparent. During the Reporting Period, such policies were effectively implemented. The Company did not adjust the cash dividend policy. In the process of formulating the profit distribution plan, the independent Directors expressed independent opinions. The proportion of cash dividend was in compliance with the provisions of the Articles of Association, which effectively protected the legitimate rights and interests of minority investors.

In 2019, the Company recorded a net profit of approximately RMB794 million as calculated according to the China Accounting Standards for Business Enterprises. Taking into account the Company's profits and sustainable development in the future, the Board recommends the payment of a final dividend of RMB0.08 per share (tax inclusive) in cash for the year 2019, with a total estimated amount of RMB616 million (tax inclusive). The undistributed profit will be carried forward to the year 2020 and no capital reserve will be converted into share capital. The distribution plan is subject to approval by the Annual General Meeting.

The estimated total dividend will account for approximately 54.61% of the net profit attributable to shareholders of the listed company of the Group for 2019 (accounting for approximately 77.59% of the net profit of the Company for 2019), which complies with the requirements of the China Securities Regulatory Commission and the Articles of Association.

SECTION IV CORPORATE GOVERNANCE

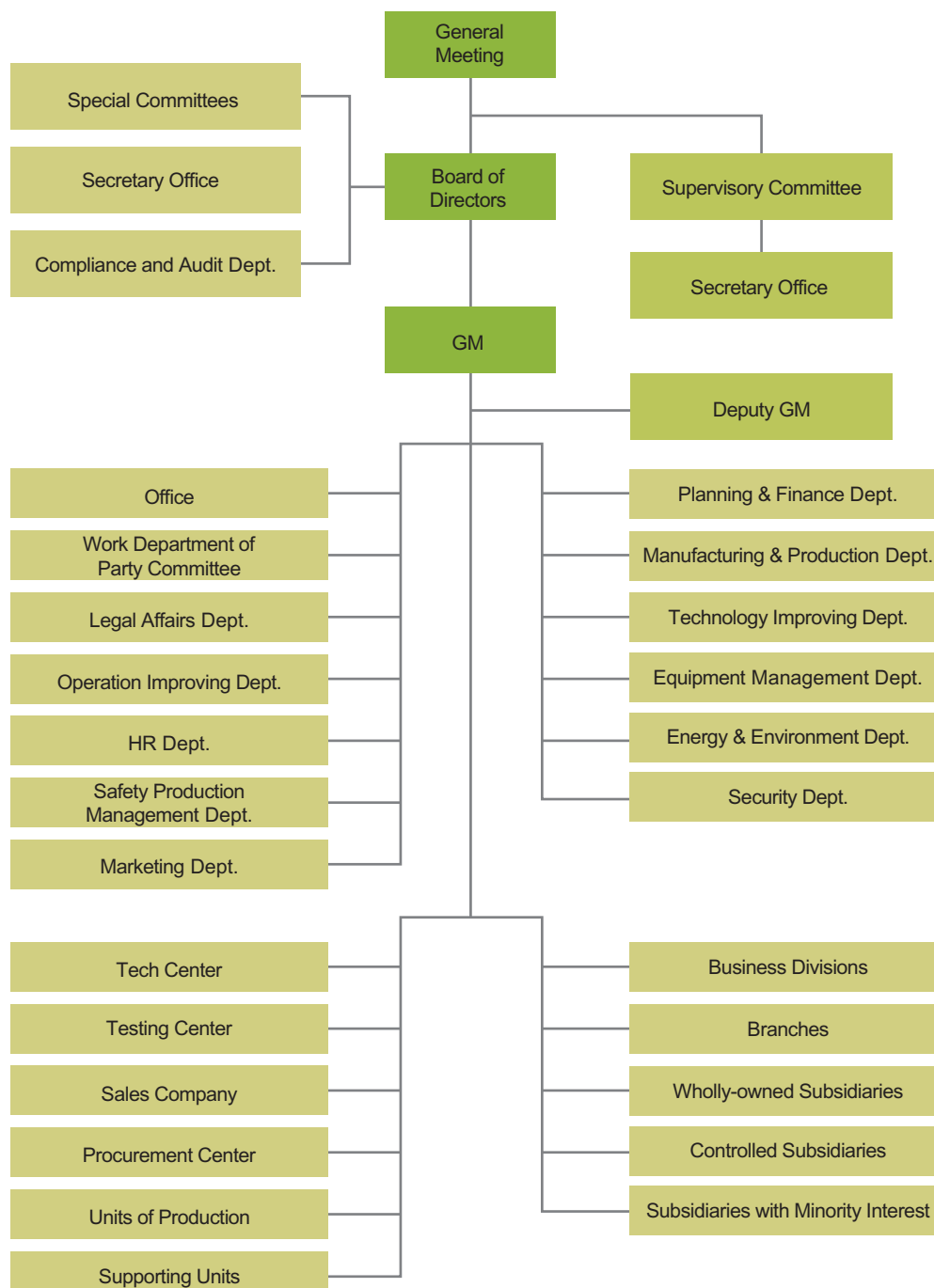
I. CORPORATE GOVERNANCE FRAMEWORK

The Company has put in place a well-structured and balanced corporate governance framework, comprised of General Meeting, Board of Directors, Supervisory Committee and senior management, in accordance with the requirements of the applicable laws and regulations, and the posts and duties of each of the aforesaid functions have been clearly defined.

The Company complied with all code provisions set out in Appendix 14 Code on *Corporate Governance Practices, Listing Rules* of the HKEx in 2019.

II. ORGANIZATION CHART

The Company's organization chart as of the end of the reporting period is depicted as follows:





During the reporting period, according to the needs of project construction, the Company divided the original Engineering and Equipment Management Department into Technical Transformation Department and Equipment Management Department; According to the needs of energy and environmental protection management and plant security, the Energy and Environmental Protection Department and the Security(Guard) Department are established.

III GENERAL MEETING

The Company held the general meeting, that is, 2019 Annual General Meeting during the reporting period. It took place in Magang's office building situated at No. 8 Jiuhua Xi Road, Maanshan, Anhui province on June 12, 2019. Mr. Ding Yi, Chairman of the Board, was present and chaired the meeting. The resolutions passed at the meetings were published on the websites of SSE and the HKEx, as well as on *Shanghai Securities News*.

IV. BOARD OF DIRECTORS AND SPECIAL COMMITTEES

1. Board of Directors

In 2019, the ninth Board of Directors of the Company has seven members, including three executive directors and four non-executive directors, of which three are independent directors, representing three-seventh of the headcount. Among them, two directors are female, representing two-seventh of the headcount. As acknowledged by all directors in writing, all directors satisfied the requirements set out in Appendix 10 *Model Code for Securities Transactions* by Directors of Listed Issuers, *Listing Rules* of the HKEx.

On 5 March 2020, Mr. Wang Qiangmin was elected as a Director of the Company at the 2020 first extraordinary general meeting of the Company with effect from 5 March 2020. As at the date of this report, the ninth session of the Board of the Company consists of eight Directors, including four executive Directors and four non-executive Directors. There are three independent non-executive Directors, representing three-eighth of the Board. There are two female Directors, representing one-fourth of the Board.

All the executive Directors and one non-executive Director of the ninth session of the Board are experienced in the steel industry and have extensive experience in steel production, operation and management, and are able to make reasonable decisions on the matters considered by the Board. Among the three independent Directors, Ms. Zhang Chunxia is a doctoral supervisor of the State Key Laboratory of Advanced Steel Process and Materials of Central Iron & Steel Research Institute and a member of the Expert Committee of the Chinese Society for Metals. She is mainly engaged in the research and development of iron and steel metallurgical process engineering and environmental engineering, and has extensive knowledge and experience in the iron and steel industry and environmental protection; Ms. Zhu Shaofang is one of the first fellow members of the Chinese Institute of Certified Public Accountants and has many years of experience in auditing; Mr. Wang Xianzhu has extensive knowledge in economics, and served as an associate dean of the School of Economics and an associate dean of the School of Business of Anhui University of Technology. The Board achieves diversity in its membership and its composition is in full compliance with the requirements of the relevant domestic and overseas laws, regulations and regulatory documents, and such Directors are fully competent in assessing internal control and reviewing financial reports.

2. Special Committees

Four special committees report to the Board of Directors, namely, Audit Committee, Strategic Development Committee, Remuneration Committee and Nomination Committee.

➤ Audit Committee

The Audit Committee under the ninth Board of Directors is comprised of Ms. ZhuShaofang, Ms. Zhang Chunxia, Mr. Wang Xianzhu, Independent Directors. Ms. Zhu Shaofang is Chairman of the Committee.

➤ Strategic Development Committee

The Strategic Development Committee under the ninth Board of Directors is comprised of Mr. Ding Yi, Chairman of the Board and Ms. Zhang Chunxia, Ms. Zhu Shaofang, Mr. Wang Xianzhu, Independent Directors. Mr. Ding Yi is Chairman of the Committee.

➤ Nomination Committee

The Nomination Committee under the ninth Board of Directors is comprised of Ms.Zhang Chunxia, Ms. Zhu Shaofang, Mr. Wang Xianzhu, Independent Directors, Mr. Ding Yi, Chairman of the Board. Ms. Zhang Chunxia is Chairman of the Committee.



➤ **Remuneration Committee**

As at the end of the Reporting Period, the Remuneration Committee under the ninth Board of Directors is comprised of Mr. Wang Xianzhu, Ms. Zhang Chunxia and Ms. Zhu Shaofang, Independent Directors, Mr. Ren Tianbao, Non-executive Director. Mr. Wang Xianzhu is Chairman of the Committee.

V. SUPERVISORY COMMITTEE

The ninth Supervisory Committee of the Company has five members, including two supervisors representing the staff and three external supervisors, of which two are independent supervisors, representing two-fifth of the headcount. The mix of the Supervisory Committee is fully compliant with the requirements of the applicable domestic and foreign laws, regulations and normative documents.

VI. INTERNAL CONTROLS

1. The ninth Board of Directors considered and passed *Internal Control Assessment Report 2019* on March 30, 2020, confirming effectiveness of internal controls implemented by the Company in 2019.
2. Ernst & Young Hua Ming Certified Public Accountants (LLP) audited the effectiveness of internal controls outlined in the Company's financial report as at December 31, 2019 and issued an unqualified auditor's report on internal controls.

SECTION V BUSINESS ETHICS AND VALUES

CORE VALUES: DEDICATION TO WORK, INTEGRITY AND WIN-WIN SUCCESS

“Dedication to work” is the basic requirement of professional ethics and the basic professional quality of employees. To implement “Dedication to work” in our value and emphasis “Leader working hard and Staff working hard”, is not only an objective requirement for the implementation of the spirit of “Civilized Production, Excellent Manufacturing, Innovation”, Magang spirit is also conducive to guiding employees to establish the correct professional ethics concept, develop good professional code of conduct, and clarify the career development and personal growth of employees.

“Integrity” is an indispensable basic ethics for both people and enterprises, and is the cornerstone of market economy and human life. The inclusion of “integrity” in the values is a clear requirement for performance excellence management, which plays an important role in promoting the establishment of a good market image of Magang and is also an essential value standard for the development of Magang and the personal growth of employees.

“Win-win Success” is the value selection and pursuit of economic and social benefits of Magang, and is a commitment to all stakeholders. The inclusion of “Win-win Success” as a value reflects the high level of social responsibility awareness of Magang, the historical mission of being responsible to employees, users, shareholders and the environment, and the value pursuit of implementing the “Four Comprehensives” and the path of scientific development.



SECTION VI EMPLOYEES

I. WORK ENVIRONMENT

1. Policies and Execution

1.1 Remuneration

The Company adopts a diversified remuneration mechanism mainly based on position performance salary system, supplemented by annual salary system and allowance for technical and technical talents. The position performance-based salary system is based on the position, highlighting the proportion of contribution of the position in the distribution; employees' bonuses are allocated based on the results of performance appraisal. The senior and middle management of the Company are paid on an annual basis and their remuneration is paid according to the annual appraisal results.

1.2 Employment Contract

The Company strictly abides by *the Labor Law*, *the Law on Employment Contracts* and other applicable laws and regulations and inks employment contracts with all employees, specifying compensation, working hours, break time, holidays and leaves, occupational safety and health, insurance and benefits, among other matters. *The Labor Law* and *the Law on Employment Contracts* also apply to rescission or termination of employment contracts.

1.3 Recruitment

Recruitment of new employees of the Company is in strict accordance with the *Labor Law*, *the Law on Employment Contract* and other laws and regulations, and *Measures for the Management of Recruitment of New Employees* and other documents of the Company. According to the replenishment plan of the Company on new employees, it introduces new employees via campus recruitment, online recruitment, social recruiting, talent introduction and other means, to supplement to key production lines and key posts, improve the age, knowledge and skill structure of front-line employees, consolidate the talent reserve and enhance the competitiveness of the Company. In 2019, the Company added a total of 7 new employees, all of whom are operation and maintenance positions.

1.4 Promotion

The Company implements a position performance system for all employees and has formulated the *Performance Management Measures for All Employees*. The key performance indicators mainly include work performance indicators and position quality indicators, etc., and the assessment cycle is set according to the sequence of positions. The monthly and quarterly appraisal results are 100% linked to bonus distribution, and the annual appraisal results are linked to remuneration distribution and appraisal, learning and training, position adjustment, etc.

1.5 *Working Hours, Holidays and Leaves*

The Company has mapped out *Employee Attendance* and *Leave Management* Rules by combining its reality with compliance with the applicable laws, regulations and policies and applies the standard of 40 working hours per week, to keep business running properly, manage working hours and leaves and protect the legitimate rights and interests of the staff.

Non-working days: weekends, public holidays, annual leave, family leave, sickness leave, leave for personal affairs, leave for injury from work, leave for marriage or funeral, maternity leave and other vacations as prescribed by the authorities in the laws and regulations.

The Company has formulated *Employee Paid Annual Leave Implementation Measures* in accordance with *Employee Paid Annual Leave Regulations* unveiled by the State Council and *Employee Paid Annual Leave Implementation Measures* released by the Ministry of Human Resources and Social Security. Any employee who has been in service for one full year but less than ten years shall enjoy five days' paid annual leave; those who have been in service for ten full years but less than twenty years shall enjoy ten days' paid annual leave; and those who have been in service for 20 full years or longer shall enjoy fifteen days' paid annual leave. Those who choose to give up their right to paid annual leave must submit a written application.

1.6 *Social Security and Benefits*

As required by the central, provincial and municipal government, the Company pays a whole package of social security contributions in full and in a timely manner. Contributions made in 2019 total of RMB802,570,000, representing a year-on-year increase of 12.81%.

The enterprise annuity system is implemented, and the enterprise annuity fee is mutually paid by the Company and individual employees. Individuals are charged 1% of the payment wage base, whereas the Company pays a total 5% of the payment wage base, to their personal annuity account on monthly basis.

An employee housing provident fund is provided. Every employee has a housing provident fund personal account, and both employees and the Company contribute about 12% out of the payment wage base. Subsidizing to those employers who did not own the benefits of monetization on the housing allotment, and the subsidy standard is 7% of payment wage base.



A supplementary medical insurance cover and a major disease relief system are provided. In addition, all employees are insured against major diseases, accidental injuries and household property commercial insurance.

Employees enjoy one meal for free on working days.

To protect health of the staff, the Company organizes Company-wide physical examination on a biennial basis.

In order to further understand the needs of employees, the Human Resources Department of the Company conducts employee satisfaction surveys on a regular basis to earnestly implement various laws, regulations and policies related to employees' own interests.

2. Key Performance Indicators

Employee Mix by Age

| Age Range | Headcount in 2019 | Headcount in 2018 |
|--------------|----------------------|----------------------|
| 35 and below | 4,780 | 5,375 |
| 36 to 40 | 2,428 | 2,840 |
| 41 to 50 | 12,308 | 13,710 |
| 51 to 60 | 6,703 | 6,529 |
| Total | 26,219 | 28,454 |

Turnover Rate by Age

| Age Range | Turnover Rate in 2019 | Turnover Rate in 2018 |
|-----------|--------------------------|--------------------------|
| below 30 | 0.18% | 0.32% |
| 30 to 40 | 0.04% | 0.06% |
| 40 to 50 | 0.01% | 0.04% |
| Above 50 | 0.01% | 0.01% |
| Total | 0.24% | 0.42% |

Turnover Rate by Region

| Region | Turnover Rate in 2019 | Turnover Rate in 2018 |
|----------------------|--------------------------|--------------------------|
| Within the Province | 0.18% | 0.27% |
| Outside the Province | 0.06% | 0.15% |
| Total | 0.24% | 0.42% |

II. HEALTH AND SAFETY

1. Policies and Execution

The Company strictly abides by the `and other laws, regulations, standards and requirements on work safety, conscientiously implements the instructions, decisions and deployments made by the national, provincial or municipal governments on work safety, deeply pushes forward the action for overcoming work safety challenges and the action for investigation and control of major work safety risks, promptly identifies and acquires work safety laws, regulations and requirements, strengthens the publicity and training of laws and regulations, and integrates the laws, regulations and requirements into the corporate system for specific implementation. In 2019, the Company combed through the original safety management systems and issued 11 systems.

In 2019, the Company earnestly implemented the requirements of national, provincial, municipal governments and laws and regulations, strengthened the implementation of the main responsibility of production safety of enterprises, and had no violation of regulations.

2. Key Performance Indicators

2.1 In 2019, the Company suffered no death accident, keeping even as last year; 1 serious injury accident, in which 1 employee was seriously injured, increasing by 1 employee as compared to last year; 2 death accidents of related parties, in which 2 workers died. In 2019, the Company lost 1,445 working days due to casualty accidents.

2.2 In 2019, the Company had no occurrence of occupational diseases.



2.3 Occupational health & safety measures and implementation

- According to the requirements of the government departments, the Company organized the second-level units to establish and enhance the “six mechanism” in pursuit of work safety risk control. The Company commenced the risk control measures on comprehensive re-identification, search and judgement of risk points (hazard sources). At present, the Company has recognized 14 second-level risk points and 518 third-level risk points, and has formulated and implemented correspondent control measures and control responsibilities.
- In 2019, the Company revised the “Work Safety Responsibility System” and issued the “Fire Safety Responsibility System” and the “Safety and Fire Control Management Measures for Relevant Parties and Personnel”, and will subsequently make amendments to the other safety management related systems via benchmarking with China Baowu. At the beginning of the year, the Company formulated the “2019 Safety Publicity, Education and Training Work Plan” to promote and implement various safety publicity, education and training work of the “Safety Training Year” as planned. The Company carried out gas safety management standard training, safety management personnel education and training, fire safety knowledge training and safety director education and training for all units.
- The Company continued to strengthen and build up the emergency rescue mechanism and the improvement of emergency response capability. The Company established a rescue organization headed by the general manager, equipped with rescue equipment, established and improved the professional rescue teams such as the gas protection (rescue) station and fire rescue team of the Company, and the emergency rescue team of metal smelting in Anhui Province, and clarified the rescue principles and plan initiation procedures. In June, the Company held the blast furnace burn-in, explosion, gas poisoning, fire emergency drill and emergency rescue skills demonstrations. In 2019, the Company added a water tower fire truck to the emergency rescue team and built a modular mobile fire station in the Southern Area. The Company’s emergency rescue team participated in the emergency rescue skills competition held at provincial and municipal level and achieved excellent results.

- In order to further regulate on-site operation and prevent the occurrence of accidents, the Company has established the “Implementation plan for work safety special action against habitual violations”, and increased the investigation and punishment of habitual violations. The Company organized a special safety inspection of hazardous chemicals, and identified a total of 14 problems; carried out special inspections on the safety of coal gas system, and identified 82 problems in total; carried out special safety inspection on metal smelting units and identified a total of 21 problems; and carried out special safety inspections for construction in progress and maintenance projects, and a total of 69 problems were identified, all of which have been rectified.
- Increase investment in work safety and implement of safety precaution projects. In 2019, the Company’s investment in work safety amounted to RMB106 million, representing a slight increase as compared with 2018.
- The safety education rate of employees reached 100%, and the special operators with qualify certificates reached 100%. The Company organized trainings and review of special operation persons, special equipment operators and management personnel; Safety qualification training courses for heads of hazardous chemical units, general production and operation units and safety management personnel were held. In 2019, the Company provided reexamination training for 1,123 special equipment operators and management personnel, and 59 were newly passed examination.
- The Company regularly carried out occupational health and safety management system audit and safety standardization system audit, and regularly carried out special inspections on major hazard sources, hazardous chemicals and special equipment; Work safety is reported to the Board on a regular basis.

III. DEVELOPMENT AND TRAINING

1. Policies and Execution

In 2019, according to the needs of promoting key tasks of the Company and the requirements of the “Training Management Measures”, the Company scientifically established the annual training plan by accurately identifying the training needs. All departments and second-level units earnestly implemented and organized the implementation, and completed the annual education and training work in a better way. Including factory level training, the Company trained its management personnel, technical personnel and operation personnel for 8,011, 12,415 and 37,232 person-time respectively, with a total of 1,092,118.5 training hours and an average 49.2 training hours per person. The Company conducts multi-dimensional tracking and evaluation on training effect in a timely manner. With the aim of mastering multi-post skills, the Company will improve the compatibility of the positions and the adaptability of the positions, so as to provide guarantee for the orderly promotion of large-scale work operation model in the future.

2. Training Statistics

2019

| Indicator | Management | Technician | Operation and Maintenance |
|--|------------|------------|---------------------------------|
| Percentage of trained employees (%) | 85.4 | 95.1 | 97.03 |
| Training hours per capita per year (hour) | 27.9 | 86.4 | 39.5 |

2018

| Indicator | Management | Technician | Operation and Maintenance |
|--|------------|------------|---------------------------------|
| Percentage of trained employees (%) | 84.2 | 90.85 | 95.69 |
| Training hours per capita per year (hour) | 24.8 | 70 | 25 |

IV. CODE OF CONDUCT

1. Policies and Execution

The recruitment of new employees strictly follows the relevant laws and regulations such as *the Labor Law*, *the Law on Employment Contract* and other relevant documents such as the *Measures for the Management of Recruitment of New Employees*, prohibiting the recruitment of minors under the age of 18 and forced labor.

2. Key Performance Indicators

The Company keeps records of all recruits accurately and only hires adults aged above 18. No child labor is used in any form. *Employment Contract* is signed with every employee, specifying working hours, break time, holidays and leaves clearly. There is no forced labor in any form or by any means.



SECTION VII RESOURCES AND ENVIRONMENT

I. RESOURCES

1. Policies and Implementation

1.1 Energy

According to the *2018-2020 Development Plan of Maanshan Iron & Steel Co Ltd*, the Company prepared the energy development plans, formulated the key index parameters, and achieved the control of medium- and long-term energy and environmental protection goals. The Company also issues *Energy Work Plans* at the beginning of each year, prepares and distributes Energy Economic Operation Index Plans each month, holds the energy work routine meetings, key energy project promotion meetings and regional energy economic operation on-site exchange meetings each month, urges each manufacturing unit to formulate the specific and detailed work plans and measures in accordance with the actual situation, thus establishing a guarantee system that further promotes energy-efficient operations and completes the annual target for comprehensive energy consumption per ton of steel. The revised management procedures and measures provided a systematic guarantee for the standardized, orderly and efficient carrying-out of the Company's energy management work. The Company implemented energy policies in a compliant manner and further pushed forward with lean energy operation and management. In order to fulfill the requirements of the national "double control" actions for total volume and intensity of energy consumption, as well as the policy for total coal consumption control, the Company formulated and issued the *Work Plan for Reduction and Replacement of Coal Consumption in 2018-2020* for implementation. By adjusting the production process technology structure, product structure, energy consumption structure, and optimizing the production process, the Company achieved the structured energy savings. In addition, the Company reduced energy consumption through large-scale energy-saving technological transformation and comprehensive utilization of waste heat and energy. At present, the main technologies applied by the Company include coke dry quenching technology, economic heating-up of hot-blast stove, gas-steam combined cycle power generation technology, decentralized photovoltaic power generation technology, comprehensive utilization of coke oven gas after hydrogen production, waste heat recovery of heating furnace, new insulation materials, and green lighting, etc.

1.2 Water Resources

Through strengthening management, enhancing process control, and continuously boosting water-saving technology transformation, the Company reduced its water consumption. In order to implement the requirements of the *National Water-Saving Action Plan* (FGHZG [2019] No. 695) and improve the water use efficiency, the Company formulated the *Water-Saving Action Plan for Joint-Stock Company (2019-2020)*, and released water consumption plans for process (production line) and domestic water indicators for rigorous assessment on a monthly basis. The Company gradually transformed the domestic water pipe work, and timely treated and replaced the found leaking points. Meanwhile, after modifying the sewage treatment system in sintering process, the Company utilized part of the upper clear water as supplementary water for wet desulfurization, thus reducing the replenishment of fresh water and avoiding drainage. By re-checking various water consumption indicators, stepping up on-site supervision and inspection of water supplying, using and draining, and adopting other measures such as evaluation and assessment, the Company achieved zero overflow at the gate of Liufenhe River. In 2019, the fresh water consumption per ton of steel was 2.99 m³/t, and the industrial water reuse rate was 98.13%.

1.3 Solid Waste Resources

As an urban factory, the Company attached great importance to the industrial development of the comprehensive utilization of metallurgical solid waste resources. With technological innovation as the starting point, the Company continued to propel the utilization of metallurgical solid waste resources through enterprise input and policy support. In 2019, the Company actively carried out research on the internal utilization and disposal of solid waste. Through years of exploration and practice, the Company's comprehensive utilization of metallurgical solid waste resources has achieved significant progress. Metallurgical solid waste, such as blast furnace slag, converter slag, iron-containing dust sludge and fly ash, has been properly utilized and disposed of.



2. Key Performance Indicators

2.1 Total Energy Consumption

See “5.1.2 Total energy consumption” in this report.

2.2 Total Water Consumption and Density

In 2019, the total fresh water consumption was about 45.7 million tons, the fresh water consumption per ton of steel was 2.99 m³/t, and the industrial water reuse rate throughout the year was 98.13%, reaching the clean production level I standard.

| Indicator | Unit | 2019 | 2018 |
|--|-------------------|--------------|-------|
| Total fresh water consumption | 10,000 tons | 4,570 | 5,033 |
| Fresh water consumption per ton of steel | m ³ /t | 2.99 | 3.29 |

2.3 Energy Use Efficiency Plans and Results

In order to implement the State Council's *Three-year Action Plan for Winning the Blue Sky Defense War* (GF [2018] No. 22), to improve its own high-quality development level, and to achieve the national “double control” actions for total volume and intensity of energy consumption, the Company incorporated the key indicator parameters, including comprehensive energy consumption per ton of steel, fresh water consumption per ton of steel, COD emissions, SO₂ emissions, etc., into the 13th Five-Year Energy Conservation and Environmental Protection Plan, developed the control plan for medium- and long-term energy and environmental protection goals, with the main leaders' KPI directly tied with such goals. Moreover, the Company signs the *Letter of Responsibility for Energy and Environmental Protection Goals* with the main responsible units at the beginning of each year, while optimizing the department setting and management responsibilities of the Company, strengthening the management of energy measurement and energy indicators, and intensifying energy saving management from multiple aspects such as system, production organization, energy consumption plan, personnel quality improvement, process management and control, etc.. In 2019, the Company's comprehensive energy consumption per ton of steel was 572.8 kgce/t, with a year-on-year decrease of 3.6 kgce/t.

2.4 Water-drawing Problems, Water Use Efficiency Plans and Results

In line with the state's policies on water resources, the Company further improved and revised the water resource management system such as the *Measures for the Management of Water Conservation*, formulated the *Water-saving Action Plan of Joint-Stock Company (2019-2020)*, and prepared and issued water consumption plan to processes (production lines) for rigorous evaluation each month. The Company adopted the fresh water consumption per ton of steel as the company-level main energy use indicator for strict control, quantified the water consumption and energy consumption indicators of the second-level units, established a monthly analysis, evaluation, and assessment system to form a water-saving and consumption-reduction assessment and incentive mechanism. The Company implemented the cascade utilization measures such as "water supply as per water quality, treatment classification, replenishment of purified water with fresh water, and replenishment of turbid water with purified water" to effectively improve the water cycle utilization rate. In 2019, the Company conducted a system-wide water balance test. On October 21, the Company renewed its water-drawing license upon approval of Changjiang Water Resources Commission.

II. ENVIRONMENT

1. Guidelines, annual goals and results for environmental protection

| | |
|---|---|
| Guidelines: | Beautiful environment, green development, urban factory |
| Environmental protection goals for 2019: | Completion of the governmental indicators on energy consumption and the total emissions of major pollutants; compliance with the national limit standards in terms of process energy consumption; compliance with the national standards in terms of pollutant discharge; Energy-saving assessment, environmental assessment and acceptance of construction projects comply with laws and regulations; 100% safe disposal rate of hazardous waste; Zero pollution accident; Fresh water consumption per ton of steel 3.0 m ³ /t. |



Results:

The thermal power plant was rated as the creditworthy enterprise of Anhui Province; key indicators of energy-saving and environmental protection were all improved; the Company supported Maanshan City to successfully hold a rectification meeting on issues reflected in a warning film in respect of the Yangtze River; the Company received the financial support of RMB15.98 million for energy-saving and environmental protection; the safe disposal rate of hazardous waste reached 100%; zero pollution accidents occurred throughout the year; the fresh water consumption per ton of steel was 2.99 m³/t; the comprehensive energy consumption per ton of steel hit a new record, a year-on-year decrease of 3.6 kgce/t.

2. Discharges

The Company's main pollutants are waste water, waste gas and solid waste. Pollutants in waste gas (mainly including smoke, dust, nitrogen oxides, and SO₂, which are generated during material transfer and production processes such as sintering, iron-making, steel-making, steel-rolling, and thermal power plants) are discharged into the atmosphere through the high chimneys after being treated by dust removal, desulfurization, and denitration. Waste water (mainly including pollutant factors such as SS, COD, oil, and ammonia nitrogen that are generated during the production process) is discharged into the tributary of the Yangtze River after being treated to reach the discharge standard. Almost all solid waste (mainly including iron-containing dust, iron oxide scale, metallurgical slag, etc.) can be comprehensively utilized.

3. Policies and Implementation

In 2019, a number of environmental protection policies were published in China, such as the amendment to the *Environmental Impact Assessment Law* and the release of the *Opinions on Promoting the Implementation of Ultra-low Emissions in the Iron and Steel Industry*. The Company updated and identified 21 applicable laws and regulations and other requirements throughout the year, carried out environmental assessment and acceptance of construction projects as per laws and regulations, and achieved a 100% project environmental assessment rate. The Company continued to promote the management of atmospheric pollution, accelerate the implementation of ultra-low emission projects, improve the atmospheric environment management system, and carry on strengthening the control of severely polluted weather. Focusing on the implementation of the works of "Great Protection of the Yangtze River", the Company carried out in-depth treatment of water pollution and clarified the responsibilities of corporate environmental management. The Company has fully followed the *Soil Protection Law* by initiating monitoring and detailed investigation of soil pollution conditions, and carrying out investigation and evaluation of soil environment for construction land. The Company has also quickened its pace in discharge licensing, and formed a license-based, streamlined and efficient environmental management system for fixed pollution sources.

4. Compliance with and violations of standards, rules and regulations

By adhering to national environmental protection laws and regulations, the pollution prevention actions, and the requirements of ecological environment protection of the Yangtze River Economic Belt, and taking energy environmental protection as its core competitiveness, the Company gave priorities to ecological protection, and firmly promoted green development. With the help of annual employee congresses and the energy and environmental protection work plan, the Company standardized the management of energy and environmental compliance, strengthened the control of environmental risks, stepped up ultra-low-emissions transformation and ecological protection of the Yangtze River, thus continuously improving the level of green development. Preparation of the annual carbon emission report and monitoring plan, third-party on-site inspection, and review of and reporting to provincial and municipal competent authorities are carried out in an orderly manner every year in accordance with the requirements of the National Development and Reform Commission and the Ministry of Ecology and Environment.

In 2019, the Company was fined RMB750,000 for occasional unorganized emissions. The Company has completed relevant rectifications.

5. Key Performance Indicators

5.1 Situation of main indicators

5.1.1 Unit indicator

| Indicator | Unit | 2019 | 2018 | Increase/ Decrease (±) |
|--|-------------------|-------|--------|------------------------------|
| Comprehensive energy consumption per ton of steel | kgce/t | 572.8 | 576.4 | -3.6 |
| Fresh water consumption per ton of steel | m ³ /t | 2.99 | 3.29 | -0.3 |
| Sulfur dioxide emissions | kg/t | 0.45 | 0.42 | 0.03 |
| NOx emissions | kg/t | 1.05 | 1.09 | -0.04 |
| COD emissions | kg/t | 0.034 | 0.04 | -0.006 |
| Particulate matter emissions | kg/t | 0.29 | 0.34 | -0.05 |
| Ammonia nitrogen emissions | kg/t | 0.002 | 0.0025 | -0.0005 |
| Comprehensive utilization rate of solid waste | % | 99.98 | 99.83 | 0.15 |



5.1.2 Total energy consumption

| Energy category | Unit | 2019 | 2018 | Increase/ Decrease (±) |
|-----------------|---------------------|--------------|-------|------------------------------|
| Raw coal | 10,000 tons | 296 | 314 | -18 |
| Clean coal | 10,000 tons | 660 | 640 | 20 |
| Coke | 10,000 tons | 158 | 153 | 5 |
| Electricity | 100 million kWh | 35 | 36 | -1 |
| Diesel | Ton | 4,129 | 4,003 | 126 |
| Gasoline | Ton | 134 | 171 | -37 |
| Natural gas | 10,000 cubic meters | 1,311 | 1,310 | 1 |

5.2 Total gas emissions and density

Due to great importance attached to energy-saving and low-carbon development, the Company has continuously conducted the inventory of carbon assets and prepared the emission reports based on the requirements of relevant government authorities. In 2018 and 2019, the carbon dioxide emissions per unit product were 1.93t/t and 1.92t/t (that of 2019 is yet to be verified by government authorities).

5.3 Total hazardous waste and density

In 2019, the Company generated 287,931 tons of hazardous waste, and utilized and disposed of 261,038 tons, both of which have significantly decreased compared to 2018, and the safe disposal rate continued to remain at 100%.

5.4 Total non-hazardous waste and density

In 2019, the Company generated solid waste of 8.0758 million tons and utilized 8.7046 million tons, both of which have slightly increased compared to 2018. The Company's utilization rate reached 99.98%, higher than the target of 99.5%.

5.5 Measures for Emission Reduction and Results

- Implementation of pollution prevention from the source. The design and planning of new projects not only met but exceeded national industrial policies and steel industry access standards. When purchasing equipment, the Company gave priority to environmental labeling products with less impact on the environment under the same technical and service indicators. The Company implemented the “fine material principle” in production through using imported high-grade, low-sulfur ore and purchasing low-sulfur coal, thus preventing pollution from the source.
- Continuous promotion of efficient operation of systems. The efficient operation of systems was continuously promoted in accordance with the requirements of ISO14001-2015 and GB/T 23331-2012. The Company has conducted activities on a regular basis, such as the identification and control of the full life-cycle environmental factors, the identification and control of major energy consumption, compliance assessment, management improvement, and internal audit, and ceaselessly improved the mechanism to promote the energy and environmental performance.
- Intensification of the management and control of the environmental protection facilities and improvement of the operation level. The Company has a complete set of environmental protection facilities, including 70 water treatment facilities, 246 atmospheric treatment facilities, 15 solid waste treatment facilities, 214 online pollution source monitoring facilities, and 21 video monitoring facilities. The Company intensified the management and control of the environmental protection facilities, clarified the responsible parties, synchronized operation and maintenance of the environmental protection facilities and main facilities, and organized emergency repairs in case of abnormalities or failures. Meanwhile, some environmental protection facilities were operated in the custody of vendors. In 2019, the exhaust gas treatment met all targets, and particulate matter per ton of steel, NO_x, COD and ammonia nitrogen decreased by 14.7%, 3.67%, 15%, and 20%, respectively.



- Sorting-out, identification and implementation of the important environmental risk management points. The Company prepared inspection plans on a weekly basis, rolled out inspections to all units, and continuously rectified problems found during inspections in accordance with the PDCA deadline. The Company further enhanced online management and monitoring of pollution sources (based on hourly meter reading system), strengthened the monitoring of process data, and timely found and dealt with problems. Using environmental information system, the Company implemented full-coverage, all-weather monitoring of the key furnaces and transfer stations, and highlighted daily supervision and strict assessment.
- Continuous pushing forward of implementation of environmental protection governance projects. In order to earnestly implement the *Opinions on Promoting the Implementation of Ultra-Low Emissions in the Iron and Steel Industry* [HDQ (2019) No. 35] issued by the Ministry of Ecology and Environment and other four ministries and commissions, the Company continued to push forward with ultra-low emission retrofitting works in accordance with the Three-year Action Plan for Defense of Blue Sky, Clear Water, and Pure Land in 2019. There were 86 projects arranged and implemented for environmental protection plan, including: 38 organized emission treatment projects, 26 unorganized emission treatment projects, 13 waste water treatment and water resource utilization projects, 7 solid waste treatment projects, and 2 projects for other treatments. Some projects are implemented across several years.

5.6 *Disposal Methods for Non-hazardous Waste, Measures for Production Reduction, and Their Results*

The Company actively and effectively used solid waste resources for recycling. Detailed management were carried out in terms of classification, storage, treatment, utilization and other links of the solid waste, and all iron-containing dust and sludge with low iron content have been recycled. Blast furnace slag and iron oxide scale were all recovered for sale or further processing. Based on the internal production system, the Company utilized and disposed of waste in accordance with the “3R” principles of the circular economy, introduced an incentive mechanism for internal waste disposal, and encouraged inter-plant waste utilization and disposal.

5.7 Strict Implementation of Hazardous Waste Management

The Company formulated the *Hazardous Waste Management Measures* in accordance with relevant national policies on hazardous waste management to comprehensively control the types, generation, disposal and transfer of hazardous wastes. In 2019, the qualification rate of standardized management of manufacturers' hazardous waste and the safe disposal rate of hazardous waste remained at 100%.

6. Construction and Operation of Environmental Protection Facilities

A total of 36 solid waste treatment facilities covering the entire production system have been built and put into use by the Company, including 15 key solid waste treatment facilities (sets). The operation of these facilities (including the utilization system of sludge transportation, sintering and spraying in converter, the comprehensive utilization technology of dezincification and pelletization in rotary hearth furnace with dust and sludge of blast furnace, the fixed slag line processing system for steel slag in converter, the air quenching and water quenching production line for steel slag in converter, the hot disintegration and magnetic separation treatment production line for steel slag in converter, the slag treatment production line in blast furnace, the regeneration processing line of hot-rolling and pickling, and the production line for selective collection of dry ash from thermoelectric furnaces) has played a key role in effectively treating and disposing of the solid waste generated by the Company and ensuring the normal operation of the Company's production.

7. Environmental Protection Investment and Environmental Protection Technology Development

In 2019, the company completed 21 environmental protection projects with an investment of RMB358 million, including: 1# furnace front, under-tank dust removal and 1720 acid regeneration acid fog cooling purification transformation, environmental control over batching line of sintering batching room in north zone of general iron-making plant, new dust removal system project on 3# blast furnace ore tank in general port material plant, the third level dust removal project of converter in No.1 steel rolling plant, addition of desulphurization and denitrification device for 7# coke oven in general coking plant, environmental protection renovation project for intelligent container transportation, resource company light bulb line, dry slag base hardening transformation and central yard greenhouse closing project, and energy control center – silicon steel waste water treatment station renovation project.



In addition, there are 21 projects under construction (including projects already approved) with a planned investment of RMB2.396 billion, including: steel-making workshop closing project of No.1 and No.4 general steel rolling plants, 3# sintering machine head flue gas denitration transformation project, silo project in south zone of general coking plant, addition of dry quenching dust removal facilities in south and north zones, environmental protection upgrade and intelligent transformation project of Masteel's raw material yard, technical renovation project for safety of raw material corridor from general port material plant to No.2 iron plant, slag hill sewage treatment system project in south zone of resource company, etc.

In the development of ultra-low emission technology, the company adopts POSDA desulphurization technology in 3# sintering machine and 1#2# shaft furnaces for initial implementation of ultra-low emissions; and the application of efficient folding filter cylinder in bag dust removal has been successful.

In recent years, the Company achieved a breakthrough in solar photovoltaic power generation. An installed capacity of 5.95MW for photovoltaic power generation was completed in 2019 and it is planned to construct 18.81MW in 2020, upon completion of which the emission of greenhouse gases will reduced by approximately 15,000 tons every year.

III. NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION

In order to reduce the impact of operation on the environment and natural resources, the company lays emphasis on product upgrading and industrial chain extension, and actively grabs the opportunity of the state promoting the reduction of excess steel production capacity to steadily eliminate the backward facilities, continuously accelerate the pace of structural adjustment, and further improve the level of energy conservation and environmental protection.

1. Energy Management

- Focusing on improving the quality and efficiency, and taking the benchmarking & tapping potentials as an important starting point, with the purpose of indicator upgrading, the company has established an energy benchmarking implementation program and indicator benchmark values such as comprehensive energy consumption per ton of steel, process energy consumption, etc. Each manufacturing unit has increased effort to benchmarking with obvious results. In order to implement the national policy of “double control” of total volume and intensity of energy consumption and total coal consumption control, the company has formulated the *2018-2020 Work Plan for Reduction and Replacement of Coal Consumption*, which has been released for implementation. In the 2019 national benchmarking competition on energy conservation and consumption reduction of key large energy-consuming steel production equipment, the company made great achievements again, with A# sintering machine of general iron making plant gaining the title of “Champion Furnace” among 300m²+ sintering machines, and 2# converter of No.4 steel rolling plant gaining the title of “Champion Converter” among 200t+ converters.
- The company vigorously promotes the construction of key energy projects and has achieved remarkable results. In 2019, the company implemented 15 contract energy management projects, saving 43,000 tons of standard coal with an annual benefit of RMB64.2 million, including flue gas waste heat recovery for bar heating furnace of long material division, 1580 heating furnace of No.4 steel rolling plant, cold rolling 2130 annealing furnace, etc., intelligent burning of hot-blast stove, energy-saving transformation of zero air loss dryer, photovoltaic power generation, recovery of waste heat from flue gas of special steel electric furnace, recovery, purification and reuse of exhaust gas from bell furnace of cold rolling plant in south zone, etc.



2. Environmental Protection Management

Based on the concept of “environmental management and green development”, the company has clarified the working ideas of strategic environmental management and formulated the environmental policy of “beautiful environment, green development and urban factory”. In 2019, according to the company’s institutional reform and new changes in national laws and regulations, five revised versions of systems were released: *Solid Waste Management Procedures*, *Measures for the Management of Radioactive Sources and Radioactive Devices*, *Radiation Accident Contingency Plan*, *Emergency Plan for Heavy Pollution Weather and Major Activities*, *Measures for the Management of Environmental Protection Projects*, with a relatively sophisticated mechanism for continuous improvement of the environmental management system; the company takes the annual energy and environmental protection work plan and the energy and environmental protection target responsibility statement as the starting point, breaks down the main targets and key works step by step and assigns them to the relevant responsible departments and units, and carries out process monitoring and regular evaluation; the company strictly implements the *Environmental Protection Law of the People’s Republic of China*, *Environmental Impact Assessment Law*, *Atmospheric Pollution Prevention Law*, *Water Pollution Prevention and Control Law*, *Solid Waste Pollution Prevention and Control Law* and other relevant laws and regulations, and has set up internal control standards for some pollutants that are stricter than the national emission standards.

Carry out environmental assessments for construction projects in accordance with the law. Strengthening the management of environmental assessments for the specific projects, in order to cope with policy changes, the company gives importance to communication and coordination with government authorities and takes such measures as preparing environmental assessment documents in advance, reinforcing the system of pre-review before submission for approval, establishing a constraint mechanism of consulting units, synchronizing the government acceptance announcement and environmental assessment modification, etc. In 2019, the company carried out a total of 41 environmental assessment projects, including 5 report documents, 16 report forms and 20 registration forms; and completed environmental assessment approval for 11 projects including 7#8# coke oven desulfurization and denitration, new silo project in south zone of general coking plant, and environmental impact registration forms for 20 projects, while environmental assessments for 10 projects are proceeding in an orderly manner.

With environmental risk control as the core, the company implements on-site prevention and control, stabilizes the discharge of pollutants to standards, and improves the online monitoring of pollution sources: in 2019, the company added 18 new online monitoring devices, and in accordance with the requirements of local government departments and Masteel's own management needs, the company will further add 40 online monitoring devices and 190 sets of video surveillance equipment for pollutant monitoring and control in 2020; meanwhile, as per the latest national online monitoring standards, the company revised the management measures, further strengthened the online monitoring operation and maintenance management, carried out relevant work by the 100% standard for daily average of online outlets, with zero environmental pollution accident in the whole year.

Standardize the management of solid waste (hazardous waste). Through the standardized management of on-site temporary storage points, realize online declaration for all outsourced disposals, with complete transfer sheets and ledgers, under a mode of internal disposal analogous to external disposal, using internal transfer sheets for timely transfer and disposal, 100% up to the standard with respect to standardized management of hazardous waste; strengthen the safety management of nuclear radiation environment, with radiation source being 100% safe and under control.

In 2019, in the corporate environmental credit rating by the Environmental Protection Department of Anhui Province, an entity of the company was awarded the title of "High-integrity Enterprise" at the provincial level, and two entities were awarded the title of "Good Enterprise"; Changjiang Steel was awarded the title of green factory in Anhui Province; H-type steel was certified as green product.

SECTION VIII SUPPLIER MANAGEMENT

I. POLICY & IMPLEMENTATION

1. The company has developed the *Product Quality Planning Management Procedures* to make planning for product quality based on customer requirements. Being product demand-oriented, the company has formulated such management standards as *Supplier Management Procedures*, *Procurement Management Procedures*, *Measures for the Management of Approval on Use of Raw Materials*, *Measures for the Management of Quality Verification of Raw Materials*, etc. to standardize the procurement process, optimize the procurement channel, and perform scientific management of suppliers, so as to ensure the purchased products conform to the quality, environment, energy, occupational health and safety, and measuring system requirements.



2. Attach importance to layout of resources and logistics, with regional supply and overall consideration. Hold market analysis meeting every week to analyze the social resources, natural environment, social environment and other factors affecting procurement, so as to grasp the environmental and social risks of the supply chain, and timely launch emergency plans to ensure the safety of supply.
3. Promote environmental management and deepen green procurement.
4. Attach importance to the construction of supply chain relationship management, so as to achieve fairness and justice between supplier and demander, and win-win cooperation. Lay emphasis on the integrity construction between supplier and demander to make transparent procurement.

II. KEY PERFORMANCE INDICATORS

The company insists on creating a “safe, stable, efficient, sustainable and competitive” supply chain. Adhering to the concept of “open the wider door and raise the higher threshold”, through the “Supplier Access Information Platform” that is made public, widely absorb suppliers with resource advantage, quality advantage and brand advantage. At present, there are 1,659 registered suppliers, including 1,619 domestic suppliers and 40 foreign suppliers.

The company strengthens the two-party review of suppliers, including the access review for the new suppliers and the capacity review for the registered suppliers; conducts dynamic evaluation of suppliers based on objective performance data, and on the basis of fairness, honesty, trust and equal cooperation, gives priority to honest and high-quality suppliers, so as to continuously optimize the supplier team. Strictly control exclusive procurement and reduce procurement risks.

In the process of upgrading the IATF16949 quality system in 2017, the company further required use of systematic thinking and innovate management to continuously improve the operation mechanism of the supplier quality control system, and continuously develop the supplier quality system. For suppliers of the key products and automotive steel products, the quality system shall be certified to ISO9001 by an accredited cooperative certification body. At present, suppliers of the key products and automotive steel products have been 100% certified by ISO9001 quality system; Meanwhile, on-site two-party review of 17 suppliers was conducted in 2019, and all of them passed the review.

The company grasps the environmental and social risks of the supply chain from the aspects of resource allocation, regional layout, logistics, environment, financial status, and national policy, and launches emergency plans timely to ensure the safety of supply; by integrating high-quality resources of the supply chain, reducing intermediate costs, achieves a win-win goal; promotes environmental operation and deepens green procurement.

SECTION IX PRODUCT MANUFACTURING

I POLICIES AND EXECUTION

Based on its own circumstances the Company has prepared a *Quality Manual* abiding to the requirements of ISO9001 quality management system. The *Quality Manual* serves as a guiding book for quality management of the Company. *Product Quality Advanced Planning and Scheduling Procedures* and *Production Process Control Procedures*, among other procedures the Company has mapped out based on the *Quality Manual*, are designed to plan for and schedule product quality in advance, control and manage the planning and scheduling process and keep under control all sorts of factors existing in production and service rendering that have an impact on product quality. These procedures are functional and adequate to assure compliance of the Company's products with the needs of customers and legal requirements and enable the Company to offer satisfactory products and services to its customers.

II KEY PERFORMANCE INDICATORS

1. **Maintained zero recall of sold or delivered products because of safety or health reasons.**
2. **Complaints about products and services and countermeasures**

In 2019, the customer service system of the Company received a total of 1,326 complaints from customers, The number of objections increased by 16.21% year-on-year, but the amount of claims decreased by 16.37%. The Company has taken actions as follows to address these complaints:

- Establishing a customer return visit system. For customers with more complaints and large complaints in a timely manner, the Company will keep abreast of their latest developments and needs, and include the results of such visits in the monthly report of customer service operation and report at the regular customer service meeting.
- The role of mold-making experts is given full play. Through the training of back-up teams by means of mentoring, the ability of mold makers at branches and the processing centers will be enhanced, thereby continuously improving the service ability of customer service personnel.
- It is to establish a customer file system and implement centralized and unified management. The needs of key customers, end clients and car manufacturers are accurately identified so as to form external design inputs.



3. Best practices relating to maintenance and protection of intellectual properties

- Incentive and guidance and patent quality improvement. Magang has introduced the policy incentives for intellectual property rights. On the basis of the national “one award and two remuneration”, Magang has set up a patent acceptance award, launched the “two awards and two remuneration” and increase in the award of remuneration, which greatly improved the enthusiasm and creativity of employees in patent invention. In 2019, the Company applied for 350 patents, including 200 invention patents; 228 new authorized patents, including 109 invention patents. The number of patent applications increased by 38% year-on-year.
- Scientific layout to enhance product competitiveness. Magang closely integrates the intellectual property rights with enterprise industrial structure adjustment, technology development and marketing, and actively builds a number of patent pools such as rail transit, high-performance building steel, automobile plate, electric steel and environmental friendly coke oven technology to protect product technology and market.
- The use of patents reduces the risk and cost reduction. Focusing on the product structure of Magang, the Company actively promoted the patent analysis and early warning of key products and key markets, implemented the intellectual property rights appraisal system for major scientific research projects and market development, effectively reduced the risk of product infringement, project investment, market development and overseas rights protection, and promoted the industrialization of product patents. The Group provided patent information and patent analysis reports for silicon steel, automobile plate and special steel APQP project.
- Protection of patents to prevent the loss of intangible assets. The Company will improve the intellectual property rights protection system, strengthen the protection of intellectual property rights such as technical confidentiality and patents in engineering and equipment outsourcing activities, and establish the intellectual property rights protection mechanism in the joint venture process of engineering technological transformation and equipment commissioned processing projects to prevent the loss of intangible assets of the Company. In 2019, the Company commissioned Beijing Pan-China Assets Appraisal Co., Ltd. to conduct a valuation on the market value of intangible assets such as patents, technical secrets and trademarks in relation to the production of steel wheels and couplings.
- In order to improve the quality of patents, strengthen the training of patent knowledge internally and strengthen the quality management of patent agencies externally, the agencies are required to arrange senior agents to write the application of the unit and enhance the search efforts, and change the agency service fee from fixed fee model to risk agency fee model.

4. Quality test and product recall

- The *Management Procedures for Product Monitoring and Measurement* was established to regulate the monitoring and measurement of purchased products, process products and final products to verify that the products achieve the requirements.
- Establish the *Control and Management Procedures for Non-conforming Products*, to prevent the unintended use or delivery of the nonconforming products, and effectively identify, control and manage the nonconforming products.
- Establish a quality suspension system, strengthen quality control, standardize inter-factory quality issues arbitration, and strengthen on-site inspection supervision and product judgment.
- Established a three-tiered quality inspection system to normalize, standardize and systematize quality inspection activities.

5. Customer data and privacy policy, execution and supervision

In terms of policy requirements, the Group has formulated and implemented the *Sales Management Measures* to standardize internal work processes and protect customer information and privacy. In terms of hardware, independent servers are used to achieve physical separation of office network and business network; In terms of software, we develop independent application software; In terms of personnel, customer managers are trained and required to be certified to ensure that customer information and privacy will not leaking. The Company supervises the implementation of relevant policies by carrying out efficiency monitoring project.



SECTION X CUSTOMER

I. POLICIES AND EXECUTION

In accordance with the product positioning and market strategy of the Company, customers in the same market segment are classified into Strategic Customer (Class AAAAA), Key Customer (Class AAAA) and General Customer (Class AAA) and managed and served differently. In terms of the nature of the customer, the customers are divided into direct-supply terminal customers, three-way direct-supply terminal customers and dealers. The Company organizes unified evaluation and sets the customer's grading standards. Based on the results, the Company drafts next year's sales and service policies and submits to the board for approval. In the event of a major quality issue or customer complaint, the Company will promptly take action to minimize the negative impact. According to the customer needs, the Company's sales and service teams will provide personalized services for different customers to meet their different expectations.

II. KEY PERFORMANCE INDICATORS

1. Number of customers by region: In 2019, the Company had a total of 1,254 customers, including 763 in eastern China, 203 in southern China, 60 in northern China, 91 in southwestern China and 137 outside China.
2. Conventions governing the choice of customers: It is required to concentrate on the surrounding market and scale down the coverage of product sales; the emerging markets in central and southwestern China may be developed reasonably by taking advantage of the Yangtze River; river and ocean transport may be combined to set foot in the southern and northern China market. An effort should be made to increase the number of key customers who are influential within China and look for terminals abroad. The Company will try to increase the total number of end users to more than 1,000 by "boosting foreign trade" and "diversifying domestic trade".
3. Customer satisfaction: In 2019, the Company optimized the evaluation system of customer satisfaction and achieved a customer satisfaction rate of 87.9%, representing a year-on-year increase of 0.2 percentage points.

SECTION XI ANTI-CORRUPTION

I. ENFORCEMENT OF THE CPC DISCIPLINES AND INTERNAL RULES OF THE COMPANY

1. Observe the CPC rules and disciplines: *Several Rules for Inner-Party Politics Under New Circumstances*, *Anti-corruption Self-discipline Code of Conduct of the Community Party of China*, *Disciplinary Sanction Provisions of the CPC*, *Accountability Provisions of the CPC*, *Internal Supervision Provisions of the CPC*, *Working Rules for Tour Inspections of CPC*, *Supervision and Discipline Enforcement Rules for Discipline Inspection Authorities of the CPC (Trial Implementation)*, *Implementation Rules of Case Investigation Provisions for Discipline Inspection Authorities of the CPC* and *Anticorruption Provisions for Performance of Duties by Heads of State-owned Enterprises*.
2. Company rules and regulations implemented: *General Rules for Reward and Punishment of Ma Steel Employees (Trial Implementation)*, *Suggestions on Implementation of Party Committee's Subject Responsibility and Discipline Committee's Supervision Responsibility Regarding Construction of An Uncorrupted Party* and the methods and responsibility list for assessment of the implementation of Party Committee's subject responsibility and Discipline Committee's supervision responsibility regarding the construction of an uncorrupted party, responsibility and integrity report, and overview acceptance, summoning, and responsibility investigation, *Regulations on Prohibition of "Unregistered Funds"*, *Measures for Implementing CPC Accountability Rules by Party Committee of Ma Steel Group*, *Rules for Implementation of Party Conduct and Anti-Corruption Responsibility System by Ma Steel Group*, *Suggestions on Comprehensive Implementation of Integrity Risk Control and Management*, *Rules for Public Integrity Commitment by Officers and Management of Ma Steel Group*, *Measures for Efficiency Supervision and Management*, *Measures for Project Approval Efficiency Supervision*, *Measures for Bidding Supervision Management*, *Measures for Implementation of Petition Supervision by Discipline Committee (Audit and Supervision Department)*, and *Regulations on Anti-Fraud of Ma Steel*.



II. KEY PERFORMANCE INDICATORS

1. During the reporting period, there are no employee corruption litigation case.

2. **Whistle Blowing Procedures**

While the petition overview office of the Company's Audit and Supervision Department is responsible for handling various violation reports, the supervisory teams of the second level units are responsible for dealing with the whistle blowing from their own units. The Company's mailing address for whistle blowing is as follows: Audit and Supervision Department, Ma Steel, No.8 Jiuhuaxi Road, Maanshan City, Anhui Province. The Company's telephone for whistle blowing is 0555-2876363 (also for fax), which is available for the public during working hours. Room 1513 in the main building of Ma Steel's administrative office building is designated as the place for whistle blowing visitors during working hours. The Company also set up an online whistle blowing module on Ma Steel's discipline and supervision website at <http://www.jwjcb.mg>.

Whistle blowing steps: read letters, receive visitors, answer calls or gather information reported online→register→submit for approval→investigate→wind up→reply or visit→statistics and analysis→archiving.

In respect of the leads found from the petition and reporting system, the issues shall be investigated and handled by the Company and the discipline inspection body of the second-level unit, under the authorization of the cadre administrative department, in an effort to strictly implement the examination and approval procedures. The major procedures and work steps are: acceptance of the application → completion of the *Preliminary Verification Report* → *Preliminary Review Case* → implementation of the *Preliminary Review Report* → preparation of the *Filing and Approval Report* → issuance of the *Filing Decision* → establish of the investigation plan → implementation of the investigation → conclusion of the investigation and preparation of the *Investigation Report* → transfer of the trial or the clues of suspected illegal and criminal issues to judicial authorities for handling in accordance with the law.

Supervision Method: The Company's supervision and audit department establish a working mechanism of mutual coordination and mutual restriction on the supervision, inspection, investigation, management and hearing of cases. First, supervision: fulfill the supervision responsibility, classify the problems detected, and supervise the rectification. Second, tip handling: strengthen the centralized management of tips about any problem, classified disposal and regular clearing. Third, sit-down talks and written inquiry: timely hold talks to make Party members and cadres as well as the targets of supervision to enhance the Party's sense of discipline and awareness. Fourth, preliminary verification: use solid efforts to carry out preliminary verification, collect objective evidence and ensure the authenticity and accuracy of clues about possible disciplinary or job-related crimes. Fifth, investigation: after preliminary verification, Party members and cadres, as well as those under supervision who are suspected of violating discipline or violating duty or committing crimes related to duty, shall be investigated for their disciplinary or legal liability. Sixth, hearing: examine and check suspected disciplinary or illegal criminal cases strictly according to rules and regulations, put forward opinions on disciplinary treatment or punishment, and ensure clear facts, conclusive evidence, accurate treatment, proper procedures, complete procedures and compliance. Seventh, management: and supervision earnestly fulfill the main responsibility of self-construction, strict education, management, supervision, strict implementation of the avoidance system, confidentiality system and work discipline; any dereliction of duty or negligence in maintaining the discipline of supervision and enforcement shall be held seriously accountable.

SECTION XII PUBLIC WELFARE

I. POLICY & IMPLEMENTATION

Located on the bank of the Yangtze River, the company faces a very serious flood control situation every year. Over the years, in addition to undertaking the regional flood control task in strict accordance with the *Flood Control Law of the People's Republic of China* and relevant laws and regulations, the company also actively assists government departments in flood control.

In the aspect of poverty alleviation and education, the company also takes the initiative to fulfill its due social responsibility and give back to the society. It has made every effort to create and consolidate a stable and harmonious relationship with the society, which has been unanimously recognized by government departments and local community.



II. KEY PERFORMANCE INDICATORS

1. Poverty alleviation

1.1 Overview

Two comrades (Wang Sen and Mao Jianzhong) of the company, as the seventh batch of selected cadres, were respectively arranged to carry out the poverty alleviation work at Malou Village, Wangyan Town, Funan County, and Liji Village, Dicheng Town. They promoted democratic management, implemented the “three-major and one-big” decision-making system, provided various services for the poor households, and through the publicity and implementation of the “ten poverty alleviation projects”, enabled the poor households to enjoy the full benefits of industrial, financial, employment, education, health, ecology and other national policies.

Over the past year, the company’s poverty alleviation cadres in Malou Village helped 81 poor households in application for distinctive industries, among which 18 were distinctive breeding industries and 63 were distinctive planting industries; and subsidized 17 students for compulsory education, 5 high school students, and 15 students for the Yulu Plan. All poor households in the village enjoyed the contracted services of rural doctors. A total of 27 dilapidated residences were renovated. The company’s poverty alleviation cadres in Liji Village helped 137 poor households in application for distinctive industries, among which 32 were distinctive breeding industries and 105 were distinctive planting industries; and subsidized 10 students for compulsory education, 3 high school students, and 20 students for the Yulu Plan. All poor households in the village enjoyed the contracted services of rural doctors. A total of 6 dilapidated residences were renovated.

Poverty alleviation by education is an effective way to break the intergenerational poverty. Under the contact of Mastee’s poverty alleviation team in village, in order to encourage the poor households and marginal households to continue their academic education and skills learning on the basis of nine-year compulsory education, the company provided grants of RMB2,000 per student per academic year to the poor households with children in high school or above. In 2019, the company paid out grants totaling RMB228,000 to 114 students. In addition, the company’s chairman Ding Yi, deputy general manager Fu Ming and two middle-level managers went to Funan County to visit the elderly and children in those poor households under assistance.

1.2 Statistics of targeted poverty reduction

| Indicator | 2019 | 2018 |
|--|--------------|---|
| I. Overall situation | | |
| Wherein: | | |
| 1. Funds (10,000 Yuan) | 22.8 | 86 |
| 2. Value of materials (10,000 Yuan) | – | 18.5 |
| 3. Number of the registered persons out of poverty (person) | 995 | 574 |
| II. Investment breakdown | | |
| 1. Poverty alleviation by industrial development | | |
| Wherein: | | |
| 1.1 Type of projects for poverty alleviation by industrial development | Other | Poverty alleviation by return on assets |
| 1.2 Number of the registered persons out of poverty (person) | 815 | – |
| 2. Poverty alleviation by education | | |
| Wherein: | | |
| 2.1 Amount of grants to poor students (10,000 Yuan) | 22.8 | 7.45 |
| 2.2 Number of poor students under grants (person) | 114 | 250 |
| 2.3 Amount of investment for improving education resources in poor areas (10,000 Yuan) | – | 0.2 |
| 3. Poverty alleviation by employment transfer | | |
| Wherein: | | |
| 3.1 Number of persons participating in vocational skills training (person/ training) | 83 | – |
| 3.2 Number of the registered poor persons with employment (person) | 50 | – |
| 4. Poverty alleviation by health | | |
| Wherein: Amount of investment for medical resources in poor areas (10,000 Yuan) | – | 0.55 |



| Indicator | 2019 | 2018 |
|--|------|--|
| 5. Poverty alleviation by society | | |
| Wherein: Amount of investment for targeted poverty alleviation (10,000 Yuan) | — | 86 |
| 6. Basic guarantee | | |
| Wherein: | | |
| 6.1 Number of “three-leftover” persons under assistance (person) | 8 | — |
| 6.2 Number of poor persons with disabilities under assistance (person) | 62 | — |
| 7. Other projects | | |
| Wherein: | | |
| 7.1 Number of projects (project) | | 1 |
| 7.2 Amount of investment (10,000 Yuan) | | 30 |
| 7.3 Number of the registered persons out of poverty (person) | | 11 |
| 7.4 Other project descriptions | | Help poor households renovate dilapidated residences |

2. In 2019, the company accepted internship from University of Science and Technology Beijing, Northeastern University, Wuhan University of Science and Technology, Anhui University of Technology, etc.
3. In 2019, a total of 1,777 employees participated in non-remunerated blood donation, with a total amount of nearly 380,000 milliliters, and a number of entities were rated as “Advanced Organization for Voluntary Blood Donation” in the city.
4. Anhui Changjiang Steel Co., Ltd., a controlled subsidiary of the company, donated RMB600,000 to the Red Cross Society of Taibai Town, Maanshan City in 2019.

5. Actively participate in Maanshan “Golden Autumn Flower Show”. In 2019, the company invested RMB350,000 for this purpose, with the exhibits fully reflecting the characteristics of Masteel, which was widely praised by citizens and won the first prize after exhibition at Flower Rain Square, an important landmark of Maanshan City.
6. Masteel volunteers keep providing convenient services on March 5, the volunteer service day; Meanwhile, they care about those disadvantaged groups, carry out “love pairing”, persist in helping students from poor households finish their studies, regularly organize young people to visit sunshine villages and welfare homes, and hold “love day” and other activities; and organize young volunteers to donate blood and clean up factory areas for many times.

SECTION XIII CONTACT US

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