



2020

Social Responsibility Report

Maanshan Iron and Steel Co., Ltd.

Green Magang Intelligent Future

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About the Report

• Solemn commitment

The Board of Directors of the Company and all its Directors guarantee that there are no fraudulent disclosures, misleading statements or material omissions in the Report and shall be individually and jointly responsible for its truthfulness, accuracy and integrity.

• Basis of report

The Report is based on GRI Standards, SDGs Compass, Guiding Opinions of State-owned Assets Supervision and Administration Commission of the State Council on Better Performance of Social Responsibilities of State-owned Enterprises, CASS-CSR4.0 of Chinese Academy of Social Sciences, Notice of Shanghai Stock Exchange on Strengthening Social Responsibility Undertaking of Listed Companies and Publishing Guidelines of Shanghai Stock Exchange for Environmental Information Disclosure of Listed Companies, and Guidelines of the Stock Exchange of Hong Kong on Environmental, Social and Governance Report. It is recommended to read the Report together with 2020 Annual Report of Maanshan Iron and Steel Co., Ltd. It shall be specially noted that see the annual report for the corporate governance (corporate governance).

• Scope of the Report

Unless specially specified, the Report mainly describes the performance of duty, practice and achievements of Magang and its subsidiaries Changjiang Steel, Hefei Company and Magang Rail Transportation Equipment Company in terms of integrity management, innovation-driven development, green development, caring for employees, co-development with partners and contribution to society from January 1, 2020 to December 31, 2020.

• Data declaration

Financial data in the Report shall be in CNY. For convenience of reference, the exchange rate of 1 USD=6.5249 CNY can be adopted for calculation (based on the CNY central parity rate published by the China Foreign Exchange Trade System on December 31, 2020 under the authorization of the People’s Bank of China). In case of EUR, it is recommended to adopt the exchange rate of 1 EUR=8.025 CNY for calculation under the same standard; In case of HKD, it is recommended to adopt the exchange rate of 1HKD=0.84164CNY for calculation under the same standard.

• Name description

“China Baowu”, “Baowu Group” and “China Baowu Group” used in the Report are the shorted form of China Baowu Steel Group Corporation Limited. “Magang Group”, “Magang Group Company” and “Group Company” used in the Report are the shorted form of “Magang (Group) Holding Co., Ltd.”. “Magang”, “Stock Company”, “Company”, “the Company” and “We” are the shorted form of Maanshan Iron and Steel Co., Ltd.. “Baosteel Hong Kong” is the shorted form of “Baosteel Hong Kong Investment Co., Ltd.”.

• Preparation process

Investigation of concerns of stakeholders – report planning – report framework construction – report preparation training – collection of materials – report preparation – internal discussion – report design – solicitation of opinions – report revision – management review – release of final draft.

• Text language

The Report shall be compiled in Simplified Chinese, traditional Chinese and English. In case of differences between three versions, the Simplified Chinese version shall prevail.

• Form of release

The Report will be published in printed version and PDF electronic version. The PDF electronic version can be downloaded at the social responsibility column (<http://www.magang.com.cn/d3/shzr/index.html>) at the official website of Magang. To reduce the impact of printing on the environment, we encourage readers to download the electronic version whenever possible.

The Report is printed on recycle paper. To save paper, we will limit the length to the greatest extent. For more information, visit the official website, WeChat official account or annual financial report of Magang for supplement.

For any questions or suggestions about the Report, please contact us by phone or letter for consultation. Our contact information is below:

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Message from Chairman

The year 2020 is the last year of building a moderately well-off society in an all-round way and the “13th Five-Year” Plan and also a key year for Magang accelerating the promotion of high-quality transformation development. Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for the New Era, we have deeply studied and implemented the spirits of the 19th CPC National Congress, the Second Plenary Meeting, Third Plenary Meeting, Fourth Plenary Meeting and Fifth Plenary Meeting of the Nineteenth Central Committee of the Communist Party of China, the spirit of the important speech delivered by General Secretary Xi Jinping during his inspection of Magang, focused on the management theme of “Comprehensive benchmarking and finding differences and creating a world first class enterprise” , to build a great and powerful new Magang and make effort to create a new situation of high-quality development.

Green development has stepped into a new phase. We have deeply implemented the national development strategy of “ecological civilization construction” , upheld green development and seeking temporary and permanent solutions, and deeply practiced the operation philosophy of environmental protection. In accordance with the overall requirements of “standard pollutant emission, effective control of total amount, controllable environment risk, compliance of construction projects, clean production process and recycling of resources” , we have vigorously promoted “treatment of three wastes - waste gas, waste water and solid waste” and “cleaning, greening, beautifying and civilizing” , “two higher and one integration” , accelerated the development of low carbon economy, followed the path of green development and eco-development, promoted integration and co-existence with the city, created “modern green urban factory” , built up Wisdom Park, Happy Avenue, North Ecological Park, South Landscape Park and other greening areas, achieved new greening of 406,600 m² with an increase of 155,000 m² and green coverage rate of 30.7%. We actively advocate green purchasing, green manufacturing, green marketing, build a green supply chain, build a new model of green development, supporting the achievement of the green development target and overall strategic target of the Company. In 2020, we have achieved 43 ultra-low emission projects and the rate of ultra-low emission of exhaust gas above 70%. Compared with that in 2019, the crude steel output has been increase by 1,130,000t , but the total emissions of sulfur dioxide and nitric oxide have been reduced by 4.54% and 9.41%, respectively, the total emissions of particulate matters have been reduced by 5.76% organizationally, the total drainage of industrial waste water has been reduced by 13.4%; The comprehensive energy consumption per ton of steel has been reduced to 560.76 kgce/t, the carbon dioxide emission per ton of steel has been reduced by 0.03 t/t, the fresh water consumption of per ton of steel was 2.69m³/t, the comprehensive utilization rate of solid waste has reached 99.87%, and the safe disposal rate of hazardous waste has reached 100%.

New breakthrough has been achieved in reform and innovation. In accordance with the management model of Baowu, in combination with self-development position, we have vigorously promoted the management and control mode and organized organization reform, and achieved more streamlined organizations, leaner personnel, more effective management and optimized process subject to the scale, professional and platform-based international development requirements. We have focused on technology leadership, further improved the system and mechanism for vitality innovation and potential creating, continuously increased the technological innovation input, accelerated efforts to make breakthrough in new technology, new materials and new products, and overcome bottlenecks in H-Beam, high-quality special steel and other key areas. We have adhered to innovation-driven development, accelerated the application of new generation of information communication technology and promoted the rapid development of smart manufacturing by following the implementation route of “four unifications” . We have adhered to science and technology idea of “technology advancement and innovation-driven development” , vigorously implemented technology and product innovation, established the customer-oriented, policy-led and enterprise-subject technology innovation system with “government, enterprises, universities, research institutes and users” openness and synergy, continuously deepened innovation management and continuously improved brand influence and brand value.

New achievement has been made in poverty elimination. We have resolutely implemented the decisions and arrangements on poverty elimination of the Party Central Committee, concentrated on targeted poverty alleviation, increased special funds for poverty relief efforts and efforts in poverty alleviation by developing industry, and made efforts in solving prominent problems in “two no-worry and three guarantee” and achieving “turning China into a prosperous country with a strong industry, a beautiful ecological environment and booming rural areas” . In 2020, the Company has intensified the support for the targeted poverty alleviation counties, and has invested CNY 1.4 million for supporting Malou Village and Liji Village to implement the distribution of dividends by shares of village collective; We have organized all units to purchase agricultural products from targeted assistance regions of China Bowu and Funan County, with the accumulative purchase amount of CNY 13,828,000. We have helped targeted poverty alleviation counties eliminate poverty.

New progress has been made in employee development. We have firmly practiced the idea of “Humanistic Magang” , taken many measures to continuously improve employee engagement and recognition, and focused on striver and contributor orientation, fully opened the career development channels for employees at all levels and classes, improved the selection, training and incentive mechanism of talents, fully aroused the initiative and creativity of employees, laying a solid foundation for the high-quality development in the new area. We have solved the most concerned, most direct and most realistic problems of employees, and actively led employees to love the enterprise and life and achieve the joint development of employees and the enterprise through supporting employees with difficulty and organizing recreational activities.

The enterprise development is inseparable from the opportunities of the era and the overall development situation of the country. Magang is in a great opportunity period for the integrated development of the Yangtze River Delta Area. We will strictly adhere to “integration” and “high quality” , fully play the advantage of location, resources and product structure, integrate and optimize all factors, increase innovation, promote industry transformation and upgrading, improve the ability and level of serving the Yangtze River Delta Area, improve market competitiveness and market share, and constantly keep growing in serving the integrated development strategy of the Yangtze River Delta Area.

Secretary of the Party
Committee and the Chairman
of Magang

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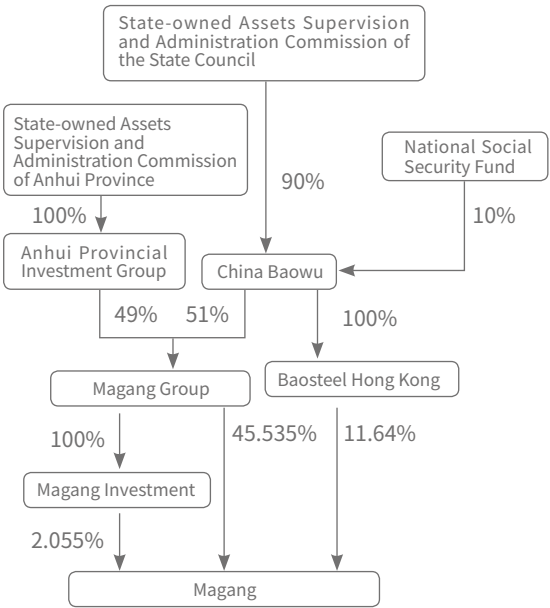
About Magang



Company profile

Magang is one of the largest steel manufacturers and retailers in China, has the supporting production scale of 20 million tons of steel and over 20,000 employees. In 2020, the crude steel output of the Company firstly exceeded 20 million tons, reaching up to 20.97 million tons, with the year-on-year growth of 5.7%. The Company achieved the operation revenue of CNY 81.614 billion and the total profit of CNY 3.081 billion. The Company ranked 130 in 2020 Fortune Top 500 China Enterprises.

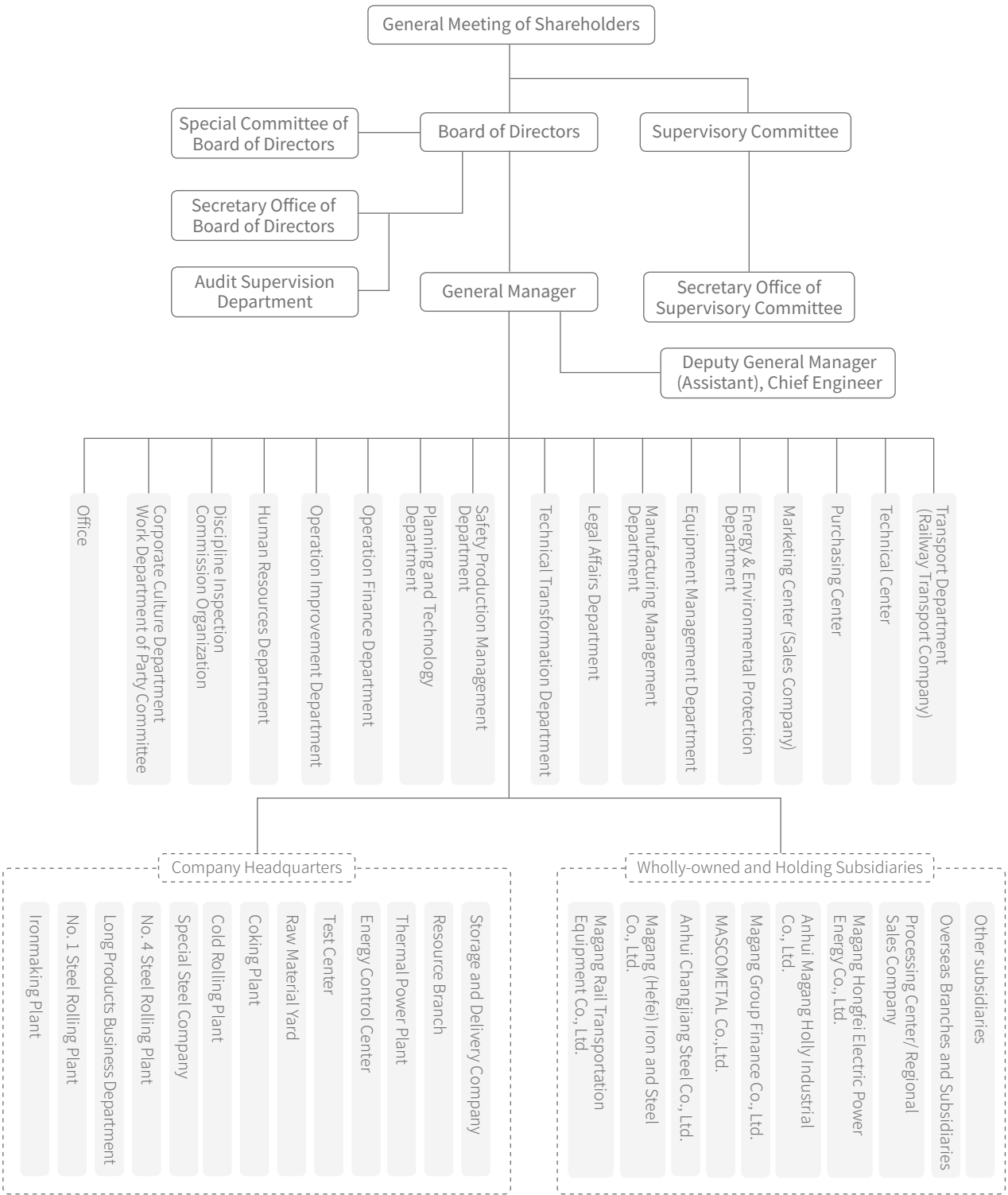
The predecessor of the Company is Maanshan Iron Factory founded in 1953. Maanshan Iron and Steel Company was founded in 1958. In 1993, reorganization of joint-stock system was conducted to Maanshan Iron and Steel Company. On September 1, 1993, it was divided into Maanshan Magang Corporation and Maanshan Iron and Steel Co., Ltd.. In 1998, the controlling shareholder Maanshan Magang Corporation was reorganized into Magang (Group) Holding Co., Ltd.. On September 19, 2019, the State-owned Assets Supervision and Administration Commission of Anhui Province which held 100% equity of Magang Group transferred 51% equity of Magang Group to China Baowu, with the direct controlling shareholder of the Company remaining unchanged, i.e. Magang Group. China Baowu became the indirect controlling shareholder of the Company. The actual controller of the Company changed to State-owned Assets Supervision and Administration Commission of the State Council from the State-owned Assets Supervision and Administration Commission of Anhui Province. From April 7, 2020 to July 13, 2020, the wholly-owned subsidiary Magang Group Investment Company accumulatively acquired 158,282,159 A-shares of the Company through the centralized bid trading system of the Shanghai Stock Exchange, with the accumulative increase proportion of 2.055% of the total share capital of the Company.



The Company issued H shares overseas from October 20, 1993 to October 26, 1993, and was listed on the Stock Exchange of Hong Kong on November 3, 1993. The Company issued CNY ordinary shares overseas from November 6, 1993 to December 25, 1993, and listed on Shanghai Stock Exchange on January 6, April 4 and September 6, 1994.

Organizational structure

Organizational Structure Chart of Maanshan Iron and Steel Co., Ltd.



Main business and products

The Company mainly engages in the production and sales of steel products. The main production process includes ironmaking, steelmaking and steel rolling. The main product of the Company is steel, roughly including steel plates, long products, train wheels and axles. The Company focuses on enhancing the core technological innovation ability and R&D strength, and launching new products constantly. In 2020, the accumulative development of new products achieved the year-on-year growth of 33%, creating sales profit of CNY 270 million, with the year-on-year growth of 154%. The Company firstly launched B356*406*634 S355J0 heavy H-beam, 458*417*30*50 Q355B heavy H-beam, High toughness hot-forming steel M1500LW+AS and high-strength aseismic rebar HRB635E. The Company achieved the export in batches of super-thick (80mm) Q355 hot-rolled H-beam. The supply amount of steel for gears and bearings for wind power energy exceeded 50,000t. The demonstration application of hot-rolled ultra-high strength steel M950JJ&M1200HS was conducted in light-weight concrete mixers and dumpers. Aluminum-silicon coated plates for home appliance took the leading position in domestic market.

Enterprise culture

Company values



Integrity



Innovation



Synergy



Sharing

Integrity: Basic rules of conduct

Keep the faith, giving top priority to absolute loyalty to the Party and the cause; Be loyal and faithful, acting by law, performing contract, implementing systems, completing tasks and fulfilling promise perfectly; Honest manufacturing, making production in strict accordance with the regulations and standards, and being careful in everything; Honest operation, creating values without damaging the interests of stakeholders; Seek truth from facts, respect facts, be what they appear to be, and do not hide problems and mistakes in work.

Synergy: The solid foundation for co-development

Perform their duties, uphold the spirit of contract, do not evade, complain, compromise, shirk or hold back, do all things within the scope of their responsibilities; Transposition thinking, making the previous process follow next process and auxiliary process complying with the main process; Unbounded duty, not limiting to the benefit of individuals and small teams and achieving the optimized configuration of resources to the greatest extent; Pull together and work hard as a team, make employee work for the same objective with the same faith.

Innovation: The spiritual core leading to progress

Technology leadership, concentrating disruptive, forward-looking, breakthrough technology to become excellent; Market orientation, taking users as the center, and continuously pursuing user satisfaction; Initiative spirit, with the initiative attitude, based on the position, taking problems as the innovative point and solving problems creatively; Break through the fixed thinking, and achieve the idea innovation, technology innovation, business model innovation, system and mechanism innovation with the courage of being the first; Make efforts in reform and establish the idea that everyone is an operator, everyone is an entrepreneur with the entrepreneurship spirit.

Sharing: Responsibility of continuous development

Resources sharing, actively and openly sharing information, knowledge and experience from the overall benefit; Achievement sharing, guaranteeing the rights of equal participation and equal development of employees, being people oriented and growing together; Co-construction and sharing, making progress together with stakeholders, testing our success with the success of cooperators, and jointly building a high-quality iron & steel ecosphere; Responsibility sharing, integrating and co-existing with the society, harmoniously co-existing with the nature, and practicing the enterprise social responsibility.

Big events in 2020

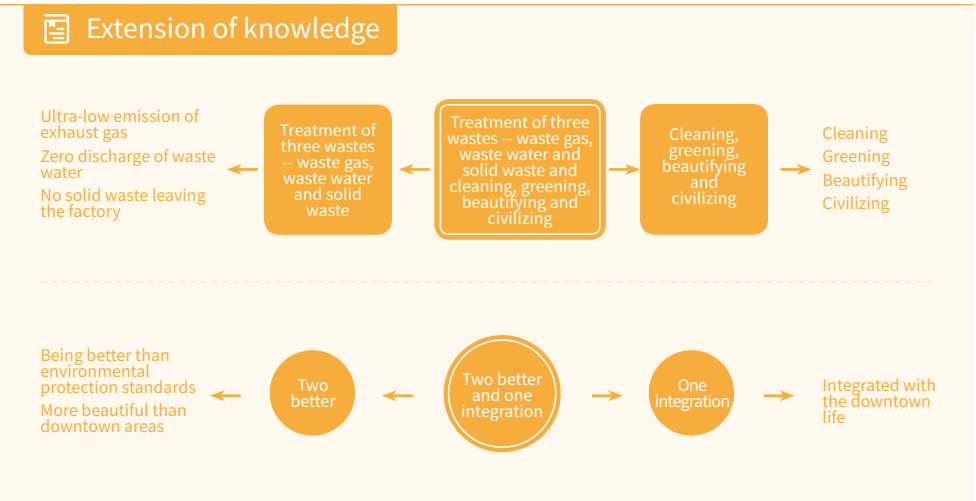


Focus

Promote green development ability and construct a modern in-city steel plant

When ecology prospers, civilization prospers; When ecology decays, civilization decays. The construction of ecological civilization is an inevitable requirement for the harmonious development between man and nature, and a fundamental for the sustainable development of the Chinese nation. In the new historical period, the state has made great efforts to promote ecological civilization construction and supply-side structural reform, focused on the key and difficult problems in ecological civilization construction and supply-side reform. The tide of transformation and upgrading of the steel industry is surging.

By deeply implementing the national thought of ecological civilization construction, integrating the environmental protection work method of “treatment of three wastes -- waste gas, waste water and solid waste and cleaning, greening, beautifying and civilizing” and the environmental protection target of “two better and one integration” of China Baowu into the daily work, taking “ultra-low emission of exhaust gas, zero discharge of waste water, and no solid waste leaving the factory” as the overall target, Magang has formulated “Treatment of Three Wastes” Action Plan, Plan for Ecological Protection and Environmental Governance of Yangtze River and Action Plan for Ultra-Low Emissions Upgrading, to define the target, measures and key tasks, and comprehensively promote green, circular and low-carbon development of the Company.



Ultra-low emission of exhaust gas

2020 target

Achieving the ultra-low emission rate of waste gas of 70%.

Achievements in 2020

43 ultra-low emission projects were completed. The rate of the ultra-low emission of waste gas reached up to above 70%.

Compare with that in 2019, the emission of sulfur dioxide was reduced by 380 t, with the reduction rate of 4.54%; The emission of nitric oxides was reduced by 1,914 t, with the reduction rate of 9.41%; The organized emission of particulate matters was reduced by 374 t, with the reduction rate of 5.76%.

Magang has actively implemented the work requirements of “treatment of three wastes -- waste gas, waste water and solid waste” and “cleaning, greening, beautifying and civilizing” of China Baowu, and taken a series of measures to accelerate and promote the ultra-low emission transformation and reduce the emission of pollutants significantly. In 2020, the Company set up 45 projects and determined the investment of CNY 2.368 billion, mainly conducted projects including desulfurization and denitration of 4 coke ovens, the exhaust gas desulfurization of 6 dry quenching ovens, desulfurization and denitration of 4 sintering machines and other organized emission transformation, dust removal upgrading and unorganized emission control, successfully achieving the transformation target of ultra-low emission rate of waste gas of 70%. The construction of a green in-city steel plant has stepped into the new phase.

Support from the top-level authorities

Established the “treatment of three wastes” work team under the leadership of the General Manager, led, coordinated and promoted the “treatment of three wastes” work. The specific “treatment of three wastes” projects were led by the company leaders respectively.

Strengthen synergy

Led by a deputy general manager, the ultra-low emission transformation process team with respect to pre-ironmaking, steel rolling, public auxiliary equipment and clean transport and the preliminary planning team of the environmental protection technology were established to deal with preliminary works of “treatment of three wastes”, among others, the technological upgrading, innovation and transformation scheme demonstration.

Define duties

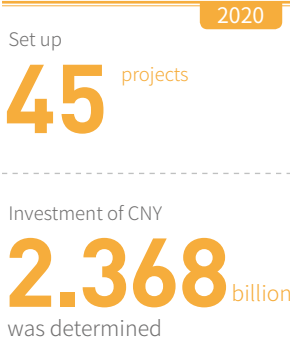
Issued the task list of “treatment of three wastes” to each responsible unit whose top leader bearing major responsibility to define tasks, requirements and period. Specific responsibilities were undertaken by personnel.

Highlight the key points

Concentrated on the achievement rate of ultra-low emissions, focused on provincial control projects, highlighted problem correction projects and planned projects in 2020, broke the routine, set the schedule in a reversed order, optimized nodes, constructed based on drawings and powerful promotion.

Strengthen management and control

Company leaders conducted specific scheduling every two weeks to coordinate the project implementation. Company leaders also led the team to organize and implement quarterly inspection, carry out daily inspection, weekly notification and monthly evaluation.



Zero discharge of waste water

🔄 2020 target

Discharge amount of industrial waste water is reduced by 10% compared with that in 2019.

📅 Achievements in 2020

Discharge amount of industrial waste water was reduced by 13.4% compared with that in 2019.

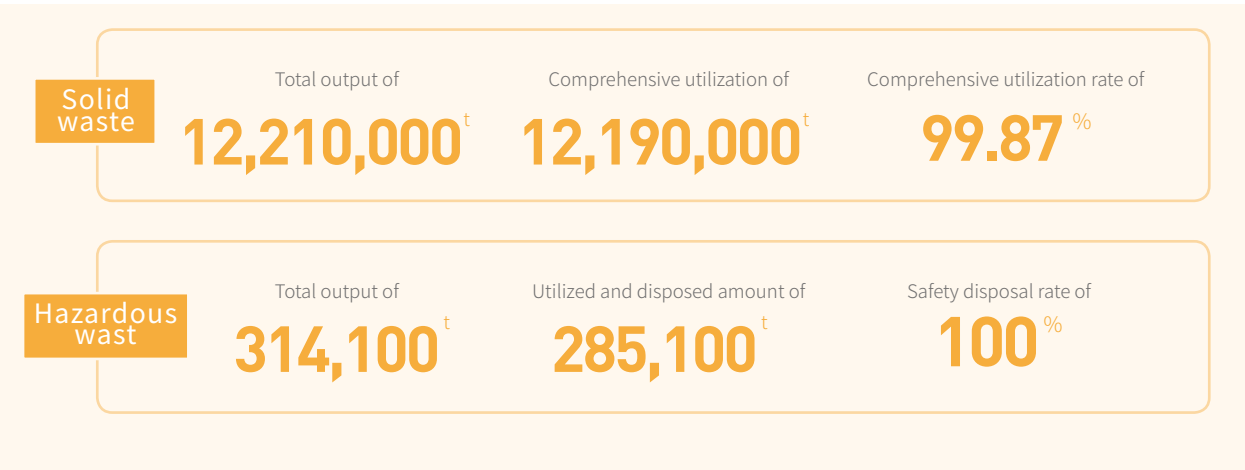
Magang prepared and issued the Plan for Ecological Protection and Environmental Governance of Yangtze River, to set the 2020 target of discharge amount of industrial waste water of reducing by 10% than that in 2019; Reduced the total discharge of waste water through the construction of the water-saving and discharge reduction project and reclaimed water reuse engineering, comprehensively promoted the diversion of rain and sewage water in southern area factories, the in-depth upgrading and transformation project of Liufen River Water Treatment Station and achieved zero discharge of industrial waste water in Liufen River.

No solid waste leaving the factory

🔄 2020 target

Establish a sound system of classified collection, comprehensive utilization and compliant disposal, realize effective whole-process management of solid waste disposal, recover valuable resources to the greatest extent, and finally realize the compliant disposal rate of solid waste of 100%, and the comprehensive utilization rate of solid waste of nearly 100%.

📅 Achievements in 2020



Magang formulated and issued the 2020 Work Plan of Magang on No Solid Waste Leaving the Factory, defining the targets, tasks and key works of no solid waste leaving the factory in 2020.

- **Set the quota indicator and promote the source reduction continuously**
Formulate the Notice on Issuing 2020 Quota Indicator for Hazardous Wastes Output of the Company, and set reduction indicators for 5 hazardous wastes with large output. Units involved shall control the generation of hazardous wastes from the source, implement the index through detailed decomposition, and formulate a feasible scheme, to establish an effective responsibility mechanism and evaluation system, ensuring effective achievement of the hazardous wastes indicator and forming the reduction trend.
- **Expand internal utilization ways, and strive to minimize solid wastes leaving the factory**
The Energy and Environment Department, Technology Center, Manufacturing Department and disposal unit shall cooperate and conduct continuous and deep research, to promote the return-to-production and utilization of hazardous solid wastes.
- **Adopt and formulate standards and achieve the sales of solid wastes as products**
Complete the sales of bulk industrial solid wastes as products, such as blast furnace slag cement, steel slag tailing, coal ash, desulphurization gypsum, iron oxide red, ferric dust and waste refractory material.



Factory environment governance

Magang has deeply implemented the national strategy for ecological civilization construction and development, adhered to the green development concept “two better and one integration” of China Baowu, increased the input and practice continuously, to carry out “cleaning, greening, beautifying and civilizing” by more beautiful than downtown areas, promote the integration of steel factories with the city, create “modern and green in-city steel factories” and make contribution for building a green and harmonious ecosphere. In 2020, with respect to green construction and landscape enhancement, the Company constructed the Intelligent Park, Happy Avenue, North Ecological Park, South Landscape Park and other greening areas, and completed newly-established greenlands of 406,600 m², increased by 155,000 m² than that of the previous year. The green coverage ratio has reached up to 30.7%, which changes the original factory scenes from full of vehicles and people into full of landscapes and gardens.

Construction of north ecological park project



North Ecological Park is known for the bulb-shaped Magang railway transport lines from a bird's eye view. It covers an area of 330,668 m² and interconnected with urban residential areas. In May 2020, based on maintaining original resources branches (steel slag processing plant and H-beam process center), Magang comprehensively improved the resources utilization efficiency and constructed Magang Happy Avenue, large parking lot, sunken green space, sparse woodland lawn and other functional areas through large-scale development and planning, removal of illegal buildings and reconstruction, repair and utilization of old buildings.



The straight and open Magang Happy Avenue is flanked by green area, with the total green areas of 122,188 m². According to the climate and soil conditions in the middle and lower reaches of the Yangtze River, in the park, there is a wide variety of tall trees, flowering shrubs and bright shrub zones, large lawn area and colorful flowers, forming a well-spaced and colorful ecological park with flowers and scenes. Magang Happy Avenue intersects with Happy Road. The Ecological Park integrates with the downtown area, is open to citizens. With open area and pleasant scenery, it has become a good leisure and rest place for citizens, presenting the beautiful scene of Magang "green in-city steel factory".

Construction of south landscape park project



Magang No. 3 Gate area is close to Tianmenshan Avenue and urban residential areas. It covers an area of about 50,000 m². There are original office buildings, craftsman bases, large alloy warehouse, dining halls, garages and other buildings and facilities in the area. The No.3 Factory Road traverses the area. Crowded buildings, winding and narrow roads, and busy traffic in the area are difficult for the site management.



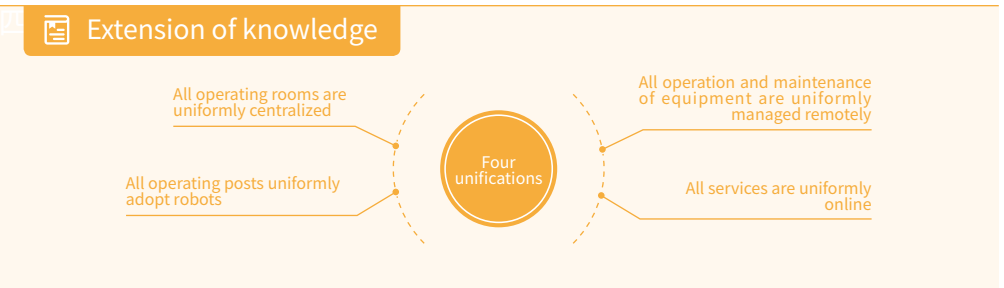
Concentrating on the comprehensive site remediation of south area of Magang, subject to the principal of removal of abandoned buildings, green construction, enhancement and beautifying, Magang organized the overall transformation of the area, including optimizing the layout of the cold-rolling office area, construction of intelligent cold-rolling control center, construction of functional parking lot, and beautifying the craftsman base; Removed alloy warehouse and other buildings, reconstructed green landscape park, straightened and broadened (to 18m) the No.3 Factory Road, broadened and reconstructed No.3 Gate, and the transformation and reconstruction area sums up to 43,216 m². Entering from No.3 Gate, you can have a panoramic view of the garden-style factory of Magang. The wide No.3 Factory Road are flanked by large green landscape park covering an area of 14,368 m² with modelled footpaths interspersed in it. It is relaxed and happy to walk in the park.

Focus

Make efforts to create a smart steel factory and accelerate the transformation and upgrading

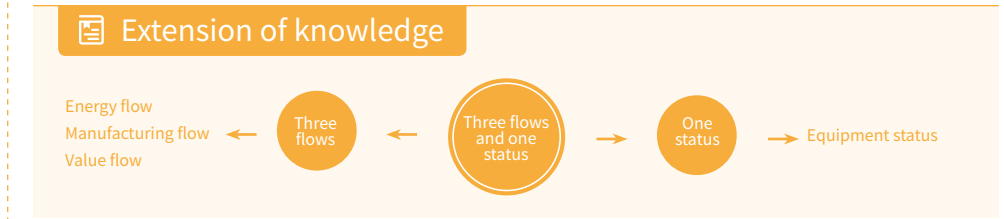
In the context of a new round of scientific and technological revolution and industrial transformation, intelligent manufacturing has become an important measure to lead the development of the manufacturing industry. The steel industry is an important pillar of industrial production. The only road for achieving more high-quality development of the steel industry is to grasp the good opportunities for development from the new generation of information technology, integrate the intelligence with decision-making of steel manufacturing and operation, and adhering to driving development with innovation.

Magang has actively implemented the new development concept, adhered to innovation-driven development, built a new manufacturing platform, accelerated the implementation of the smart manufacturing strategy according to the requirements of "four unifications", accelerated the application of the new generation of information communication technology, promoted the centralized control, unmanned operation, remote operation, and intelligent manufacturing of all bases, to make efforts to build efficient, safe and smart steel factories, lead the high-quality development of the steel industry, and help to achieve the strategic target of manufacturing power.



Construct smart energy and build a new smart manufacturing platform

● **Promote the integration of the smart energy system.** Follow the principle of "four unifications", guide by "three flows and one status" concept, promote the centralized, integrated, comprehensive, refined and smart energy management of Magang.



● **Deeply promote the informatization of energy management.** Promote the implementation of the informatization of energy management, analyze functional requirements of projects, investigate and survey the Level III and Level IV measurement requirements of energy medium.

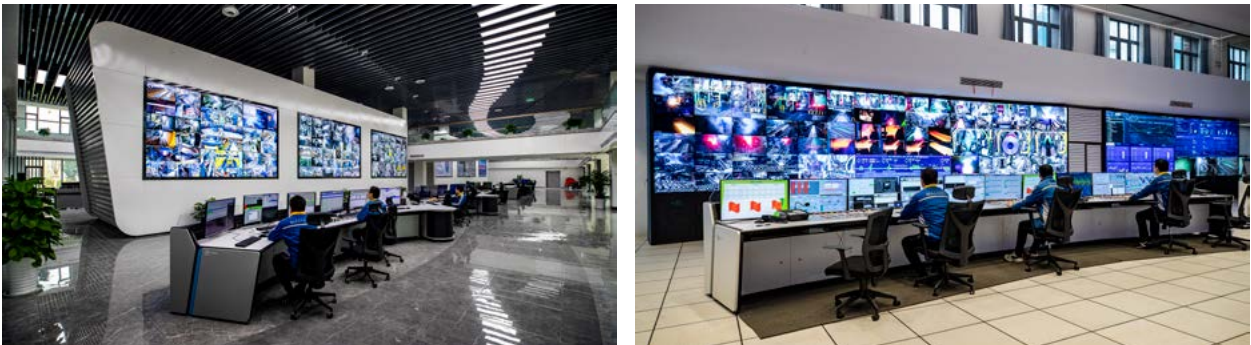
● **Promote the informatization of environmental protection management.** An environmental management system integrating the environment monitoring of the production area, pollutant emission, operation condition of environmental protection facilities and comprehensive environmental business management was established, so as to transform the key process environmental protection management from end treatment to process management and control.

Build “four unifications” indexes and carry out quarterly quantitative evaluation

In accordance with requirements of China Baowu on the quantitative evaluation of “four unifications” , Magang organized and promoted the quarterly quantitative evaluation of “four unifications” indexes and prepared the Report of Magang on the Quantitative Evaluation of “Four Unifications” Indexes, Report of Magang on “Four Unifications” Indexes (The First Half Year of 2020) and other materials, and published its 4A indexes quarterly.

The Company surveyed and determined grassroots level operation rooms of all production lines and distinguished operation rooms and local operation rooms according to the operation control points. Under the target of unmanned operation, centralized control, one-key operation and visible operation, concentrated on centralized management and control of regions, application of onsite industrial robots and unmanned operation, the Company implemented the centralized control of iron making, steelmaking and continuous casting of No.4 Steel Rolling Factory, hot rolling and cold rolling, basic network transformation, high-speed wire warehouse of Special Steel Company, application of industrial robots in Cold Rolling Factory and other key smart manufacturing projects.

By the end of 2020, the centralized control index was 67.7%, 28.3 percentage points higher than that of the last year; The unmanned operation index was 47.6%, 10.3 percentage points higher than that of the last year; The service launching index was 98.3%, 65 percentage points higher than that of the last year. By the end of 2020, the remote operation and maintenance platform of equipment was deployed and put into operation in Baocloud Maanshan Base. A total of 442 key equipment in the main production lines of Cold Rolling Factory and No. 4 Steel Rolling Factory were connected to the platform, the remote operation index breaking through “zero” and reaching up to 12%.



Build a complete information system to guarantee smart operation

Built the complete information-based system of smart operation and intelligent manufacturing, optimized the business management and improved weak links by building decision support, finance, human resources, production and sales, purchase, equipment, energy, environmental protection, safety, technology, R&D and other information systems, to achieve ability enhancement.

Magang integrated into China Baowu’ s overall architecture of “one cloud, one network, one core” by integrating the information-based system based on “uniform basic platform, uniform technology platform, uniform communication architecture and uniform network interconnection” . Anti-drove the integration of business due to the replication and full coverage of information-based systems, fully played the synergy benefits of the systems and improved the Company’ s production and management control ability.

Focus Effectively prevent and control the epidemic and resume work and production orderly

At the beginning of 2020, the sudden outbreak of COVID-19 swept the country and attracted the hearts of hundreds of millions of Chinese. The CPC Central Committee with Xi Jinping at its core attached great importance to it, insisted to give top priority to the people’ s lives and health, held an emergency meeting of Standing Committee of the Political Bureau of the CPC Central Committee to study and plan on epidemic prevention and control, to mobilize the whole country to stem the epidemic, and win the battle against the epidemic.

Since the outbreak of the epidemic, Magang has firmly implemented the spirits of several keynote speeches and instructions of Xi Jinping, carefully implemented the decisions and arrangements of the CPC Central Committee, the State Council, provincial and municipal Party Committees, governments and China Baowu, and taken winning the epidemic prevention and control war as a major political task, worked hard to build a tight prevention and protection network while maintaining production and operation, so as to ensure the epidemic prevention and control and the resumption of work and production “to be grasped at the same time without neglecting” .

Due to the effective organization, rapid action and effective measures, Magang achieved company-wide overall control of the COVID-19 epidemic, stable staff and stable production and operation order during the Spring Festival holiday in 2020 and since the resumption of work and production.

Strengthen organizational leadership and establish epidemic prevention and control system

On January 21, 2020, the Emergency Response Office and Prevention and Control Office of the Company issued the Notice on Strengthening the Prevention and Control of Novel Coronavirus Pneumonia across the Company, and launched Emergency Plan for Public Health Security Emergencies; On January 23, the COVID-19 epidemic prevention and control leading group and the leading group office were established. The Chairman and General Manager of the Company carried out relevant works according to their responsibilities.

- The epidemic prevention and control workgroup covering all units of the Company was established according to the deployment of the Company; During the epidemic prevention and control, two leading group meetings and four leading group office meetings were held to timely convey and implement the prevention and control requirements of provincial and municipal Party committees, governments and China Baowu, constantly strengthen prevention and control measures, intensify prevention and control, and deploy specific works. At the same time, the Discipline Inspection Commission of the Company urged the discipline inspection authorities at all levels to conduct special inspections with relevant departments centering on epidemic prevention and control work deployment from the level of political supervision, to ensure the implementation of prevention and control measures and ensure safety production and health of employees.
- The Emergency Response Office and the Prevention and Control Office of the Company established the 24h emergency on-duty system, formulated targeted prevention and control scheme based on the development and changes as well as prevention and control requirements of the epidemic, issued 45 documents and notices, forwarded 20 documents about epidemic prevention and control of the state, province, municipality and China Baowu, issued 7 letters about epidemic prevention and control in employee canteens, public bathrooms, public toilets, college student apartments and factory environment, conveyed the spirits of epidemic prevention and control meetings in a timely manner, put forward specific requirements of epidemic prevention and control, and enhanced the sense of urgency and the sense of responsibility of all units.
- The Emergency Response Office and Prevention and Control Office of the Company collected and summarized the information of suspected and confirmed employee cases in hospital, people traveling to and from epidemic areas, close contacts, self-quarantined personnel, people with fever and people returning from overseas reported by each unit every day, and submitted the information to the relevant departments in China Baowu and Maanshan City.

Strengthen epidemic prevention and control measures centering on work targets

The Emergency Response Office and the Prevention and Control Office of the Company actively promoted all units, departments and employees to have a deep understanding about the importance, urgency, complexity and difficulty of COVID-19 epidemic prevention and control, and actively cooperated and worked together to complete various epidemic prevention and control work.

Collect epidemic prevention and control materials

Since the launch of the epidemic prevention and control work, the Emergency Response Office, the Prevention and Control Office, Purchase Center, Sales Company and relevant units of the Company have actively overcome various difficulties and purchased prevention and control materials from multiple channels, and collected a total of 1.143 million masks, 4,750 kg 84 disinfectant, 2,857.5 kg alcohol, 612 infrared thermometers and 2 sets of infrared temperature measuring devices. They distributed prevention and control materials to production and operation sites, guaranteeing the productions requirements and demands for work resumption.



300,000 masks were transported to Magang Office Building

Promote regional prevention and control



> Supporting measures of remote office

In addition to personnel who must on duty, in principle, remote office was adopted to reduce flow and gathering of people.



> Prevention and control measures of access control management

Carried out temperature measurement and information registration of personnel entering the factory area and office building without any omission.



> Environmental health and cleaning measures

Organized all units to do well in the environmental health of the office building, focused on the cleaning and transportation of household waste, the disinfection of garbage containers and garbage storage places, and eliminated the hygienic dead angles and the breeding grounds of “four pests” ; Strengthened the collection of abandoned masks and ensured safe disposal.



Outdoor disinfection



> Implement stagger work hours

Adjusted the attendance time of day-shift employees to 8:30 a.m. from 8:00a.m., and installed infrared temperature measuring devices at the gates with centralized personnel, to improve the temperature measurement efficiency, and solve the problem of congestion and public gathering.



Body temperature measurement



> Prevention and control measures of public bathroom management

Closed all public bathrooms in the factory area and encouraged employees to shower at home.



> Epidemic prevention measures of shuttle buses

Organized the disinfection of shuttle buses as stipulated, and all passengers on the shuttle buses shall wear masks and have their body temperature measured.



> Food distribution measures in the canteen

Extended the meal time in the canteen and led employees to takes meals at different time; Adjusted the layout of tables and chairs and implemented one table for one personnel; Advocated boxed meal and takeout; Disinfected tableware, tables, chairs and floors timely after meals.



Keep distance when buying food in the canteen



Implement one table for one personnel in the canteen

Guarantee employee safety

Define the prevention and control requirements

Required all units to strengthen self-prevention and control and did well in the scientific prevention and control of first-line employees, to ensure the team stability; Organized all units to strengthen all prevention and control works and measures, to ensure the safety and health of employees; Required all units not to organize large meetings and gatherings with large crowds of people and reduced the trans-regional personnel flow to the greatest extent.

Implement the quarantine system

Urged all non-local personnel returning to Magang to report to the work unit and self-quarantine for 14 days and required all non-local employees returning to Magang who were living in college student apartment and dormitories for singles to self-quarantine with “one person in one room” .

Deepen propaganda and guidance

Organized all units to propagandize knowledge about COVID-19 prevention and control through new media, bulletin board and electronic screen, strengthen employees’ awareness of self-protection and protection of others, and actively guide employees to understand, cooperate with and abide by the necessary prevention and control measures taken during the special period. The Prevention and Control Office downloaded and printed 2,000 sets of posters for epidemic prevention and control, received and issued 500 sets of propaganda posters and 2,000 manuals.

Strictly implement “prevention of inbound and local transmission”

The Company timely followed up the prevention and control strategies according to change of the epidemic situation. The Company timely implemented the deployment of China Baowu and Maanshan City about the resumption of work and production and epidemic prevention and control and their requirements about the prevention and control of overseas imported cases, to do well in the “prevention of inbound and local transmission” . During the resumption of work and production, the Company issued the Notice on Safety Production, Epidemic Prevention and Control and Emergency Response During the Resumption of Work and Production and formulated Emergency Response Plan for Employees in Magang Office Building under the Outbreak of COVID-19. Required all unit to fulfill the main responsibility for epidemic prevention and control, strictly implemented safety production measures, performed the territorial management duties, strengthened employee management, and established emergency plan according to the requirements of “whoever employs employees shall be responsible for the management and the situation” and “establish a strong prevention and control network and interrupt the transmission chain” .

Be cautious and do well in the regular prevention and control of the epidemic

In accordance with the regular management requirements of epidemic prevention and control, the Prevention and Control Office paid close attention to the epidemic situation, carefully implemented the work deployment of provincial and municipal Party Committees, governments and China Baowu and carried out works focusing on “preventing recurrence and inbound” .

- Insisted on monitoring focus groups strictly, continued to implement the “zero report” system, collected the information of returned non-local personnel every day, and timely registered personnel from medium- and high-risk areas (such as Wuhan and Beijing) and overseas personnel arriving at Maanshan.
- Defined that all personnel arriving at Maanshan from medium- and high-risk areas must take nucleic acid test and encouraged employees to take nucleic acid test voluntarily.
- Strengthened the communication between Maanshan City and Yushan District Epidemic Prevention and Control Headquarters, acquired the requirements and measures for the epidemic prevention and control in time and strengthened work guidance for all units.
- Facing with the global spread of COVID-19, the Prevention and Control Office purchased 1 million disposable medical masks and 200 infrared thermometers by seizing the opportunity of sufficient supply of epidemic prevention and control supplies and cheap price.

01

Operate through the right path and promote the transformation and development

Magang implemented the new development concept, strengthened the performance orientation of China Baowu of “beyond the self, outperform the market, pursue excellence”, took reform as the driving force, promoted development with innovation, focused on integration, comprehensively examined standards and found shortcomings, strived to open up a new situation of high-quality development of the Company.



26 Guarantee rights and interests of shareholders and creditors

28 Strengthen the defense of anti-corruption

31 Total risk management and internal control





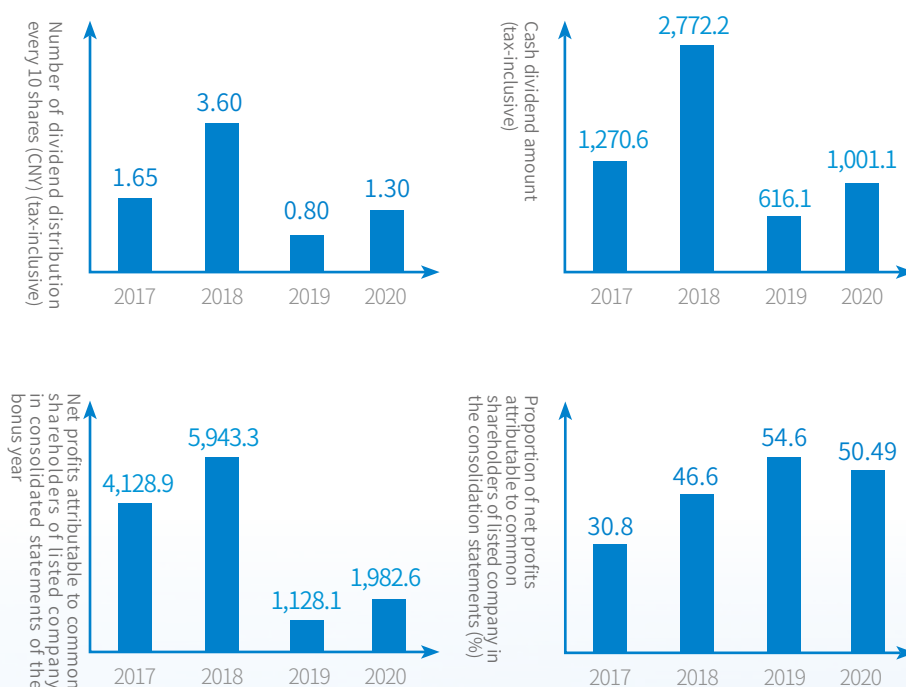
Guarantee rights and interests of shareholders and creditors

Ensure shareholder returns

According to the provisions of “the profits distributed shall not be less than 30% of distributable profits” in the *Articles of Association*, the Company gave priority to cash distribution for dividend distribution in line with the principal of paying attention to reasonable return on investment of shareholders and meeting the reasonable funds demand of the Company. The conditions and procedures for the adjustment or change of the profit distribution policy were compliant and transparent. During the report period, the policy was implemented effectively. Magang continued the cash dividend policy and independent directors issued independent opinions while preparing the profit distribution scheme. The proportion of cash dividend met the requirements of the Articles of Association and effectively protected the legitimate rights and interests of small and medium investors.

Dividend distribution scheme or plan

Unit: CNY million Currency: CNY



Note: The Board of Directors suggested to distribute the ending dividends of 2020, i.e., CNY 0.13 (tax-inclusive)/share. Undistributed profits were carried forward to 2021 and no capital reserve was converted into additional capital stock.

Protect the interests of creditors

The Company takes integrity as the value, continues to carry out compliance management, always adheres to the prudent financial strategy, establishes and improves the Company's financial system, to ensure the safety of assets and funds. The Company has always considered the legitimate rights and interests of creditors and effectively safeguarded their interests in the process of major business decisions. During the report period, the Company dispatched and operated the funds strictly according to the process and authority prescribed by the system, as of the end of 2020, the Company's leverage level has been reasonable with strong solvency.

Strengthen the communication

For a long time, Magang has been taking various manners to actively strengthen the communication with institutional investors at home and abroad. During the report period, under the impact of COVID-19, the Company actively strengthened the communication with investors at home and abroad through telephone, e-mail, WeChat and other manners rather than organizing the overseas roadshow. During the report period, the Company held 22 telephone or video conferences with investors, and communicated with 17 institutions and hundreds of personnel. Investors have a better understanding to the Company via communication.

The Board of Directors tried best to maintain communication with shareholders through smooth communication channels and encouraged them to participate in the General Meeting of Shareholders. Shareholders can download company profiles, annual reports, interim reports, quarterly reports and relevant ad-hoc announcements and circulars of the Company from the official website. 2019-2020 annual information disclosure and investor relation related comprehensive work of the Company won the Shanghai Stock Exchange “A” highest grade evaluation once again.

Improve corporate governance

Since the listing in HKEX in 1993 and listing in Shanghai Stock Exchange in 1994, in accordance with relevant laws and rules, Magang has established the corporate governance structure with checks and balances among the General Meeting of Shareholders, the Board of Directors, the Supervisory Committee and the General Manager. The General Meeting of Shareholders, the Board of Directors, the Supervisory Committee and the General Manager have clear division of labor and clear responsibilities. In 2020, Magang continued to standardize the operation, strengthen the construction of basic systems, and strive to improve the governance level. In accordance with the Company Law and the Governance Standards of Listed Companies of CSRC, in combination with actual situation of the Company, the Board of Directors amended the Work Rules of General Manager, Measures for Strategic Planning and Management, Investor Relations Management System, Insiders Registration System and Measures for the Internal Control and Management of Related Transactions. The main contents of the amendment involved corporate strategy, investment, corporate governance, etc.



Strengthen the defense of anti-corruption

Magang carefully implemented relevant documents (Regulations on the Implementation of the Responsibility System for the Party Conduct and Government Integrity, Implementation of the Examination and Evaluation on the Responsibility System for the Party Conduct and Government Integrity, Implementation Opinions on Strengthening the Education of Leaders on Party Conduct and Government Integrity, Implementation Opinions on Strengthening the Prevention and Control of Integrity Risk and Eight Bans on Integrity) of China Baowu, strictly implemented Implementation Rules of Magang Party Committee on Implementing the Responsibility System for the Party Conduct and Government Integrity, and Administration Measures of Magang on Anti-Fraud, unswervingly promoted the construction of the Party conduct and government integrity and anti-corruption, insisted on the “strict” keynote, so as to create a diligent, clean and honest environment and provide a solid discipline guarantee for constructing a new, powerful and strong Magang. In 2020, the Company had no lawsuit about guilty of corruption, accepting bribes and other duty-related crimes .



Keep to the political direction firmly and achieve “two maintenances” unswervingly

The Company strengthened the political supervision, guaranteed the implementation of systems, improved daily supervision mechanisms, further enhanced the driving force for implementing the major decisions and deployments of the central Party and implementing national strategies, and promoted the modernization of enterprise governance systems and capabilities.

Improve supervision system and promote the collaboration and synergy of “two responsibilities”

The Company deepened the construction of the collaboration system of the primary responsibility of the Party Committee, the supervision responsibility of the Commission for Discipline Inspection, the first responsibility of the Secretary of the Party Committee, and “double responsibilities for one post” of members of the leader group, and established and improved the complete chain for responsibility decomposition, supervision and inspection, examination and evaluation, and accountability. The Company continuously deepened and strengthened the supervision and inspection of illegal business and operating enterprises, “related transactions” , “obtaining personal benefits from the enterprise” and the implementation of important systems; Insisted on the accurate and powerful accountability, anti-driven the undertaking of responsibilities and execution of responsibilities.

The Board of Directors listens to the anti-fraud work report every year.

Continue to correct “four morals” and promote the moral of action and responsibility

The Company deepened the achievements in the central rectification of prominent problems in formalism and bureaucracy, insisted on implementing the spirits of the CPC Central Committee’ s eight-point decision, adhered to problem-orientation and solved prominent problems, to prevent the reoccurrence of previous problems and the occurrence of new problems and solving small problems as serious problems. The Company investigated and treated violation of disciplines strictly and treated and announced violations seriously according to regulations and disciplines.

Extension of knowledge

Four morals: Refer to formalism, bureaucracy, hedonism and extravagance.

Strengthen the investigation and supervision and continue to promote rectification of problems

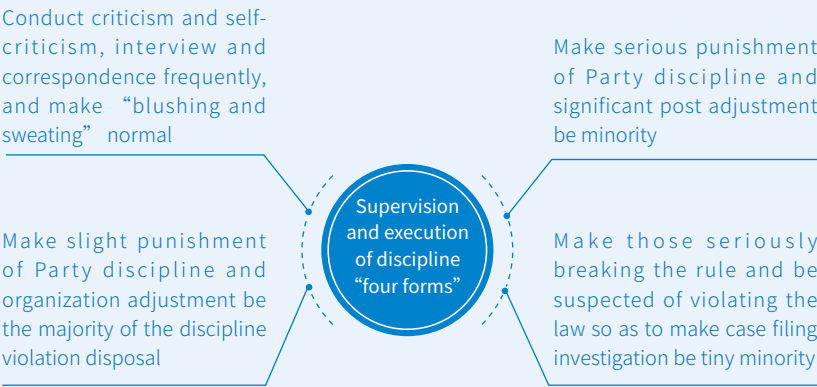
The Company promoted the full coverage of investigation, and urged the rectification of problems, the improvement of systems and mechanism as well as solution of loopholes in management.

Insist on seeking improvement in stability and deepen the construction of “do not dare, are not able, and have no desire to be corrupt” mechanism

The Company effectively handled and resolved the inventory, strengthened, monitored and stemmed the corruption growth, and resolutely investigated and punished corruption behind all kinds of risks; The Company accurately seized and thoroughly applied the supervision and execution of discipline “four forms” and strengthened the function of solving root causes.

Extension of knowledge

“Do not dare, be not able, and have no desire to be corrupt” mechanism: Refer to strengthen the deterrent force of “do not dare to corrupt” , consolidate the “cage” of “be not able to corrupt” , enhance the consciousness of “do not dare to corrupt” , and build a mechanism for implemenyng the “do not dare, be not able, and have no desire to be corrupt” mechanism integratedly.



2020

The Company carried out

175

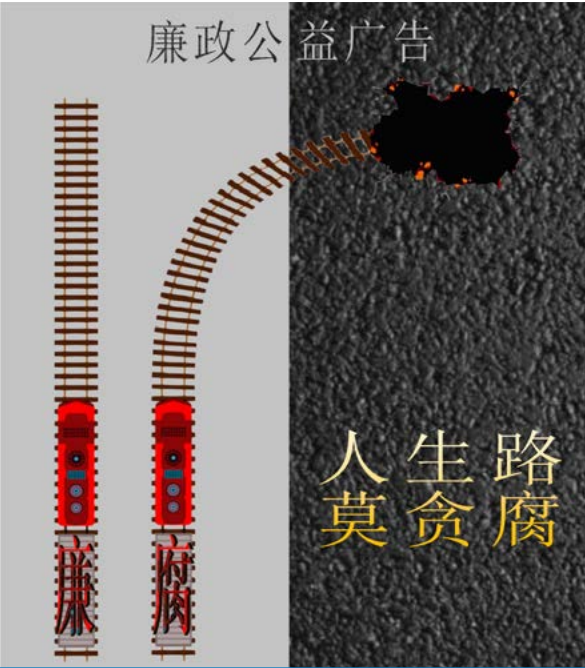
educations on Party discipline and integrity

6,036

participants

Strengthen anti-corruption training and strictly observe the bottom line of profession

The Company strengthened the case warning education and duty-related crime prevention work, compiled and issued bulletin on integrity risk prevention and control and bulletin on typical cases, summarized violation of rules and disciplines found and punished in the supervision, execution of discipline and inspection, and compiled and issued the typical case analysis report, to educate employees with events around; The Company coordinated and organized grassroots level units to carry out 175 educations on Party discipline and integrity with 6,036 participants; The Company collected public service advertisements on integrity, broadcasted and exhibited them through the official WeChat account of Magang home, to create a clean, honest and practical atmosphere advocating integrity and frugality.



Public service advertisement on integrity
Don't select corruption in the way of life



Public service advertisement on integrity
Down with one knock



Magang marketing center organized party members and cadres to visit Magang integrity education base



Magang purchase center organized thematic education on integrity



Total risk management and internal control

I identify risks and establish the risk early-warning model

Aiming at management and technical business posts, the Company conducted the risk identification questionnaire survey from bottom to top, involving 7,932 respondents and 49 risk items. Combining with the results of questionnaire survey, 12 risks were identified as the major risk control items of the Company in 2020, including “epidemic prevention and control and operation risk prevention, safety risk, environmental protection risk, prevention and resolution of financial risk, compliance risk of important fields and key procedures, stability risk, standard governance risk of subsidiaries, professional integration risk, human resources risk, price fluctuation risk, purchase and supply chain risk, merger and investment risk” , and issued annual work plans, organized professional management departments to connect with 12 major risk management and control items, established risk early warning model and mechanism to carry out daily management and control.

Refine requirements and enhance compliant operation ability

With respect to improving the internal control system, strengthening the implementation of internal control, strengthening information-based management and control, enhancing the strength of supervision and evaluation and strengthening investor supervision, in combination with the strategic planning and business plan of the Company, the Company settled and linked 18 internal control processes with 138 daily management activities, identified 679 risk points of management and control and prepared the *List of Internal Control and Management Items*.

Enhance three lines of defense, and continue to optimize and improve the risk management

The Company continued to improve the internal control and the construction of the comprehensive risk management system with three lines of defense, i.e. “the business unit as the first line of defense, functional department of risk management as the second line of defense and the internal audit department and the special committee as the third line of defense” and by improving the internal control system, strengthening the implementation of internal control, strengthening information-based management and control, enhancing the strength of supervision and evaluation and strengthening investor supervision. The Company conducted the comprehensive risk investigation quarterly, continued to improve system and strengthened the process control. During the report period, there was no significant or important risk matter in key areas of risk management and control in organizational governance, operation, finance, compliance, key engineering, human resource, safety, environmental protection and energy, information-based development and subsidiary.

The Board of Directors listens to the special report of risk analysis and internal control construction regularly 4 times per year.

Promote the rapid improvement of internal control system capability with the help of external forces

In order to improve the internal system capability of the Company continuously, implement the requirements of Implementation Opinions of SASAC on Strengthening the Construction and Supervision of the Internal Control Systems of the Central Enterprises (GZFDG [2019] N.101) and other documents and the requirements of China Baowu, professional accounting firm was employed through bidding to implement “risk management and internal control consulting services” , and conducted risk management and internal control training and diagnosis centering on special risks of the steel industry and the construction requirements of the risk management system.

Establish the comprehensive risk management system that meets the management requirements through smart operation and management

Through China Baowu’ s information-based construction experience, the Company optimized business processes, improved weak links in the original system, and established a comprehensive risk management system, to meet the requirements of new system and new business of the Company. On one hand, it integrated internal data and external data effectively, increased the risk perceptibility to transmit the information to the whole system and make response timely; On other hand, it integrated the daily risk management process and core business system data effectively to combine risk management and daily business operation organically and intervened the business process control by combining the artificial intelligence and data analysis technology, to promote the realization of the management and control mechanism focusing on pre-event and in-process management and control, and effectively promote the driving effect of risk control on the overall operation of the enterprise.

02

Build an innovation-driven and intelligent future

In order to continuously improve its core competitiveness and support to build high-quality steel ecosphere, Magang has adhered to science and technology concept of “technology-led and innovation-driven”, vigorously implemented technology and product innovation, established an open and synergistic technology innovation system combining efforts of government, enterprises, universities, research institutes and users featuring customer-orientation, policy-guidance and enterprise-subjectiveness, continuously deepened enterprise management and significantly improved Magang brand influence and brand value.

34 Promote technology innovation

37 Deepen management innovation





Promote technology innovation

Strengthen innovation management

Magang built a sound science and technology innovation management system to effectively and orderly promote the science and technology innovation according to the regulations and improve its core competitiveness continuously. In 2020, the Company prepared and amended 14 management measures (including Management Measures for Scientific Research and Technological Breakthrough Projects, Management Measures for Development of New Products, Management Measures for Science and Technology Business Contracts, Standards for Science and Technology Project Evaluation and Incentive Management, Management Measures for National and Industrial Standard Projects, Management Measures for Technology Export, etc.), completed the pre-planning and solicitation of opinions of Technology Standards Management Procedures and Management Measures for Government Science and Technology Projects to promote the construction of the science and technology innovation management system to a new level.

Create an innovation platform

Magang strengthened the thinking of Technological Innovation Supply Chain, and built an open and synergistic technology innovation system combining efforts of government, enterprises, universities, research institutes and users featuring market-orientation and enterprise-subjectiveness; The Company strengthened the cooperation with universities and research institutes at home and abroad continuously, established an open, high-level and diversified industry-university-research consortium, formed joint development, commissioned development, co-constructed and joint experimental base, talent training and other modes, created a good industry-university-research cooperation atmosphere; Strengthened R&D resources sharing in China Baowu system to rapidly improve the efficiency of technological innovation.

- China Baowu Central Research Institute Magang Technology Center was officially founded in June 2020, marking that Magang Technology Center was officially integrated into the science and technology innovation system of China Baowu.
- It has the state-recognized enterprise technology center and the inspection technology research institute with the CNAS qualification, “Quality control and technical evaluation laboratory for industrial products (train wheels and H-beams)” of MIIT, a post-doctoral scientific research station, and “National and local joint engineering research center for advanced manufacturing technology of key parts of rail traffic” (under construction).
- It established 4 provincial innovation platforms, i.e., “Anhui Engineering Research Center of High Performance Construction Steel”, “Anhui Research Center of Automotive Steel and Application Engineering”, “Anhui Key Laboratory of High Performance New Materials and Safety Control for Rail Transit” and “Anhui Rail Transit Wheel and Axle Engineering Research Center”.
- The applied “Anhui Technology Innovation Center for Key Parts of Rail Transit” has been approved for construction by the Anhui Provincial Party Committee and Government. The target task statement of the Innovation Center has been prepared by relevant research institute according to the requirements the Science and Technology Department of Anhui Province and been reviewed and signed by experts of the Science and Technology Department of Anhui Province.
- It organized and conducted the 2020 evaluation of “Anhui Rail Transit Wheel and Axle Engineering Research Center”, settled, prepared and submitted the evaluation materials. Upon the review and onsite evaluation and investigation of the expert team organized by Provincial Development and Reform Commission, it was awarded as excellent and with provincial “major emerging industry bases, major emerging industry projects, major emerging industries and innovative modern industrial system” innovation platform funds of CNY 500,000.

2020

34

applied H-beam patents

32

applied train wheel and axle patents

33

applied steel plate patents

25

applied galvanization patents

3

applied wheel and axle Bainite wheel patents

2

applied steelmaking patents

Intellectual property management

Magang formulated the Patent Management Measures, Management Measures for Technical Secrets, Management Measures for Science and Technology Achievements, Management Measures for Trademarks, Management Measures for Copyright of Computer Software, Incentive Standards for Science and Technology Achievements, Incentive Standards for Intellectual Property and other intellectual property management systems. According to China Baowu’s principle of “unified language, unified standard, unified platform and unified culture” and the thinking of “overall planning and implementation by step”, Magang established the unified and centralized technical knowledge management system and information system through the systematic technical knowledge management planning, technical knowledge management organization system and management system construction, technical knowledge management platform construction, to accumulate and inherit knowledge by classification and accumulation of experiences and knowledge in various fields.

In 2020, the Company set up the Planning and Technology Department and the Knowledge Assets Office, formulated and amended relevant management measures and corresponding incentive standard, to strengthen the management of intellectual property. The Company closely combined intellectual property with industrial structure adjustment, technology development and marketing, built several patent pools, applied 34 H-beam patents, 32 train wheel and axle patents, 33 steel plate patents, and 25 galvanization patents. It actively laid out international patent application, and applied 3 Bainite train wheel patents, which were licensed in Australia, Europe and Japan. It applied 2 steelmaking patents. Among which, the Straight Vacuum Refining Device and Its Usage obtained the patent licensing in Japan, USA and Europe. A Method for Controlling the Solidified Structure of Casting Blank During Continuous Casting and Its Control Device obtained the patent protection in Japan, Germany, Italy and Austria.



Knowledge management system training



2020

Organized and
implemented

192

scientific research
and technological
breakthrough projects

The direct additional
benefit from scientific
research of CNY

230 million

Create an atmosphere for innovation

Magang advocated the innovation culture, fully mobilized the enthusiasm, initiative and creativity of technical personnel in innovation, and formulated Management Standards for Science and Technology Project Evaluation and Incentive, to promote company-wide innovation scientifically. It organized and implemented 192 scientific research and technological breakthrough projects (13 government projects, 96 scientific research projects and 83 technological breakthrough projects). Among them, the R&D unit technological center undertook 79 projects (11 government projects, 53 scientific research projects and 15 technological breakthrough projects). The manufacturing unit undertook 113 projects (2 government projects, 43 scientific research projects and 68 technological breakthrough projects). It achieved direct additional benefit from scientific research of CNY 230 million. It organized and completed 50 new projects, and organized 44 acceptance inspections.

Fruitful innovation achievements

Magang accelerated to improve the technological innovation system, focused on the breakthrough in some key products and process technologies, committed to develop the influence and competitiveness in key areas so as to boost the construction of the high-quality iron & steel ecosystem of China Baowu.

● Application of patents and technical secrets

In 2020, the Company applied 576 patents (including 344 invention patents) to China National Intellectual Property Administration and was licensed with 331 patents (including 100 invention patents). As of the end of 2020, the Company has a total of 1,677 valid patents, including 723 invention patents. The Company has won 6 national and provincial patent awards, and has been licensed with 4 patents in the USA, Japan and Europe.

● Submission of science and technology papers

It submitted over 70 papers to “The 22rd CSM Annual Steelmaking Conference Proceedings”, “the 12th International Conference on Zinc and Zinc Alloy Coated Steel Sheet” and other academic seminars, Journal of Iron and Steel Research, Iron & Steel, Steelmaking and Steel Rolling, and actually published over 50 papers.

● Standard formulation and amendment

It formulated 1 national standard (GB/T3653.7-2020 Ferroboron - Determination of Sulfur Content - Infrared Absorption Method) and 8 industrial standards, hosted 3 national standards and 12 industrial standards under research. Specially, Heavy H-beam and Specification for Technology Application of High Strength Rebar provide basis for the production, promotion, sale and use of heavy H-beam products and high strength rebar. It formulated and amended 10 enterprise standards including 8 formulated and 2 amended.

● Application of scientific and technological achievement

It actively promoted the application of various scientific and technological achievement awards, organized the application and successfully won 6 scientific and technological progress awards, including 4 Anhui Provincial Scientific and Technological Progress Awards and 2 Metallurgical Scientific and Technological Awards.



Deepen management innovation

Optimize the management and control mode

In accordance with the management model of Baowu, in combination with self-development position, Magang has taken the initiative to reform, and achieved more streamlined organizations, leaner personnel, more effective management and further-optimized process subject to the requirements of specification, platformization, large-scale and internationalization.



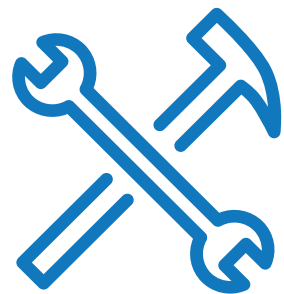
Promote the management reform of functional and business departments

Magang built a “centralized and consistent” management mode, established a user-centered operation mechanism, to transform to “centralized and consistent system” from the coexistence of multiple modes; It simplified 12 functional departments to 10, and simplified 89 divisions to 78, further clarified the functional localization of functional and business departments; The Company redivided its main duties into over 40 items, re-adjusted the management interface, to increase the management efficiency and effectiveness; It supplemented the professional personnel power of departments, and increased over 200 personnel for functional and business departments.

Promote grassroots level management reform

- ② **Optimize the organizational structure and improve the management process.** It standardized the setup of management departments and offices in factories according to the “3+α” standard; Promoted the integration of branch factories by process reengineering, to achieve streamlined grassroots level organization, lean staff, appropriate management range and efficient business process; Consolidated the grassroots level management standards and processes through informatization, to expand and standardize the range of grassroots level management and improve management efficiency; Took smart manufacturing as the carrier to play the function of the centralized control center and improve the grassroots level labor efficiency.
- ② **Optimize the management and control mode and pursue the extreme efficiency.** Magang integrated, removed and standardized the setup of working areas, increased the grassroots level management range significantly, improved the “operation head system centered” grassroots level management, optimized the post configuration of operation heads, highlighted the power authorization, compliance of process and authority delegation, to full play the grassroots level production and operation function, build a smooth, orderly, controlled, rapid and efficient onsite management and control mechanism, play the role of front-line command, management and operation of operation heads, and enable factories and departments to focus on production management, team leading and pursuing advanced technologies.
- ② **Optimize the post system and motivate employees to create value.** Magang focused on value creation and efficiency improvement, optimized the post management system, made the development channels of employees in different sequences smooth, widened the growth space for technical and skilled talents, optimized and expanded their careers, and encouraged employees to create more value. It established and improved the qualifications and employment standards for different posts and promoted post employment to match talents to posts.
- ② **Optimize the salary system and enhance employees’ sense of gain.** Magang highlighted the value of the post, and directly linked employee income with value creation and performance based on the value of the post. It strengthened the performance orientation, implemented the idea of “work based on ability, and bonus based on performance”, and gave salary distribution priority to units and individuals with high post value and outstanding performance, so as to share the development achievements with employees and enhance the sense of belonging, happiness and gain of employees.





Implement integration

In order to fully implement the integration of China Baowu, according to the strategic development plan of China Baowu, Magang focused on the steel industry and achieved the professional, platform-based and standard development of the industry through the professional integration projects. It solved repetitive allocation of resources and internal competition, reduced internal trade costs and formed a synergy for development to support the company efficiency improvement.

Overall deployment and implementation by step

In accordance with the strategic development plan of China Baowu, in combination with the actual situation of the Company, Magang listed the professional integration projects, and implemented the integration works by step.

Project management and clear responsibilities

In order to guarantee the continuous promotion of the professional integration, the Company promoted the integration by project. Led by leaders with specific duties of the Company, each project team formulated work plans and schedule, defined responsibility subject and established the promotion mechanism.

Uniform rules and standard operation

Magang prepared the integration schemes respectively according to business characteristics, and performed relevant decision-making procedures according to “decision-making of major matters, appointment and dismissal of important leaders, arrangement of important projects, use of large funds” . All schemes were fully considered, researched and discussed. The integration work was promoted stably and orderly. The production and operation of the Company was stable.

Extension of knowledge

Decision-making of major matters, appointment and dismissal of important leaders, arrangement of important projects, use of large funds: Refer to decision-making of major matters, appointment and dismissal of important leaders, arrangement of important projects, use of large funds. Decisions must be made through collective discussion.

Seamless connection, stability and smoothness

In order to ensure smooth production, safety, stability, environmental protection and compliance, Magang conducted sufficient bilateral communication, established the emergency mechanism, did well in propaganda, held the handover meeting, explained the purpose, significance and effect of integration to grassroots level employees and obtained the understanding and supports from employees. The transitional period was set for special integration projects.

03

Low carbon, environmental-friendly, and building a green steel factory

Magang implemented the green development concept of “Lucid waters and lush mountains are invaluable assets” and promoted the energy conservation and discharge reduction with higher standards, stricter requirements and more conscious actions, to strive to build green in-city steel factories.

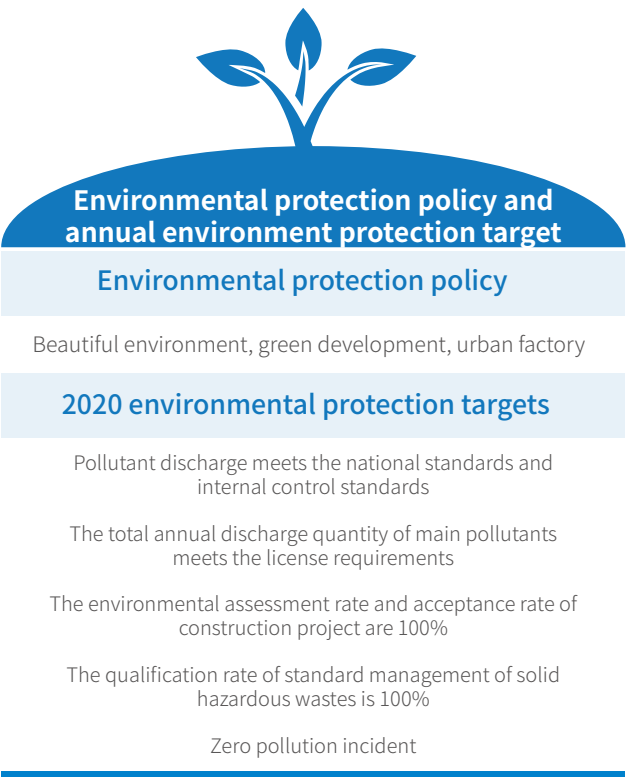
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Strengthen green management

Magang deeply implemented the national strategy for ecological civilization construction and development, concentrated on the work subject of “unswervingly deepening the reform and perseverely building strong brand” . Under the overall target of environmental protection management of “up-to-standard pollutant emission, effective control of total amount, controllable environment risk, compliance of construction projects, cleaner production process and recycling of resources” , Magang built the green and low-carbon sustainable development model, established a set of continuously-improved environment management mode, supporting the achievement of the green development targets and overall strategic targets of the Company.



- **Environmental organizational system:** Magang established the environmental protection management committee to uniformly manage the energy conservation and environmental protection; Set up the Energy and Environmental Protection Department to be responsible for the energy and environmental protection and comprehensive utilization and management of resources of the Company; Set up the energy and environmental protection office in secondary units and allocated full-time environmental protection and management personnel, forming the environmental protection and management network. In addition, it defined main responsible personnel of environment management and duties of environmental protection and management personnel, and established the accountability system for environmental protection based on the principle of “whoever pollutes shall carry out prevention and control; Whoever has pollution incident shall eliminate the impact” .
- **Environmental protection system:** Fully followed the requirements of Baowu and settled the system management. Currently, there are 17 management files and 2 emergency plans for the environment management system. In 2020, Magang completed the preparation and amendment of Management Measures for Environmental Protection and other 14 documents.

- **Risk prevention and control system:** Magang timely tracked national environmental protection policies and requirements, formulated reasonable risk prevention and control measures in accordance with the Management Measures for Risk Control. It prepared the overall bulletin on risk management quarterly to report quarterly environmental risks in compliance management, internal control, key works and other aspects and predict possible risks in next quarter.
- **Emergency management system:** Magang prepared and published the emergency plan for heavy pollution weather and implemented the management and control measures for heavy pollution weather in strict accordance with the requirements of Maanshan Municipal Government; It amended the Emergency Plan for Emergent Environmental Incidents of Maanshan Iron and Steel Co., Ltd. to further standardize the management of emergent environmental incidents; It regularly organized and conducted drills of the emergency plan for emergent environmental incidents to ensure the rapid response to environmental incidents.
- **Environmental monitoring management:** Magang installed the automatic pollution source monitoring system consisting of 90 national control points, 2 air quality automatic monitoring stations and 159 video monitoring points, to realize the integrated control of the environmental protection facilities, pollutant discharge outlet and production process, realize alarm and early warning based on the operation parameters of facilities, discharge data and video analysis. The system will push information to responsible units and personnel accurately through SMS and WeChat to achieve early treatment and risk elimination.
- **Environmental protection information disclosure:** Magang implemented the pollutant discharge license system strictly, implemented monitoring in accordance with Technical Specifications for Application and Issurance of Pollutant Permit and Self-monitoring Guidelines for Pollution Sources, and disclosed pollutant discharge license implementation report and monitoring data in real time.
- **3-level inspection system:** Magang established a sound “3-level inspection” system. Competent departments carried out on-site inspections every month, issued rectification assessment notice or special inspection notification for environmental protection problems identified, and urged responsible units for rectification. All units and branch factories carried out self-inspection to eliminate daily environmental hidden hazards.
- **Clean production audit:** Magang implemented *Law of the People’s Republic of China on Promoting Cleaner production and Notice on Deeply Promoting Key Enterprise Cleaner Production* (HF [2010] No. 54), established cleaner production audit leading group and workgroup, implemented a series of cleaner production schemes. It has made significant achievements in the energy utilization and control and prevention of pollution source, and successfully passed the evaluation of environmental protection administrations.



- **Green propaganda and education:** In order to practice the energy and environmental protection management policy of “beautiful environment, green development, urban factory” , Magang created a strong atmosphere of energy conservation and carbon reduction within the Company, conducted activities of various forms and rich contents online and offline to promote and practice the sense of value of ecological civilization and environmental protection policies. By the end of 2020, the “hours of ecological civilization training of employees” in the indicators of green in-city steel factories increased to 5.59h/personnel from 0.07h/personnel in 2019.



Innovate green products

The Company attached great importance to the life-cycle management of products, to the impact on resources and environment of product design and development, selection of raw materials, production process control, use and recycling, and tried to minimize the consumption of energy and resources and the impact on ecological environment.

The Company actively responded to national call of green development, conducted certification of green products, studied and understood the evaluation methods and requirements of green products and integrated green certification into the comprehensive management system of the Company, and made remarkable achievements in conservation of energy and resources, reduction of carbon emission, non-toxic and harmless control and recycling. In 2020, the profile steel produced by the Company successfully passed the green product certification.

Support national energy efficiency upgrade with non-oriented silicon steel



Under the influence of national motor efficiency upgrade, domestic leading home appliance enterprises have started to improve the efficiency of frequency conversion compressor motors since 2020, and gradually replaced the 0.35mm series products of the non-oriented silicon steel for inverter compressors by 0.30mm series products with lower loss and higher strength.

In order to meet the home appliance customers' requirements on non-oriented silicon steel products with thin thickness and high performance, the Company had started the R&D, production and trial manufacturing of 0.30mm series non-oriented silicon steel products since the second half of 2019. With continuous breakthrough, it researched and developed the M30W230 non-oriented silicon steel product for high-efficiency inverter compressors successfully in January 2020. The product has passed the certification of Gree Landa Compressor Company and entered the mass production stage.

In order to adapt to the increasing requirements of environmental protection, the Company started the research of chrome-free environmental protection coating process based on M11 non-oriented silicon steel insulation coating. The sample roll of the first batch of chrome-free environmental protection coating product M35V1900 has passed the certification of UAES, and has been supplied in batch. It has been successfully applied to many new energy vehicle models in China; At the same time, in order to meet the driving motor upgrade in the electric bicycle industry, it developed the 0.27mm non-oriented silicon steel product M27V1700 that is suitable for high-efficiency electric bicycle driving motors, which successfully breaks the size limit of driving motors of electric bicycles and achieves lighter electric bicycle structure and more diverse models.



Boost lightweight special-purpose vehicles with 1,000MPa-level hot-rolled ultra-high strength steel



In the context of stricter and stricter requirements of environmental protection policies, laws and rules, lightweight has become the inevitable development trend of special-purpose vehicles. High-strength steel is one of the most direct and effective solution of lightweight. High strength and ultra-high-strength are the inevitable development trend.

In view of the above, the Company developed the new generation of 1,000MPa-level (tensile strength $\geq 1\text{GPa}$) hot-rolled ultra-high strength steel, with the maximum strength of 1,300MPa. Adopting the decreased alloy component design and combining the supporting hot-rolled TMCP process not only eliminates the heat treatment, has short process flow and low energy consumption in the manufacturing process, but also meets the green manufacturing requirements of the steel industry. The product is characterized with high strength, high hardness, high wear-resistance and easy formability.

The demonstration application of 1000MPa-level ultra-high strength steel has been achieved in lightweight concrete mixers and urban muck dump trucks, which has better promoted the upgrading of models of concrete mixers and urban muck dump trucks. It has good effect of lightweight, energy conservation and discharge reduction and good social benefit.





Save
energy and
resources

Strengthen energy management

Magang actively implemented national laws and regulations about energy conservation, implemented “comprehensive benchmarking and finding differences and creating a world first class enterprise” theme of China Baowu and the spirit of the green development conference, prepared the 2020 Energy Work Plan of Magang, deeply promoted the lean energy operation through the whole process energy consumption management and control and energy conservation technology innovation, to ensure the successful achievement of the energy-saving targets and tasks in 2020 and in “13th Five-Year Plan” ; It formulated the 2018-2020 Coal Substitution or Reduction Work Scheme of Magang, and controlled the consumption of coal reasonably through technological transformation of large blast furnaces, continuous reduction of liquid iron proportion of steelmaking, optimizing the ore blending of blast furnaces, reducing the fuel ratio and strict coal quality control. The Company’ s comprehensive energy consumption per ton of steel has been upgraded year by year, dropping from 601 kgce/t in 2015 to 560.76 kgce/t in 2020.



Waste heat recovery project of electric furnace of the Special Steel Company

Achievement of main targets and indicators
of the energy work plan of Magang in 2020

Comprehensive energy consumption per ton of steel of	Energy consumption per CNY 10,000 output value (equivalent) (current price)	Blast furnace gas release rate of	Coke oven gas release rate of
565.3 kgce/t	461.718 tce/CNY 10,000	0.13 %	0.13 %
Oxygen release rate of	Converter gas recovery of	Fresh water consumption per ton of steel of	Energy evaluation execution rate of construction projects of
1.51 %	103.69 m³/t	2.93 m³/t	100 %

The average annual electricity production is expected to reach

19.005
million kwh

Develop clean energy

The Company has continuously promoted the rooftop photovoltaic power generation projects, successively completed the distributed photovoltaic power generation projects in the north finished product warehouse of Cold Rolling Factory, No.4 Steel Rolling Factory and Special Steel Company. In addition, the distributed photovoltaic power generation projects in Long Products Business Department, Cold Rolling Factory Phase II and Thermal Power Factory are under implementation, with the actual installed capacity of 17.4 MW. After the completion of all projects, the average annual electricity production is expected to reach 19.005 million kWh.



Photovoltaic power generation project

Strengthen water resource management

In order to implement the National Water Saving Action Plan and improve the water use efficiency, Magang prepared the Magang Water Saving Action Plan (2019-2020), to improve the water use efficiency and reduce water resource consumption by strengthening management and process management and control, promoting the technological transformation of water saving continuously and controlling the total quantity and intensity of water resource consumption. In 2020, the Company carried out several water-saving transformation engineering, including the in-depth treatment of Liufen River Wastewater Treatment Station and diversion of rain and sewage water, achieving the annual fresh water consumption per ton of steel of 2.69m³/t.

2020 comprehensive target of water resources

Fresh water consumption per ton of steel of

≤ 3.0 m³/t



Energy conservation and optimization project of water supply system of work roll of CSP rolling mill



Deal with climate change

In accordance relevant requirements of Ministry of Ecology and Environment, provincial and municipal competent departments, Magang started 2019 carbon emission inventory of the Company timely; Completed the collection, accounting and confirmation of carbon emission data, prepared 2019 Carbon Emission Report of Magang and filling and report on the National Carbon Emission Platform; Cooperated with the third party to verify and confirm the total carbon emission and carbon emission of each process, carbon emission of each unit of its power plant and the 2020 Carbon Emission Monitoring Plan, and completed the carbon emission verification report. In 2020, the total carbon dioxide emission of the Company was 39.2644 million tons, the carbon dioxide emissions per ton of steel was 1.87t/t and the year-on-year decrease of 0.03 t/t.

2020

The total carbon dioxide
emission was

39.2644
million tons

The carbon dioxide emissions per ton
of steel was

1.87 t/t

The year-on-year decrease of he carbon dioxide emissions
per ton of steel was

0.03 t/t



R&D of new energy conservation and environmental protection technology

To support the construction of green in-city steel factories and achieve “treatment of three wastes -- waste gas, waste water and solid waste” and “cleaning, greening, beautifying and civilizing” , Magang conducted prospective studies focusing on the improvement of the internal disposal rate of hazardous wastes, return-to-production utilization rate and productization rate of solid wastes and aiming at advanced technologies in the industry. In 2020, it carried out 7 corporate-level environmental protection technology R&D projects, 2 finished and 5 under research, saving CNY 64,450,500 for the Company and 5 invention patents applied.

2020

7

Carried out corporate-level
environmental protection technology R&D
projects

2

finished

5

under research

Environmental protection technology
R&D projects saved CNY

64,450,500

Environmental protection
technology R&D projects led to

application of **5** invention patents





04

Humanistic Magang, bring up industry elite

Magang has adhered to people-orientation, combined the company development direction with employees' efforts closely, cared and kindly treated employees in life, emotion, growth and other aspects, created a safe and healthy work environment and atmosphere for employees, built a value realization platform and shared the achievements in operation and development with employees, enable everyone of Magang chasing dreams with firm pace and high enthusiasm.

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- 52 Safeguard rights and interests of employees
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Improve employee structure

Magang prepared the Management Measures for Employee Recruitment, to standardize the management process of employee recruitment, ensure the quality of employee recruitment work, improve the employee structure, and meet the needs for human resources of the company development. In 2020, the Company issued the annual demand collection notice for personnel supplementing in operation and maintenance posts, required all units to plan personnel supplementing and adjust the personnel structure according to the human resource planning, production and operation requirements and the improvement of personnel efficiency, to relieve the pressure of production and operation. According to the development needs of production and operation and the improvement of personnel efficiency, the Company coordinated the personnel and posts needed by all units, prepared the Request for Instructions on the Recruitment Work of “Two Colleges” in 2020 and submitted it to the group and had it approved; The Company recruited fresh graduates from Anhui Vocational College of Metallurgy and Technology and Magang Technician College, and finally signed employment agreements with 136 students.



Safeguard rights and interests of employees

Equal and inclusive employment

Magang has strictly abided by the Labor Law of the People’s Republic of China, Labor Contract Law of the People’s Republic of China and other laws and regulations, adhered to equal employment criteria, opposed all acts of discrimination based on gender, age, region, education background, religious belief, nationality, race, sexual orientation and disability as well as employment of child labors, forced labor, overtime work, harassment and abuse, to protect the legitimate rights and interests of employees, ensure the fair treatment of employees in recruitment, labor, salary, training, promotion, compensation, holiday and other aspects.

Salary & welfare mechanism

Magang mainly implements the diverse salary mechanism mainly focusing on the post performance-based salary system and being supplemented by annual salary system and subsidies for technical and skilled talents. The post performance-based salary system determines the salary based on the post, and highlights the proportion of post contribution in the allocation. It links the income with the company profits and post contribution, and allocates the bonus for employees based on their performance. The annual salary system is implemented for the senior and middle management of the Company to determine the salary based on the annual assessment results. In 2020, under the thinking of “learning from best practices and achieving optimal matching”, in the principal of different modes, clear structure, highlighted posts, and three-dimensional development, Magang established the post performance-based annual salary system (for company leaders and C level and above management), post performance-based salary system (for technical business and operation management, operation and maintenance personnel), capability-based salary system (for core technical and skilled personnel, including chief engineer and skill masters) and overseas-post performance-based annual salary system (for overseas dispatched personnel), to further optimize the salary system.

At the same time, the Company continued to optimize and implement all welfare benefits of employees, paid all social insurance premiums on time and in full according to relevant national, provincial and municipal regulations; Implemented the enterprise annuity system (expenses required for enterprise annuity were paid by the enterprise and employees and were accounted into the individual account of employee enterprise annuity monthly); Implemented the housing provident fund system, and set up individual account of housing provident fund for employees; Implemented the housing allowance for employees who did not enjoy the monetized housing allotment welfare with the standard of 7% of salary; Implemented supplementary medical insurance and the system of assistance for treating major and serious diseases and purchased commercial insurances for serious diseases, accidental injury and family property of all employees.

Implement democratic management

Magang continuously improved the timely and effective consultation and communication mechanism and channels, and actively promoted the democratic management. In 2020, the Company prepared and held the first meeting of the 9th session of congress of workers and staff; Formulated and amended the implementation measure for the congress of workers and staff, work rules for the General Democratic Administration Committee of the congress of workers and staff; Further standardized the democratic administration system; Organized employees’ representatives to participate in the 2019 democratic appraisal of China Baowu, with the completion rate of 98.4%; Held the joint conference of congress of workers and staff, deliberated and passed Notice on Issuing the Termination of Labor Contract Upon the Negotiation between Employees and Enterprise, Rest, Self-employment and Other Dismissal Policies, deliberated and optimized the overall implementation scheme for the execution of labor contracts, implemented the right to know, right to participate, right to vote and right to supervise of employees; Implemented Regulations on Labor Law Supervision of Anhui Provincial Trade Union, issued the implementation scheme, established the Labor Law Supervision Committee of Trade Union, to safeguard the legitimate rights and interests of employees; Amended 2020 Employee Collective Contract and effectively safeguarded the legitimate rights and interests of employees.



The first meeting of the 9th session of congress of workers and staff of Magang

Focus on occupational health

Adhering to the production safety policy of “people-orientation and harmonious development with society”, Magang promoted the implementation of production safety standardization, strengthened the basis construction of production safety, guaranteed the safety and health of all employees, prevented serious and exceptionally serious safety accidents, and maintained the safety and stability of the production and operation of the Company.

- ① Formulate Management Measures for Occupational Health, Management Measures for Labor Protection Articles, Management Measures for Work-related Injury, and Management Measures for Hazard Source Identification, Risk Assessment and Control, to strengthen the occupational health management.
- ② Entrust relevant testing organization for on-site detection of occupational hazard factors every year, organize employees exposed to occupational hazards for occupational health examination regularly. In 2020, 1,658 on-site occupational hazard points were detected. 5,575 employees participated in the occupational health examination.
- ③ Standardize the management of personal labor protection articles, and distribute labor protection articles for employees as required. In 2020, the investment in labor protection articles reached up to CNY 27.89 million. The expenses for heatstroke prevention reached up to CNY 19.99 million.
- ④ Evaluate the current situation of posts with serious occupational hazard every year and analyze the impact on the health of employees. In 2020, CNY 1.38 million was invested for evaluating the current situation of occupational hazards of 8 units.
- ⑤ Conduct the transformation and governance of partial occupational hazard posts. In 2020, CNY 1.29 million was invested for the dust control in the area of straightening machine for medium profile steel of Long Products Business Department to improve the on-site operation environment technically.
- ⑥ Organize and carry out all kinds of occupational health training every year, strengthen the propaganda and education of occupational disease and hazard prevention knowledge of employees, and improve the self-protection awareness of on-site personnel.
- ⑦ Change the version of ISO45001 Occupation Health Safety Management System, entrust professional institutions to guide the version change of Occupation Health Safety Management System, and carry out 2 system version change trainings, a total of more than 200 employees participated the trainings.
- ⑧ Actively pay attention to the mental health of employees, set up a “heart station” in the E-Gonghui APP, expand the team of psychological counseling volunteers. Now, it has 6 psychological consultants.



Lay a solid foundation of safety production

Strengthen safety management

Centering on the overall work thinking of “benchmarking and integration, responsibility compaction, system rectification, smart safety, deepening training, laying a solid foundation, evaluation and incentive” , Magang deeply carried out the safety production breakthrough, planned and implemented the three-year action plan for special rectification of safety production, to fully implement responsibilities, strengthen sense, control risks, investigate hidden dangers, find differences and improve performance.

System construction

Magang established the Safety Production Committee, with the Chairman of Magang serving as the Director, to lead the safety production of the Company. The Safety Production Management Department serves as the Office of Safety Production Committee, to be responsible for the comprehensive management of daily safety production. All grassroots level units also established their own Safety Production Committee and Safety Management Department, allocated 275 full-time safety production management personnel in total. Among which, 62 personnel have obtained the qualification of certified safety engineer.

System construction

In order to fully integrate in the safety management system of China Baowu, Magang actively introduced relevant requirements of the safety management system of China Baowu, settled and amended the Safety Production Responsibility System and other 23 safety production management systems, implemented the “three must” requirements in all amended rules and regulations, defined the safety responsibilities of all professional departments and the management process.

Extension of knowledge

Three must: Refer to that the safety must be managed while managing the industry; The safety must be managed while managing the business; The safety must be managed while managing the production and operation.

Emergency management

The Company and all production units established a sound emergency plan system, and carried out emergency plan drills regularly. In addition, the fire brigade and gas protection station were established as the full-time emergency rescue team. While undertaking the internal emergency rescue work of the Company, they also undertake the responsibilities and duties of social rescue as the Maanshan hazardous chemicals emergency rescue team and Anhui metallurgy emergency rescue team.

Safety management of relevant party

In accordance with the spirit of the annual safety production conference and the requirements of Special Rectification Action Plan for Safety Production of Magang, Magang carried out the joint special safety production rectification action, formulated the Special Safety Rectification Scheme for Relevant Party of Process Entrustment, the Special Safety Rectification Scheme for Relevant Party of Auxiliary Business Outsourcing (Labor Service), to promote the improvement of the safety work and safety management level of collaborative suppliers.

Indicators	2020		2019		2018	
	Target	Actual	Target	Actual	Target	Actual
Larger accidents and above	0	0	0	0	0	0
Wounded rate of per thousand person	0.8%	0.26%	1%	0.36%	1.2%	0.57%
New occupational disease cases	0	0	0	0	0	0
Safety education rate	100%	100%	100%	100%	100%	100%
“Three synchronizations” compliance rate of new, transformed and expanded projects	100%	100%	100%	100%	100%	100%
Detection rate of special equipment	100%	100%	100%	100%	100%	100%
Rectification rate of serious hidden dangers	100%	100%	100%	100%	100%	100%



Hidden dangers investigation



Safety training

Safety production standardization

Magang has comprehensively promoted the construction of safety production standardization since 2011, and planned to reach the target comprehensively in three years. All Level II units of the Company have passed the Level II acceptance of safety production standardization organized by provincial and municipal departments. After integrating into China Baowu, the Company put forward the work plan of the safety standardization standard raising and upgrading, and determined the Cold Rolling Factory and Special Steel Company as the pilot units, to promote the construction of the first-class enterprise of safety production standardization. The Company entrusted Sinosteel Wuhan Safety and Environmental Protection Research Institute to assist the construction of two pilot units, carried out several on-site hidden danger investigation, allocated CNY 9.278 million for the rectification of large hidden dangers, organized and carried out the two phases of special trainings for Level I safety standardization construction, with over 260 participants.



Prevention of work-related injuries

Magang has actively strengthened the construction of the safety production responsibility system for all staff, strengthened special safety supervision, focused on eliminating weak links and solving prominent problems, and strengthened the investigation and management of hidden safety dangers, safety emergency management and risk prevention and control, laying a solid foundation for enhancing system capability by innovation and collaboratively building an iron & steel ecosystem with China Baowu.

Identify safety risks and strengthen the control of hazard sources: Magang comprehensively introduced the requirements of China Baowu, strengthened the risk prevention and control of hazard sources, organized all units to carry out comprehensive risk identification and search of hazard sources, re-evaluated safety risks, fully connected to the information-based safety system, organized the special trainings for hazard sources identification. Through identifications and evaluations, the Company identified 34,812 risk and hazard sources, including 97 Level II hazard sources, 735 Level III hazard sources and 14 major hazard sources, and implemented management and control measures for all risk and hazard sources identified, to make all risks under control.

Highlight key points and implement special rectification: Taking the year 2020 as the “year of safety rectification”, at the beginning of 2020, the Company formulated a special rectification work scheme on 7 aspects, required corresponding departments to be responsible for rectification work within their scope of responsibilities according to the principle of “the safety must be managed while managing the business”, normalized management standards, improved management ledgers, found and corrected 403 hidden dangers, and achieved phased achievements. At the same time, the Company formulated a three-year action scheme for special safety rectification to further consolidate and deepen the special rectification; The Company carried out the special gas rectification in assembly occupancies and rectified 43 places; Promoted the IIoT application of gas alarm system through safety measures, and achieved the alarm display through mobile phone APP of on-site gas alarm signal by utilizing big data.

Strengthen awareness and strictly stop acts in violation of regulations: In order to carefully implement the management concept of “violation of regulations is a crime”, in combination with avoiding habitual violation of regulations of the Company, Magang formulated the Rules for Implementing the Concept of “Violation of Regulations is a Crime” and Strengthening On-site Safety Management Control, and determined illegal command and other 9 serious violations of regulations. The Rules for Implementing the Concept of “Violation of Regulations is a Crime” and Strengthening On-site Safety Management Control was issued after being deliberated and approved by the first joint meeting of the 9th session of congress of workers and staff. From the implementation of the Rules to the end of 2020, the Company investigated and punished 93 personnel with serious violations of regulations. Among them, 91 illegal operation personnel from relevant parties were dismissed. Two official employees were treated as awaiting job assignment.



Occupational hazard notification boards are set at posts with occupational hazards, reminding employees of the types of occupational hazards, protective measures, emergency measures, etc.



Gas alarm devices are set in the gas area at the production site. On-site gas alarm signal will be displayed through mobile phone APP by utilizing IIoT and big data computing.

Implement the propaganda and education of safety

Magang has actively implemented the safety training work, and formulated safety production education and training plans every year, including certification training of “three posts” personnel and trainings on the propaganda and implementation of laws, regulations, standards and systems, and enterprise safety culture and safety management concept propaganda. In 2020, the Company organized 23 safety training projects, mainly including the special training on the version change of Occupation Health Safety Management System, the special training on the establishment of Level I enterprise of safety production standardization, improved the safety awareness and safety management ability of employees, and ensured the employment with certificates of special operation personnel.



Level I safety production standardization training



Occupation Health Safety Management System training



During the safety production month in 2020, Magang organized the emergency rescue skills competition with 45 employees from 15 grassroots level units participating. It has improved the emergency rescue skills of employees effectively.



Promote employee development

Sound training system

Magang has attached great importance to the construction of talent team, and continued to improve the talent development mechanism and the cultivation system of various talents, to help employees grow into talents. In 2020, the Company developed and designed three employee training systems of operation and management, technology business, operation and maintenance aiming at management, technical and skilled personnel.

Operation and management training: Focus on continuously improving the competence and quality of management personnel, improving their knowledge structure, inspiring strategic thinking, broadening the international vision, enhancing and guiding the core leadership of enterprise development comprehensively by holding thematic lectures, special researches and studies, short-term learning outside the company and other ways.

Technical business training: Be committed to knowledge update and ability improvement of technical and business personnel, promote the improvement of the innovation competitiveness of enterprises, and carry out systematic trainings in the form of senior seminars and various special training by combining the R&D of main steel process of the Company with demand of professionals and technical personnel in the manufacturing unit, equipment system and energy system.

Operation and maintenance training: Focus on strengthening post training of employees, carry out the training, appraisal and evaluation of employee vocational skill level upgrading, and improve the construction of skilled talents team.

Unblock the development channel

Magang has built a comprehensive and open career development channel for all employees which is suitable for the comprehensive management quality, specialized technical level, skill innovation level and business operation ability of all employees, to grant employees who do best, are creative and make contributions with job grade, treatment, status and respect. In 2020, the Company promoted the overall improvement of human resource management level and greatly improved the career development channel of employees under the thinking of accelerating integration, supporting strategy, strengthening synergy and common development, in the principle of post system integration, post value marketization, post management standardization and post recruitment normalization.



Create happy homeland

Take care of employees

Magang has focused on creating the work environment and organizational atmosphere, carrying out employee fellowship activities, festival celebration activities, sports activities, fitness activities, employee art performance and other series of group activities which are beneficial to the health of employee, to enrich employees' cultural life and promote their all-round development.



"Rewalk the Long March of Steel" the brisk walking in Ningma Sub-district



"My Destiny With You, Sweet Dating" Fellowship for Single Youth



"Glory of Magang, Creating the Dream of Hundred Years" Employee Art Performance

Support employees with difficulties

Magang has vigorously promoted the spirit of mutual assistance and love, and solved serious dangers encountered by employees and their families with the strength of the group. In 2020, the Company carried out the propaganda, insurance renewal and claim settlement of the Mutual Assistance and Guarantee Plan for Employees of All-China Federation of Trade Unions. It renewed the insurance for 19,200 employees, with the amount of CNY 1,022,900. During the Spring Festival, leaders of the Company visited 22 needy employees, and distributed the condolence money of CNY 2.94 million. Party and administration leaders at all levels visited more than 6,700 needy employees. The Company issued the autumn education funds for 10 employees from 8 units, with a total amount of CNY 50,000.

Extension of knowledge

Autumn education assistance: A "Sunshine Engineering" for caring for employees, encouraging their children to grow up and helping children of needy employees to go to school. Labor Union of the Company actively implemented the work requirements of "Do not allow any child of employees to drop out of school due to family difficulties", carefully carried out "autumn education" activity, and worked hard to provide targeted assistance for poverty, so as to give families with real difficulties more help.

Renewed insurance for
19,200
employees

Distributed the condolence money of CNY
2.94
million

Leaders visited more than
6,700
needy employees



05

Make progress hand in hand and achieve mutual benefit and win-win

Magang attached great importance to the communication and cooperation with the government, suppliers, customers, academic research institutions and other partners, and has integrated multiple superior resources and built a strategic sharing platform with the attitude of inclusiveness, openness and innovation, to explore opportunities, exert influence and promote the healthy development of the industrial chain.



62 Boost the growth of partners



64 Serve customers whole-heartedly



Boost the growth of partners

Supplier management

Magang formulated the Management Procedure for Suppliers, Management Measures for Tendering and Bidding, Management Procedure for Purchasing, Management Measures for Use Approval of Raw Materials and Fuel Purchased, Management Measures for Quality Verification of Raw Materials and Fuel, Management Procedure for Advanced Product Quality Planning and other management standards, to standardize purchase processes, optimize purchase channels, and manage suppliers scientifically, and ensure that the products purchased meet the requirements on quality, environment, energy, occupational health and safety, measurement system and other aspects, and safeguard the legitimate rights and interests of the tenderer and the bidder.

In 2020, upon the annulment of the former Management Measures for the Evaluation and Selection of Suppliers, the Company issued Management Measures for Supplier Certification, selected suppliers and approved the qualification and scope of supply of suppliers through sourcing, preliminary evaluation, on-site audit and selection; The Company changed and amended the original Management Measures for Dynamic Evaluation of Suppliers, to achieve graded management of suppliers, select the superior suppliers and eliminate the inferior suppliers, and promote the continuous improvement of suppliers. By the end of 2020, the Company has 3,150 registered suppliers, including 3,065 domestic suppliers and 85 foreign suppliers.

Sunshine transparent purchase

Magang bidding platform

Magang Bidding Company (current Baohua Bidding Anhui Branch) independently researched and developed the online bidding system (<http://www.mgzbx.com>) and established a scientific management and supervision system. At the same time, the bidding announcements are published simultaneously on the Magang Bidding Portal Website and Anhui Tendering and Bidding Information Network to ensure that the whole bidding process is open, fair and just.

Ouyeel Purchase Platform

Magang has vigorously promoted the sunshine purchase work by utilizing the Ouyeel purchase platform according to the promotion requirements of China Baowu on sunshine purchase. In the independent sourcing and purchase business, Magang has set corresponding purchase application conditions for all suppliers in the platform, determined the bid-winning suppliers and purchase price of various goods and materials based on the comparison of quality and price; By increasing the bidding rate, and conducting price comparison and bid negotiation utilizing the Ouyeel purchase platform, Magang has significantly improved the online purchase rate. By the end of 2020, the online purchase rate of the Company's materials and spare parts has increased from 71% at the beginning of 2020 to 95%, and that of the full category of materials has increased from 61% at the beginning of 2020 to 91%.



Magang bidding homepage



Ouyeel purchase platform homepage

Honest and compliant purchase

Magang managed and controlled the compliance of purchase for the whole process. It integrated the idea of “ensure that the products purchased meet the requirements of quality, environment, energy, occupational health and safety, measurement management system” into Management Procedure for Suppliers. The Management Measures for Certification of Suppliers stipulates the rules for access and audit for different types of suppliers and detailed provisions by classification on bank credit, business reputation, environmental system certification level, occupational health and safety certification level, tax payment in accordance with laws and other aspects of enterprise social responsibility and integrity management. The execution of the Agreement on Regulating Business Conduct is taken as the prepositive procedure for the access of suppliers. During the report period, 346 supplier access materials (including cancellation of supplier qualification and rejection of introduction) were audited. 297 Agreements on Regulating Business Conduct were executed.

Purchasing quality management

Magang implemented the whole-process quality monitoring and management. Magang required that suppliers should have excellent performance in the materials supply for large-scale steel enterprises from the source, that all key products of each supplier should pass the ISO9000 quality standards, and the warranty that meets the technical standards must be provided for the product delivery; That the quality of goods and warranty should be compared during warehousing and acceptance; That the attention should be paid to the use evaluation during use while conducting the second party audit and third party audit to the quality system of suppliers. During the post evaluation, suppliers should be evaluated dynamically, requiring that the qualification rate should not be lower than the red line of 80%. In 2020, all suppliers of key products of the Company passed the ISO9000 quality management system certification.

Green purchase

Green purchase is an important part for improving the indicator of green in-city steel factories of Magang. Magang has actively built a green purchase management system. With the target of improving the proportion of green purchase, Magang has developed a catalogue of green products in the purchase center with respect to improving the service life, reducing consumption, saving energy, reducing emissions and recycling use; Integrated the performance of suppliers in environmental management system, cleaner production and performance of social responsibilities in the management scope, to constantly improve the breadth and depth of supplier audit. The Company has required that all suppliers must guarantee low carbon and environmental protection, and safety production, notified all suppliers to perform the social responsibilities through contract, notification and supplier conference. The Company has required that the on-site investigation shall be conducted when necessary to further promote in-depth green purchase.



Graphite electrode is a consumable product in production. Magang has taken reducing electrode consumption and extending the service life as the purchasing target and set the consumption target value by executing technology agreements with suppliers. At the same time, Magang has taken antioxidation measures of graphite electrode to achieve good consumption reduction effect of graphite electrodes in No.4 Steel Rolling Factory and Special Steel Company.

Strengthen the management of unqualified suppliers

Magang has established the mechanism for selecting the superior suppliers and eliminating inferior suppliers and implemented the “Blacklist” and “Warning directory” for unqualified suppliers. Magang has conducted the evaluation of suppliers and published the list of suppliers according to the evaluation results. In 2020, there were 19 suppliers in the blacklist of suppliers and 12 suppliers in the warning directory.



Serve customers whole-heartedly

Lean customer management

Customer service management system

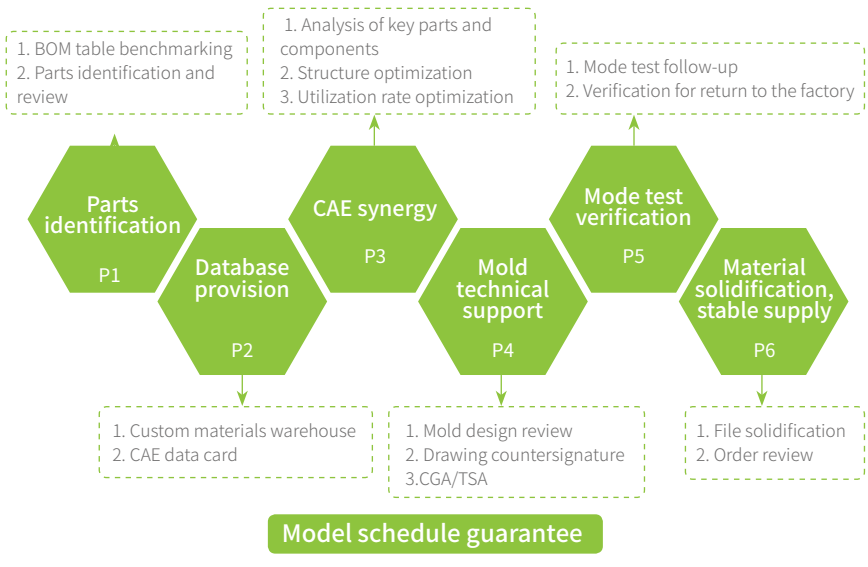
The Company has advocated the value marketing concept of win-win with customer value, highlighted customer value, provided overall solutions around customer demands, and realized maximum customer value.

The Company has managed whole-link (pre-sales, in sales and post-sales), whole-process and whole-cycle customer service of products systematically and centrally, established customer review system and set up a comprehensive customer view. It has established the technical service management system, focused on customer needs, taken solving problems of users as the orientation, strived to improve customer service level and improved the perception and satisfaction of customers. It has comprehensively introduced the integrated promotion mode of production-marketing-research, to respond to the demand of users faster, better and more efficient and make users have no worries during the use of materials. It has established and promoted the user problem solution mechanism, strengthened customer demand identification and a identification transformation, to timely solve various problems at the user end, and implement improved closed-loop. It has overall planned and promoted the technical service solution, EVI work, and identified special demands of customers, to assist to complete product design and process design and provide products that meet the characteristic demands of users. Customer satisfaction reached 89.2% in 2020.

EVI helps the design of new commercial vehicle model of Changan



The Company has established a long-term cooperation relationship with Changan Auto. During the years of cooperation, the service team of the Company has provided Changan Auto with technical services, such as auto parts identification technology, optimization of vehicle materials, forming simulation analysis of auto parts, part structure optimization, mold design intervention and acceptance. By conducting EVI project, it has achieved the synchronization between application technology of automobile sheet products and Changan technology. It has intervened in real time from the early stage of vehicle model project approval, provided technical support for different plates, promoted the development and application of new technologies and new materials, and achieved service lock in the process, promoted the cost reduction of Changan, and truly realized the value co-creation and benefit sharing between the Company and users.



Multidimensional product propaganda

In order to strengthen the product propaganda, the Company has helped breakthrough and efficiency creation with multiple measures. It held steel product customer communication meetings to communicate closely and share results with customers, introduced products from multiple perspectives, demonstrated the strategy of implementing innovation-driven development firmly, used new technology, new sharing service model and new business model to strengthen the upstream and downstream linkage, win-win and sustainability of the overall development, and jointly built and shared a high-quality iron & steel ecosphere. It held annual meeting of product technology service, and showed cooperation achievements with customer representatives from special steel, automobile sheet, home appliance sheet and silicon sheet application fields, popularized product knowledge, answered customers' technical questions, analyzed industry prospects, exchanged product ideas, and drew a beautiful blueprint for collaborative development.



Hold steel product customer communication meeting



Hold annual meeting of product technology service

Customer information protection

Magang has paid attention to customer data and privacy protection. Magang has implemented the Sales Management Measures to standardize the internal workflow and ensure no disclosure of customer data and privacy; It has developed an independent application software and used independent server to realize the physical isolation of office network and business network; It has involved the customer information protection into the customer manager training and required to work with certificate; It has redesigned the claim authority of product objections and the scope of approval level by level from the perspective of fast treatment and risk control, added "confirmation" link, subdivided the treatment methods of objections, and clarified the approval authority; It has set the interface of external customer complaints and internal rectification, added and subdivided objection proposal, business negotiation, liability judgment, verification of corrective measures and other links, all of which are closely connected and independent of each other, to effectively prevent the disclosure of customer information.

Active after-sales service system

Focusing on customers and in combination with graded management of customers, the Company has dispatched customer representatives for strategic and key customers, to collect customer information, feed customer problems back, maintain customer relationship, and solve customer problems in the process of using products from time to time. In addition, for automotive sheets, home appliance sheets, silicon sheets, color-coated sheets and hot-rolled products, Magang has dispatched over 30 customer representatives for more than 90 end customers in East China, Central China, South China, Northeast China and Northwest China to provide after-sales services for customers effectively.

Magang Rail Transportation Equipment Company actively promotes the active customer service



Magang Rail Transportation Equipment Company has actively promoted the active customer service, subdivided the areas of customer service personnel based on the principal of “high efficiency and centralization, coordination and sharing” , covering 18 railway bureaus and 67 passenger and cargo sections at home. In 2020, in addition to the treatment of conventional quality objection, the active customer service of Magang Rail Transportation Equipment Company also included technology support of cargo wheel flaw detection technology, wheel hardness comparison test, understanding and mastering wheel loading and application information and track of using status.

On December 22, 2020, the customer service team of Magang Rail Transportation Equipment Company received a feedback from the Materials Department of Beijing Railway Administration: The identification of 38 J320U-T locomotive tires was not clear, which affected the press fitting. It asked us for treatment. It was understood that this batch of tires were shipped in 2015, were corroded seriously due to open stacking for a long time, which restricted the processing, press fitting and wheelset maintenance in Huairou North Locomotive Depot.

Although the product damage was not caused by the manufacturing of Magang Rail Transportation Equipment Company, customer service personnel of Magang Rail Transportation Equipment Company still solved it actively for service extension, making highlight and raising to a new level. After determining the treatment scheme, the team repaired 38 tires onsite in the cold open air within 3 days. This active service experience also received a sincere letter of thanks from Huairou North Locomotive Depot.



On-site inspector is checking the truck wheel dimension

Technology support of cargo wheel flaw detection

Handle customer complaints

The Company has established the customer service center to implement the “customer-centered” service concept and optimize the objection processing process. The customer service center is the only window for handling customer product objections, and is conducted with the centralized and flat management. The customer service center is responsible for the subsequent rectification of objections and client-end verification, and continuously focuses on the improvement of product quality through on-site tracking by customer representatives, customer reviews, etc. In 2020, the Company handled 1,393 quality objections.

Chongqing Shangyihong beam steel plate corrosion improvement



Overview: Corrosion, warping and other problems were found on site when using the 6.0mm and 8.0mm beam steel M610L horizontal-cut plates manufactured by No. 4 Steel Rolling Factory in Shangyihong Shuangqiao Base. The customer refused to use the products. Upon investigation, it was found that the corrosion was caused by contacting with rainwater during transport or stacking in open air.

Rectification: Through benchmarking with other steel factories, investigation and survey, Magang proposed the fine packaging scheme for hot-rolled horizontal-cut plates to better protect the surface quality of hot-rolled plate. The specific scheme is: for products used by Shangyihong, when its width exceeds 1,300mm, the package method of fine packaging choose kraft paper, and transport mode of railway transport, automobile transport and water transport; When its width is not more than 1,300mm, the package method of fine packaging choose kraft paper, and transport mode of automobile transport and water transport.

Effect: Fine packaged products warehoused by Chongqing Company have normal surface quality, with the label meeting the specification. The monthly order quantity of Shangyihong beam steel M510L and M610L is 1,500 t. After improvement, the Company can obtain the benefit of nearly CNY ten million per year if the product is supplied continuously. In addition, the Company can improve the customer satisfaction and expand the product market of fine packaging. The popularity of products can be improved by continuously promoting the packaging method to other customers.



Pay attention to quality management

Quality management system

According to the requirements of IATF 16949 quality management system, Magang prepared the Quality Manual as the leading document of its quality management. In 2020, the Company continuously promoted the construction and evaluation of the quality management system, strengthened the inspection of internal systems, to ensure the compliance, effectiveness and suitability of the quality management system. In view of quality problems at the user end, the Company continuously optimized and improved the product quality by subdividing products by differentiation, adjusting process parameters, improving process and formulating standards and operation specifications. In view of the quality of plate products, the Company conducted component optimization and process design optimization under the problem orientation; The Company conducted the benchmarking of process and technology, equipment management and lean production under the orientation of key quality problems, to comprehensively improve the production process stability and material quality level of automobile outer panels; It promoted the quality improvement of long products and special steel products through surface quality breakthrough and process improvement; Promoted the development of new products, inspected the identification and transformation of customer demand for new products, strengthened the rectification closed-loop of quality objections and quality problems. In 2020, Magang successfully passed the external review of IATF 16949 quality management system, and the renewal audit of the comprehensive management system.

Product quality certification

In 2020, Magang completed 15 product certifications, including 6 supervision audits, 9 renewal reviews. It carried out the certification expansion audit of EU CE certification and EU ISO9001 quality system certification.

Serial No.	Name	Involved products	Audit type	Audit result
1	EU CE certification	Profile steel, steel plate and strip	Renewal review and certification expansion	Passed
2	Singapore BC1 certification	Profile steel, steel plate and strip	Renewal review	Passed
3	PED certification	Steel plate and strip	Supervision audit	Passed
4	EU ISO9001 quality system certification	Profile steel	Supervision review, certification expansion	Passed
5	Bureau Veritas (BV) factory recognition	Profile steel	Supervision audit	Passed
6	CCS factory certification	Billet (bloom billet)	Renewal review	Passed
7		Billet (continuous casting round billet)	Renewal review	Passed
8		Round steel for marine anchor chains	Renewal review	Passed
9		Steel plate- Binhai Metal Product Co., Ltd.	Supervision audit	Passed
10		Steel coil	Renewal review	Passed
11		Steel coil opening and processing	Renewal review	Passed
12	GOST certification of Russia	Profile	Renewal review	Passed
13	Product certification on axle and train wheel billets by Beijing Grand Honour Certification Co., Ltd.	Billet	Supervision audit	Passed
14	MCC metallurgical product certification	Steel plate and strip, H-beam and rebar	Renewal review	Passed
15	MCC green product certification	H-beam	Supervision audit	Passed

Conduct various audits

In 2020, Magang passed the renewal review of IATF 16949 quality management system; In order to successfully pass the customers second-party audit, the Company received 5 audits from DPCA and Honda and 3 qualification surveys; Conducted 19 second-party audits of supplier qualification access, and 8 on-site second-party audits; Organized the internal audit of the quality management system for 25 units; Completed the product audit of 100 products from 23 key customers, with the pass rate of 100%; Organized and carried out the process audit of automotive steel products, completed the P2 - P7 whole-process audit of 12 units. The satisfaction degree of the manufacturing process of all units was Level B.

Product quality appraisal

- ② **Improve the capability of inspection and test continuously:** Magang adjusted and redefined the inspection business between coal coking, energy control center and test center; Re-designed performance assessment indicators through benchmarking, added the timeliness and accuracy of inspection items, and improved the detection period and accuracy of key inspection projects; Promoted benchmarking of technology center and test center with Baosteel, to improve the capability of inspection and test gradually.
- ② **Identify, control and manage unqualified products effectively:** Magang strengthened the management of unqualified products in strict accordance with the Management Procedure for Unqualified Product Control. It investigated and treated the cause of defective hot-rolled base coils with inclusion or warping for 2130 pickling rolling and 1720 pickling rolling; Strengthened the management and control of defective base coil for 1680 pickling and had them to be processed by pickling rolling units; Strengthened the determination of difficult quality defects according to the standard map for determining difficult defects of continuous annealing, and timely provided support for handle; Urged the hot-rolled and cold-rolled recoiling units to accelerate the rejection of defective coils, to achieve rapid identification of defective coils.
- ② **Conduct quality supervision and special inspection continuously:** Magang conducted regular quality supervision and promoted the implementation of the process execution rate and relevant management systems of the Company. It organized the inspection of key products and new important production lines. It conducted the special supervision to material quality and management process of raw and auxiliary materials, key processes and abnormal fluctuations in product quality, as well as major and difficult problems in the production and quality control. It enhanced the special inspection intensity of self-inspection situation of the manufacturing unit and its effect, to consolidate and improve the effect of process discipline inspection of company level, factory level and branch level. In 2020, under the premise of doing well in epidemic prevention and control, Magang insisted on conducting 2-3 quality supervisions weekly, and conducted 172 quality supervisions in total, including about 60 special supervisions. It conducted 10,828 inspections of process parameters/manufacturing process and found 103 non-conformance items.

2020

Completed

15

product certifications

2020

Conducted

2~3

quality supervisions weekly

Conducted

172

quality supervisions in total

Conducted

60

special supervisions

Conducted

10,828

inspections of process parameters/
manufacturing process

Found

103

non-conformance items



06

Be thankful, make feedback and create a harmonious future

Magang has been committed to supporting public welfare for a long time, has always insisted on the important enterprise value of making contribution to society with the development achievements and has interpreted the true meaning of values with practical actions, to build a more harmonious and beautiful society.

Achieve decisive victory of poverty elimination
72

77 Act active in community





Achieve decisive victory of poverty elimination

Strengthen the organizational leadership and compact the responsibility of poverty elimination

Company leaders have deeply assisted poor villages in investigation and survey by batches, listened to work reports, visited poor households, understood the production and living conditions, and actively planned the assistance measures. The Party Committee of Magang listened to 4 poverty alleviation reports and researched poverty alleviation works. It carried out the special labor competition of “winning the critical battle against poverty”, further strengthened the organizational synergy of joint consultation, planning and promotion of the leading groups for poverty alleviation, and stimulated the dedication and fighting spirit of the work teams and poverty alleviation workers stationed in villages in the battle against poverty.



Ding Yi, the secretary of party committee and the chairman of the company, visited poor households



Company leaders had discussion with heads of towns and villages and cadres stationed in villages



Liu Guowang, the deputy secretary of the party committee of the company, visited poor households



Zhang Maohan, the deputy general manager of the company, investigated and surveyed the poverty alleviation workshop in Liji Village

Strengthen field investigation and survey, and cultivate pillar industries

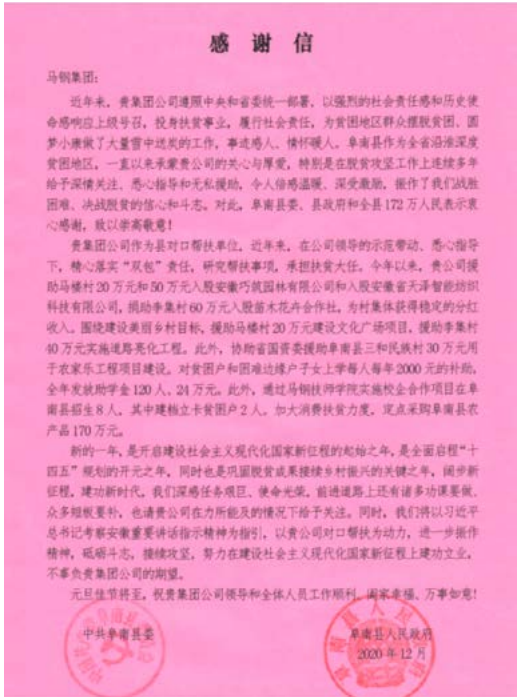
Magang established an investigation and survey team to conduct the feasibility investigation and survey of dividends by shares declared by the village collective. Upon analysis and evaluation, it funded Malou Village for CNY 300,000 and CNY 500,000 respectively for contributing Anhui Qiaozhu Garden Co., Ltd. and Anhui Tianze Intelligent Textile Science & Technology Co., Ltd., and donated CNY 600,000 to Liji Village for contributing the seedling and flowers cooperative.



Ding Yi, the secretary of party committee and the chairman of the company, sent protects to the village



The company donated the funds for poverty alleviation by developing industry to Malou Village



“ In recent years, in accordance with the unified deployment of the Central Committee and the Provincial Party Committee, your group has responded to the call of superiors with a passionate sense of social responsibility and historical mission, devoted to poverty alleviation, fulfilled the social responsibility, and conducted a lot of much-needed works for getting rid of poverty and realizing the moderate prosperity of people in poor areas, which was heart-warming. Your Company has always cared about Funan County, an extreme poverty area along the Huaihe River in the province, especially deep concerning, careful guidance and selfless assistance in poverty elimination, which deeply warms and inspires us, and boosts our confidence and fighting will in overcoming difficulties and winning the battle against poverty. For this, the Party Committee and People’s Government of Funan County and 1.72 million people in Funan County would like to express our sincere thanks and pay great respect to your Company!

—— From the letter of thanks of Party Committee and People’s Government of Funan County

”

Strengthen poverty alleviation through consumption and enhance the assistance effectiveness

Magang has intensified efforts to poverty alleviation through consumption. According to the needs of employees’ welfare, distribution of heatstroke prevention articles, and purchase of foods for working meals, it has purchased agricultural products from targeted assistance regions of China Bowu and Funan County, with the accumulative purchase amount of CNY 13,828,000. Through purchasing agricultural products instead of donation, it has actively helped poor people in increasing income and eliminating poverty.

Perform the subcontracting and guarantee system and implement personal assistance

Magang has continued to carry out the assistance work with certain cadres being responsible for certain households, timely adjusted the assistance arrangement according to the personnel post change, and regularly organized subcontracting and guarantee cadres to visit poor households, to solve practical problems within the capability, and timely do well in poverty alleviation condolence.

Participate in epidemic prevention and control and support flood prevention

Since the start of the epidemic prevention and control work, Magang has arranged cadres stationed in the villages to return to their posts and work in a timely manner to cooperate with two committees of village to do well in propaganda of epidemic prevention and control knowledge, screening of key groups and other works according to the requirements of the local government; After resumption of work and production, it accelerated the implementation of industrial projects for poor households and helped people with the demand of migrant work to return to their posts as soon as possible; It assisted enterprises entering the employment poverty alleviation workshop of Malou Village to conduct equipment transformation and organized the production of civil masks. Facing the severe situation in Liji Village caused by the flood situation of Huaihe River, the cadres stationed in the village of the Company led people to protect the bank and organized the flood prevention work.

Deepen the guidance of party construction and strengthen assistance of poverty alleviation stationed in village

The poverty alleviation team stationed in village assisted two committees of village to strengthen the construction of primary party organizations, strictly implemented “three sessions and one lecture” , democratic evaluation of Party members, collection of party membership dues, branch theme party day and other systems, did well in the village-level reserve cadres cultivation and selection and Party member development, visited party members with difficulties during the Spring Festival and the CPC Founding Day, and gifted the consolation money on behalf of the Party Committee of the Company. Poverty alleviation cadres stationed in village actively publicized and implemented various people’ s livelihood policies for all, helped 18 poor households in improving living environment, implemented poverty alleviation by developing industry to 36 households, released the industrial bonus of CNY 136,000, implemented kindergarten funding, education support, tuition and miscellaneous fee reduction and Yulu plan for 88 times, helped 150 families living in poverty, such as orphans, widows, the disabled and people in straitened circumstances, implemented the social welfare policies, and achieved full coverage of poverty alleviation through health.

Statistics of targeted poverty alleviation of Magang from 2018-2020					
Dimension		Indicator	2020	2019	2018
General situation		Fund (CNY 10,000)	1,522.8	22.8	86
		Converted amount of materials (CNY 10,000)	—	—	18.5
		Number of archived poverty-stricken people who have overcome poverty with the help (person)	69	995	574
Sub-item investment	Poverty elimination by industrial development	Type of poverty alleviation projects by developing industry	<input type="checkbox"/> Poverty alleviation in agriculture and forestry industry	<input type="checkbox"/> Poverty alleviation in agriculture and forestry industry	<input type="checkbox"/> Poverty alleviation in agriculture and forestry industry
			<input type="checkbox"/> Poverty alleviation through tourism	<input type="checkbox"/> Poverty alleviation through tourism	<input type="checkbox"/> Poverty alleviation through tourism
			<input type="checkbox"/> Poverty alleviation through e-commerce	<input type="checkbox"/> Poverty alleviation through e-commerce	<input type="checkbox"/> Poverty alleviation through e-commerce

Statistics of targeted poverty alleviation of Magang from 2018-2020					
Dimension		Indicator	2020	2019	2018
Sub-item investment	Poverty elimination by industrial development	Type of poverty alleviation projects by developing industry	√ Poverty alleviation through asset incomes	√ Poverty alleviation through asset incomes	√ Poverty alleviation through asset incomes
			<input type="checkbox"/> Poverty alleviation with technology	<input type="checkbox"/> Poverty alleviation with technology	<input type="checkbox"/> Poverty alleviation with technology
			<input type="checkbox"/> Others	<input type="checkbox"/> Others	<input type="checkbox"/> Others
		Number of poverty alleviation projects by developing industry (number)	3	—	—
		Investment to poverty alleviation projects by developing industry (CNY 10,000)	140	—	—
		Number of archived poverty-stricken people who have overcome poverty with the help (person)	69	815	—
	Poverty elimination by diverting employment	Investment amount of vocational skill training (CNY 10,000)	—	—	—
		Number of vocational skill training (person /times)	—	83	—
		Number of employment of archived poverty-stricken people (person)	—	50	—
	Poverty elimination by relocation	Number of employment of relocation households (person)	—	—	—
	Poverty elimination through education	Investment amount for subsidizing for poverty-stricken students (CNY 10,000)	—	22.8	7.45
		Number of poverty-stricken students subsidized (person)	—	114	250
		Investment amount for improving educational resources of poverty-stricken areas (CNY 10,000)	—	—	0.2
	Health poverty alleviation	Investment amount of medical and health resources in poverty-stricken areas (CNY 10,000)	—	—	0.55
	Ecological protection poverty alleviation	Project name	<input type="checkbox"/> Carry out ecological protection and construction	<input type="checkbox"/> Carry out ecological protection and construction	<input type="checkbox"/> Carry out ecological protection and construction
			<input type="checkbox"/> Establish ecological protection compensation methods	<input type="checkbox"/> Establish ecological protection compensation methods	<input type="checkbox"/> Establish ecological protection compensation methods
			<input type="checkbox"/> Establish ecological public welfare posts	<input type="checkbox"/> Establish ecological public welfare posts	<input type="checkbox"/> Establish ecological public welfare posts
			<input type="checkbox"/> Others	<input type="checkbox"/> Others	<input type="checkbox"/> Others
		Investment amount (CNY 10,000)	—	—	—

Statistics of targeted poverty alleviation of Magang from 2018-2020					
Dimension		Indicator	2020	2019	2018
Sub-item investment	Minimum security	Investment amount for helping “three left-behind” personnel (CNY 10,000)	—	—	—
		Number of “three left-behind” personnel helped (person)	—	8	—
		Investment amount for helping poor people with disabilities (CNY 10,000)	—	—	—
		Number of poor people with disabilities helped (person)	—	62	—
	Social poverty alleviation	Investment amount by eastern and western cooperation in poverty alleviation (CNY 10,000)	—	—	—
		Investment amount for fixed-point poverty alleviation (CNY 10,000)	—	—	86
		Poverty alleviation public welfare fund (CNY 10,000)	—	—	—
	Other projects	Number of projects (number)	—	—	1
		Investment amount (CNY 10,000)	1,382.8	—	30
		Number of archived poverty-stricken people who have overcome poverty with the help (person)	—	—	11
		Description of other projects	Poverty alleviation through consumption	—	Help poor households to renovate dilapidated houses
	Awards (content, level)		—	—	—



Act active in community

Participate in flood prevention and relief

Magang has carefully implemented the spirits of important instructions of the General Secretary Xi Jinping on flood prevention and relief and the spirit of Notice of the Company on Doing Well in Flood Prevention in 2020, issued the Notice on Organizing Youth Shock Brigade to Engage in Flood Prevention and Relief, to mobilize young people to actively participate in the flood prevention tasks of all units and do well in the flood prevention works solidly. In 2020, the major flood period was 40 days. 14 flood prevention units dispatched 1,500 flood prevention personnel and 2,900 vehicles per day; Prepared flood prevention materials including 21,000 woven bags, geotechnical cloth of 2,100 m², aggregate of 2,800 m³, rubble of 2,000 m³, galvanized wire of 560kg, steel tube of 1,400 kg, and 500 life jackets; Found and disposed 25 risk situations, including 12 large risk situations (such as piping) and successfully completed the flood prevention task.



The Thermal Power Factory rapidly gathered the militia to set up a flood prevention team to be on duty on the dike



Special Steel Company compacted flood prevention responsibilities and continuously consolidated flood prevention measures



Erected Cihu River drainage equipment over the night



Blocked piping of Yangtze River embankment

Create a civilized city jointly

Civilized city is a scientific evaluation of the overall strength, inner charm and development vitality of a city. It is also a “comprehensive indicator” that reflects the comprehensive strength and core competitiveness of a city. In recent years, Magang has actively participated in the construction of civilized city of Maanshan City, and made efforts for Maanshan City winning National Health City, National Excellent Tourist City, National Model City of Environmental Protection and National Garden City. In 2020, Magang participated in the construction of civilized city of Maanshan City, and organized 55 people to participate in the “creating civilized traffic, youth volunteer first” civilized traffic persuasion activities of urban volunteers.

Engage in volunteer actions

Adhering to the voluntary service spirit of “dedication, friendship, mutual assistance and progress”, Magang actively guides its employees to participate in volunteer activities, and conveys true feelings with actions and writes love with dedication. In 2020, the Company cooperated with the Maanshan Blood Station to encourage 2,102 employees to donate blood voluntarily, with the total amount of blood donation of 598,600ml, which effectively alleviated shortage of clinical blood. 2 employees successfully donated hematopoietic stem cell. The administrative service center was awarded as the outstanding contribution unit of hematopoietic stem cell donation in Maanshan City. It organized the flower exhibition to participate in the 29th Maanshan Golden Autumn Flower Exhibition, dressing up the city appearance, winning a good reputation and setting up a good corporate image of a listed company.



Arrangement of the 29th Golden Autumn Flower Exhibition



Li Yong from Special Steel Company donated hematopoietic stem cell



Li Zong, an employee of No. 4 Steel Rolling Plant, donated hematopoietic stem cell

Letter of thanks from the flood control and drought relief command Office of hanshan County

Letter of thanks from the flood control and drought relief command of hanshan county
Magang corporation,

After entering the flood period, our county encountered heavy rainfall continuously, with the Yuxi River and Niutun River in the county exceeding the warn line for a long time. Important dike mouths had dangerous situations frequently. During the most urgent period of flood fighting and rescue in our county, your company acted quickly based on instructions, and immediately organized 100 employees to set up a flood prevention commando to rush to the frontline dikes in Tongzha Town to support flood fighting and rescue.

After arriving at the county, the commando engaged in the dike patrol and inspection at the first time, and stuck to the dike under its charge regardless of hard and fatigue, made inspection carefully, reported risk timely and accurately, eliminated risks bravely, showing its spirit of fighting against floods and sense of responsibility by facing difficulties, hardworking, being indomitable and maintaining the overall situation, making positive contribution to the risk prevention and rescue in the county.

Hereby, we would like to express our heartfelt thanks and great respect to all employees who supported the flood fighting and rescue in our county. We firmly believe that with the care of leaders at all levels, the support from all sectors of society and the practical action of whole people preventing flood, we will surely achieve the final victory of flood prevention and rescue.

Flood Control and Drought Relief Command Office of Hanshan County
July 28, 2020

Letter of thanks from flood control and drought relief command office of maanshan City

Letter of thanks from flood control and drought relief command office of maanshan city
Magang (Group) Holding Co., Ltd.,

During the flood period in this year, our city was hit by historic floods. The Yangtze River and other major rivers exceeded the warn line and security line for several consecutive days, making the flood prevention situation extremely complex and grim. On July 27 and July 31, according to the instructions of the Flood Control and Drought Relief Command of Maanshan City, your company urgently transferred capable personnel to form a flood prevention commando of 100 people to support the flood prevention and dike inspection of Hanshan County. The commando carried forward the working style of being dedicated, hardy and capable of fighting, and successfully completed the flood prevention and fighting tasks. It is a team of well-managed, hard-working and good at fighting against hard battles, which embodies the social responsibility of state-owned enterprises and sets up a good image.

Hereby, we would like to express our heartfelt thanks to your company for your efforts and achievements in flood prevention and rescue. Let us continue to work hand in hand to overcome difficulties and win the final victory of flood prevention and relief in 2020!

Flood Control and Drought Relief Command Office of Maanshan City
August 3, 2020

含山县防汛抗旱指挥部

感谢信

马钢公司：
入汛以来，我县连续遭遇强降雨，境内裕溪河、牛屯河长期超警，重点圩口险情频发，在我县抗洪抢险最危急最困难时期，贵公司闻汛而动，闻令而行，立即组织100名员工，成立防汛突击队，赴我县新坝镇一线圩堤，支援抗洪抢险。
突击队到达我县后，第一时间投入堤防巡堤查险，不辞艰辛，不畏酷暑，始终坚守责任堤段，查险仔细认真，报险及时准确，排险会战争先，以实际行动展现了迎难而上，勇于拼搏，坚韧不拔，维护大局的抗洪精神和担当意识，为我县抗洪抢险工作作出了积极贡献。
在此，谨向支援我县抗洪抢险的全体员工表示衷心的感谢和崇高的敬意。我们坚信，有各级领导的关心、社会各界的支持和全民防汛的实际行动，一定会取得抗洪抢险的最后胜利。



马鞍山市防汛抗旱指挥部办公室

致谢函

马钢（集团）控股有限公司：
今年汛期，我市遭遇历史性洪水，长江及各主要河流连续数日起警戒，防汛形势异常复杂严峻。7月27日和7月31日，按照市防汛指令，贵公司紧急抽调骨干力量组成100人的防汛突击队，驰援含山县配合开展巡堤查险工作，突击队发扬特别能奉献、特别能吃苦、特别能战斗的工作作风，圆满完成了防汛抢险工作任务，是一支管理到位、吃苦耐劳、能打硬仗的队伍，体现了国企的社会担当，树立了良好形象。
在此，谨向贵单位在抗洪抢险工作中所付出的努力和取得的成就致以诚挚的谢意。让我们继续携手并肩，共克时艰，共同夺取2020年防汛救灾的最后胜利！



Social responsibility management

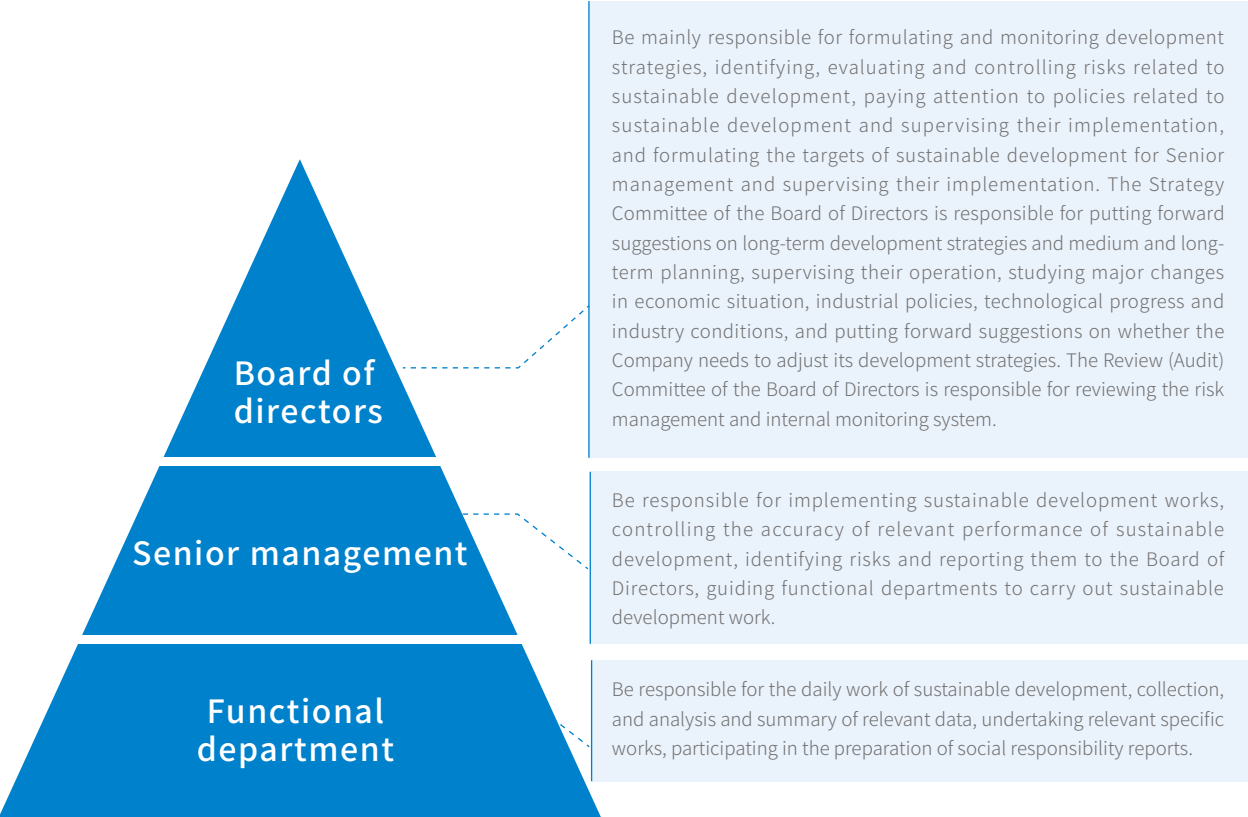
Responsibility concept

Adhering to the social responsibility concept of “integrity, harmony, green and development” , Magang has taken fulfilling its social responsibility as its initiative pursuit, as an important means to enhance its competitiveness and promote the sustainable development of the enterprise. Magang has integrated its social responsibility into its operation strategies, promoted the inward integration of social responsibility continuously, given consideration to the government, shareholders, employees, customers, partners, communities and other stakeholders while pursuing the economic benefits, been committed to build an influential and sustainable and responsible brand through reform and development, and promote the sustainable development of the company to a new stage from the aspects of compliance operation integrity development, innovation management, intelligent manufacturing, resource conservation, environmental protection, care for employees, development together with partners, contribution to society, and assisting poverty alleviation.

Responsibility governance

Social responsibility management framework

In reference to the advanced experiences in social responsibility management at home and abroad, Magang established the social responsibility management framework from top to bottom which is consisted of the Board of Directors, Senior management and functional departments, with clear, coordinated and unified division of responsibilities at all levels.



Support of social responsibility by the top leaders

Top leader of Magang actively promoted social responsibility management and took the lead in participating in social responsibility works, personally laid out and promoted the whole process management of planning, process implementation and results, so as to implement all social responsibility works of the Company. The Chairman highly focused on and continuously promoted the social responsibility work of the Company, listened to the social responsibility work reports, commented and deployed related works through monthly chairman office meetings; The General Manager and other senior executives also sat in on the monthly chairman office meetings and was responsible for implementing relevant works deployed in the monthly chairman office meetings.

Structure of the report preparation team

Top leaders of Magang supported and highly focused on the preparation of social responsibility reports. The Chairman served as the leader of preparation work leading team and was mainly responsible for the preparation; A Deputy General Manager of the Company acted as the deputy team leader to promote the preparation of reports; Each functional department collected materials required to report preparation according to the list of materials and participated in the audit of reports. In 2020, top leaders of the Company participated in the kick-off meeting of social responsibility report preparation and put forward specific work requirements.

Social responsibility system

Magang has fully integrated sustainable development issues into the Company’ s development strategy, and formulated special sustainable planning including 2018-2020 Energy Development Planning, Water Conservation Action Plan (2019-2020), 2018-2020 Coal Substitution or Reduction Work Scheme and 2018-2020 Implementation Plan for Three-year Action of the Battle for Defending Blue Sky, Clean Water and Pure Land, to guide the special social responsibility work of the Company.

Social responsibility indicator system

Magang guided the preparation of social responsibility report by establishing a complete indicator system. In 2020, based on original indicator system, the Company further standardized its social responsibility work and report management work by further introducing GRI Standards, SDGs Compass, Opinions of State-owned Assets Supervision and Administration Commission of the State Council on Better Performance of Social Responsibility of State-owned Enterprises, CASS-CSR4.0 of Chinese Academy of Social Sciences, Notice of Shanghai Stock Exchange on Strengthening Social Responsibility Undertaking of Listed Companies and Publishing Guidelines of Shanghai Stock Exchange for Environmental Information Disclosure of Listed Companies, Guidelines of the Stock Exchange of Hong Kong on Environmental, Social and Governance Report and industry benchmarking, with indicators of six dimensions upgraded, i.e., report preface, responsibility management, market performance, social performance, environmental performance, report postscript.

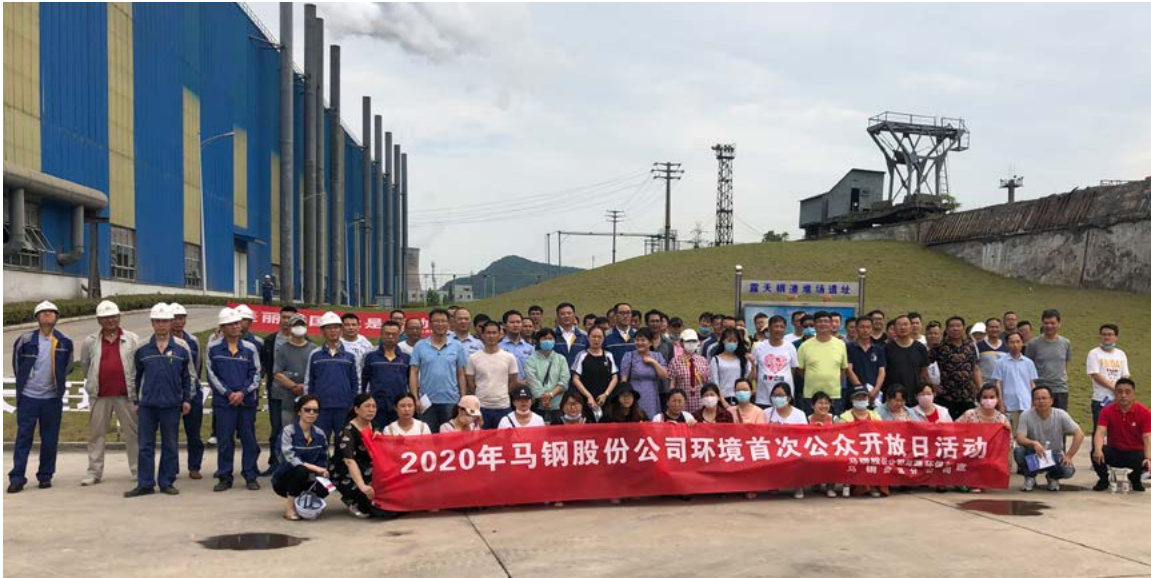
Responsibility communication

Effective communication with stakeholders is a solid support for enterprises to improve their ability to take social responsibility. In the process of operation and development, Magang has constantly innovated communication modes with stakeholders, actively expanded communication channels, and established a social responsibility communication mechanism integrating “daily, regular and annual communications” . The Company has established a diversified internal and external communication platform, to propagate corporate philosophy and performance responsibilities dynamic, and enhance the understanding and support of stakeholders to the Company through setting a special social responsibility column in the official website, regularly issuing annual reports, interim reports and quarterly reports, actively participating in industry forums and meetings, organizing or participating in enterprise visits and surveys, investor exchanges and roadshows, holding stakeholder forums, planning or participating in public welfare activities, and issuing social responsibility reports.

Carry out the harmonious construction of “factory public open” communities



On June 3, 2020, at the coming of the 49th World Environment Day, together with Maanshan Municipal Ecology and Environment Bureau, Ecology and Environment Branch of Yushan District, Magang carried out the first public open day activity. It took the Resource Branch as the opening unit, invited partial representatives of citizens and journalists from news media to deeply understand the environmental protection work of the Company through discussion and on-site visit. The representatives visited the south water reuse system process, water treatment upgrade project, the landscape strip in the factory and open steel slag hot splashing industrial site in the south comprehensive utilization base of steel slag of Resource Branch, and listened to the introduction of the original and current technological processes of open steel slag hot splashing industrial site. The purpose of the activity is to make the public understand the Company better, popularize the knowledge of comprehensive utilization of solid waste in iron and steel metallurgy, enhance the transparency of enterprises, and establish a benign interaction mechanism between enterprise development and public concerns.



Capability for responsibility

In order to effectively implement the concept of social responsibility, Magang has persisted in consolidating its capability to fulfill its responsibilities with a modest and aggressive attitude, and cultivate a responsible corporate culture. It organized employees to participate in internal and external social responsibility trainings, seminars and other activities, enhanced employees’ awareness of social responsibility, popularized the latest research results and knowledge of social responsibility at home and abroad; Released social responsibility reports constantly, to promote management with reports and constantly improve its capability to fulfill its responsibilities; Invited experts from CASS to guide the preparation of reports, to further improve the overall quality of reports; Actively participated in the selection of China Baowu “Excellent Cases of Environment Management” , summarized practical experiences, and played the typical leading and demonstration effect; Incorporated indicators (such as safety, environment protection, optimization of human resources, online purchase rate of all categories, self-recycling rate of hazardous waste disposal and comprehensive energy consumption per ton of steel and repair cost per ton of steel) into the evaluation standards of annual operation performance of the manager level, and incorporated safety, environment protection and other indicators into the assessment indicators of secondary units, branches and subsidiaries; It appraises and selects safety units and safety individuals in the Company every year, sets the benchmark, takes the leading and demonstration to improve the capability of all employees to fulfill their responsibilities.

Topic analysis

Topic identification

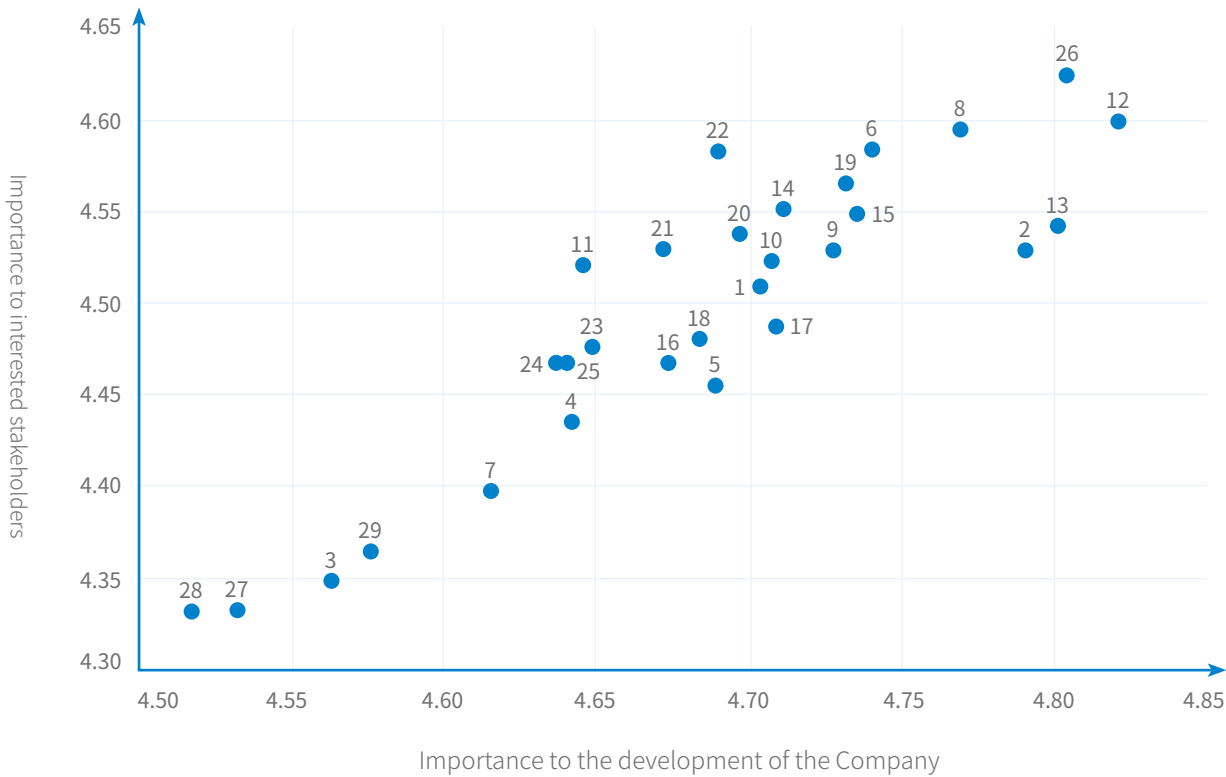
In order to enhance the pertinence and responsiveness of the report, Magang has gradually strengthened the management of major social responsibility topics, and established the management model of major social responsibility topics from “importance to stakeholders” and “importance to company development” in the early stage of releasing the social responsibility report through analysis of macro policies and industry policies, laws and regulations, study of authoritative social responsibility standards at home and abroad, introduction of excellent social responsibility reports in the industry, to primarily identify and select the major social responsibility topics which are closely related to the steel industry and have corporate characteristics.

Topic differentiation and analysis

In order to further enhance the pertinence of major social responsibility topics, Magang specially formulated questionnaires on substantive topics to widely understand the concern extent of internal and external stakeholders to the major social responsibility topics primarily identified and selected by issuing official documents and other methods. In 2020, a total of 8,566 valid questionnaires on substantive topics survey about corporate social responsibility report were collected. According to the results of the questionnaire survey, it further analyzed and sorted out the importance degree of various major social responsibility topics, and selected the core social responsibility topics that were highly concerned by stakeholders and closely related to the sustainable development of the Company, as the key points of information disclosure in 2020 social responsibility report.

Sequence of topics

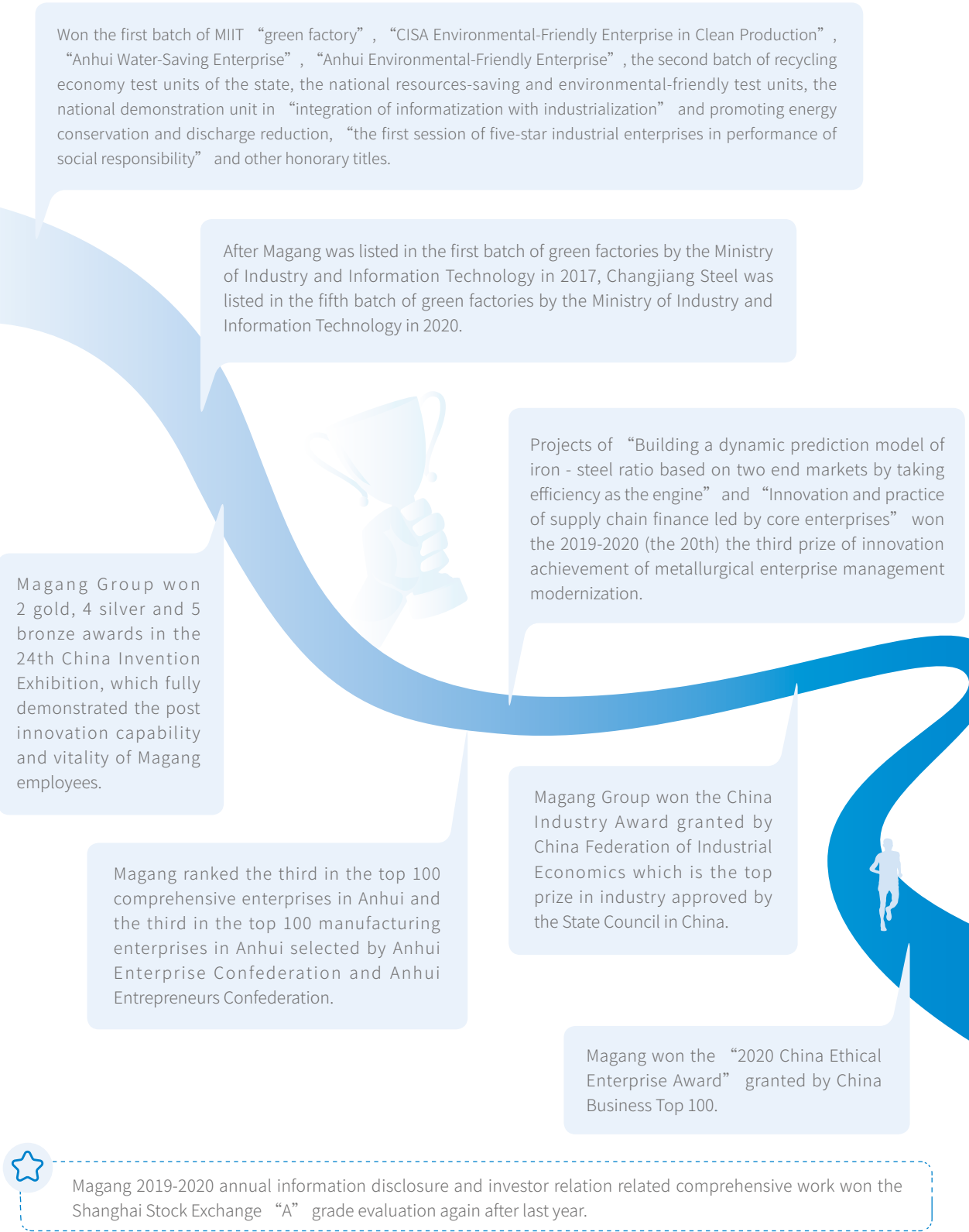
Magang 2D matrix diagram



1	Deepen reform	16	Smooth career development channel
2	Enhance anti-corruption and integrity upholding suggestion	17	Balance the work and life of employees
3	Guarantee the interests of shareholders and investors	18	Actively help employees with difficulties
4	Preservation and appreciation of assets	19	Manage and control the product quality in the whole process
5	Deepen the integrated development of the Yangtze River Delta Area	20	Guarantee the basic rights and interests of customers
6	Improve environment management system	21	Optimize the service experiences of customers
7	Active response to climate change	22	Actively respond to customer complaints
8	Strictly control the discharge of pollutants	23	Strengthen cooperation among industries, universities and research institutes
9	Reduce energy and resource consumption	24	Drive the development of industrial upgrading
10	Energetically develop recycling economy	25	Build the responsibility supply chain
11	Research and develop environment-friendly products	26	Implement safety production
12	Pay attention to occupational health of employees	27	Enhance community communication and participation
13	Optimize salary and welfare system	28	Be earnest in charity and public benefit
14	Strengthen the communication with employees	29	Assist poverty elimination
15	Cultivate a team of high-quality talents		

Responsibilities and honors

Magang has been promoting and implementing social responsibility work constantly over the years, actively responding to the demands of stakeholders, and has been widely recognized by all sectors of society and won many honors. As the core enterprise of Magang Group, Magang has made great contributions to the honors obtained by the group.



Prospect

Looking forward to the future, we will always insist on Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era as guidance, practice new development concept, deeply study and implement the spirit of the important speech delivered by General Secretary Xi Jinping during his inspection of China Baowu Magang Group, seize the development opportunities of integrated development of the Yangtze River Delta Area, build the high-quality iron & steel ecosphere, make greater contribution to build a beautiful Anhui and a beautiful Yangtze River Economic Belt with clean water, green environment and excellent industries and make China Baowu become a global steel industry leader, pay back to the kind care from General Secretary Xi Jinping with practical actions and fruitful achievements, and live up to the ardent expectations of General Secretary Xi Jinping!



Appendix

Key performance

Indicator	Unit	2020	2019	2018
Operating income	CNY 100,000,000	816.14	782.63	819.52
Total profit	CNY 100,000,000	30.81	22.98	82.39
Net profit	CNY 100,000,000	25.78	17.14	70.58
Total taxes	CNY 100,000,000	18.5	29.12	41.92
Number of corruption lawsuit cases of employees	Case	0	0	1
Number of Directors who participated in anti-corruption related trainings	Person	8	7	7
Director coverage rate of anti-corruption related trainings	%	100	100	100
Per capita training hours of anti-corruption related trainings of directors	Hour	32	28	26
Number of employees who participated in anti-corruption related trainings	Person	6,036	2,030	14,328
Research and development investment	CNY 100,000,000	18.13	8.46	8.01
Annual number of patents applied	Piece	576	350	311
Annual number of patents for invention applied	Piece	344	200	178
Annual number of newly authorized patents	Piece	331	228	220
Annual number of newly authorized patents for invention	Piece	100	109	50
Total number of customers	Household	1,429	1,254	1,152
Total number of customers in East China	Household	852	763	733
Total number of customers in Southern China	Household	213	203	163
Total number of customers in North China	Household	101	60	45
Total number of customers in Southwest China	Household	113	91	76
Total number of overseas customers	Household	138	137	135
Recovery rate of products sold or delivered due to safety or heath reason	%	0	0	0
Number of reserving customer complaints	Number	1,393	1,387	1,147
Customer complaint resolution rate	%	86.59	—	—
Customer satisfaction	%	89.2	87.9	87.5
Number of registered suppliers	Number	3,150	1,659	2,022
Number of domestic suppliers	Number	3,065	1,619	1,975
Number of overseas suppliers	Number	85	40	47
Number of suppliers with second-party audits during the report period	Number	39	17	26
Total amount of social insurance payment	CNY ten thousand	68,774.62	80,257	65,193.8
Number of total employees	Person	23,457	26,219	28,454

Indicator	Unit	2020	2019	2018
Number of total male employees	Person	21,375	23,888	25,924
Number of total female employees	Person	2,082	2,331	2,530
Number of total full-time employees	Person	23,457	26,219	28,454
Number of total part-time employees	Person	0	0	0
Number of employees aged 35 and under	Person	4,865	4,780	5,375
Number of employees aged 36-40	Person	2,069	2,428	2,840
Number of employees aged 41-50	Person	10,648	12,308	13,710
Number of employees aged 51-60	Person	5,875	6,703	6,529
Number of local employees	Person	22,645	25,618	27,801
Number of non-local employees	Person	812	601	653
Number of new employments during the report period	Person	142	7	450
Signing rate of Labor Contract	%	100	100	100
Proportion of female managers	%	7.38	7.06	7.41
Per capita paid annual leave days	Day	12.47	12.6	12.5
Proportion of employees receiving training	%	94.9	—	—
Number of management employees receiving training	Person	1,812	1,696	1,797
Proportion of management employees receiving training	%	97.42	85.4	84.2
Per capita training hours of management employees	Hour	189.67	27.9	24.8
Number of technology business employees receiving training	Person	2,749	—	—
Proportion of technology business employees receiving training	%	97.64	95.1	90.85
Per capita training hours of technology business employees	Hour	166.50	86.4	70
Number of operation and maintenance employees receiving training	Person	14,069	—	—
Proportion of operation and maintenance employees receiving training	%	94.25	97.03	95.69
Per capita training hours of operation and maintenance employees	Hour	65.96	39.5	25
Employee satisfaction	%	89.54	89.39	89.84
Employee turnover rate	%	0.36	0.24	0.42
Male employee turnover rate	%	0.28	—	—
Female employee turnover rate	%	0.08	—	—
Turnover rate of employees under the age of 30	%	0.16	0.18	0.32
Turnover rate of employees aged 30-40	%	0.08	0.04	0.06

Indicator	Unit	2020	2019	2018
Turnover rate of employees aged 40-50	%	0.08	0.01	0.04
Turnover rate of employees over the age of 50	%	0.03	0.01	0.01
Turnover rate of local employees	%	0.32	0.18	0.27
Turnover rate of non-local employees	%	0.03	0.06	0.15
Work safety input	CNY 100,000,000	1.38	1.06	0.71
Times of occupational disease	Times	0	0	0
Number of employee work-related death accidents	Case	0	0	0
Number of employee serious injury accidents	Case	0	1	0
Number of employee with serious injury	Person	0	1	0
Number of employee with slight injury	Person	7	7	14
Wounded rate of per thousand person	‰	0.26	0.36	0.57
Number of work-related death accident of related parties	Case	3	2	4
Number of work-related death employee of related parties	Person	3	2	5
Number of lost workdays due to work-related injury	Day	645	1,445	1,470
Rate of work-related death of employees	%	0	0	0
Coverage rate of safety trainings	%	100	100	100
Rate of employment with certificate for special operators	%	100	100	100
Total external donation amount	CNY ten thousand	237.3	0	60
Number of employee volunteers	Person	4,266	1,050	820
Total duration of annual voluntary activity	Hour	7,738.04	9,137.6	7,823.6
Person-time of participation in volunteer activity	Person-time	5,065	8,593	7,289
Total environmental protection investment	CNY 100,000,000	30.11	3.78	2.44
The number of annual pollution accidents	Case	0	0	0
Project EIA rate	%	100	100	100
Carbon dioxide emissions per ton of steel	t/t	1.87	1.9	1.93
Total emissions of carbon dioxide	10,000t	3,926.44	3,765.83	3,797.99
Sulfur dioxide emissions per ton of steel	kg/t	0.38	0.422	0.401
Total emissions of sulfur dioxide	t	7,992	8,371.9	7,885
Nitric oxide emissions per ton of steel	kg/t	0.88	1.026	1.097
Total emissions of nitric oxide	t	18,430	20,343.56	21,554.13
Particulate matter emissions per ton of steel	kg/t	1.07	0.327	0.368
Total emissions of particulate matter	t	22,372	6,495.68	7,218.81
Total raw coal consumption	10,000t	340.17	317.95	341.46
Total cleaned coal consumption	10,000t	658.92	696.49	674.46
Total coke consumption	10,000t	374.01	345.09	337.52

Indicator	Unit	2020	2019	2018
Total power consumption	One hundred million KWH	55.29	54.03	55.49
Total diesel consumption	t	7,280.32	8,516.51	8,103.88
Total gasoline consumption	t	277.68	185.68	224.17
Total natural gas consumption	10,000m³	7,186.22	4,832.92	5,413.74
Comprehensive energy consumption	10,000 tce (equivalent value)	1,175.76	1,129.91	1,131.89
Comprehensive energy consumption per ton of steel	kgce/t	560.76	569.36	576.15
Total quantity of hazardous wastes generated	t	314,068.09	289,917.72	341,792.02
Generation density of hazardous wastes	kg/t	14.98	14.61	17.40
Qualification rate of standardized management of hazardous wastes	%	100	100	100
Utilization and disposal quantity of hazardous wastes	t	285,086	263,037.45	36,981.28
Safe disposal rate of hazardous wastes	%	100	100	100
Total quantity of solid wastes generated	10,000t	1,220.98	1,036.74	1,014.83
Utilization quantity of solid wastes	10,000t	1,219.40	1,099.61	1,013.79
Utilization rate of solid wastes	%	99.87	99.99	99.89
Total annual fresh water consumption	10,000t	5,645.61	5,303.45	5,902.48
Fresh water consumption per ton of steel	m³/t	2.69	2.67	3
Repeating utilization quantity of industrial water	10,000 m³	312,122.65	287,302.44	280,234.35
Repeating utilization rate of industrial water	%	97.77	98.64	97.54
COD emissions per ton of steel	g/t	26.94	27.26	32.60
Total COD emissions	t	564.97	539.72	640.39
Ammonia nitrogen emissions per ton of steel	g/t	1.62	1.25	2.05
Total emissions of ammonia nitrogen	t	34.0	24.804	40.340
Total consumption of packaging materials	t	72,195	73,345	69,848
Consumption density of packaging materials	kg/t	3.44	3.72	3.55

Note:

1. In order to continue to improve the disclosure quality of social responsibility reports, the statistical caliber of energy and environment protection was adjusted to Magang Group in 2020, that is, the previously disclosed energy and environment protection data in 2019 and 2018 of the Company’ s headquarters was adjusted to the statistical caliber of Magang Group in the Appendix “Key Performance Table” and was disclosed again.
2. The total emissions of particulate matter in 2020 were calculated according to Technical Specification for Application and Issuance of Pollutant Permit Iron and Steel Industry (HJ846-2017). Relevant data in and before 2019 was calculated according to the statements of CISA. In case of calculation according to the statements of CISA, total emissions of flue gas and dust of Magang were 6,121.48t during the report period.

Index of indicators

General Disclosure and Key Performance Indicators (KPI) in Environmental, Social and Governance Areas		
Environmental		
A1: Emission	General disclosure	Focus I, Chapter III
	A1.1 The types of emissions and respective emissions data	Focus I, Chapter III, Appendix I
	A1.2 Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions and intensity	Chapter III, Appendix I
	A1.3 Total hazardous waste produced and intensity	Focus I, Appendix I
	A1.4 Total non-hazardous waste produced and intensity	Focus I, Appendix I
	A1.5 Description of emission target(s) set and steps taken to achieve them	Focus I, Chapter III
	A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them	Focus I, Chapter III
A2: Use of Resources	General disclosure	Chapter III
	A2.1 Direct and/ or indirect energy consumption by type in total and intensity	Appendix I
	A2.2 Water consumption in total and intensity	Chapter III, Appendix I
	A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them	Chapter III
	A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them	Chapter III
	A2.5 Total packaging material used for finished products and with reference to per unit produced	Appendix I
A3: The Environment and Natural Resources	General disclosure	Chapter III
	A3.1 Description of the significant impacts of business activities on the environment and natural resources and the actions taken to manage them	Chapter III
A4: Climate Change	General disclosure	Chapter III
	A4.1 Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them	Chapter III
Social		
B1: Employment	General disclosure	Chapter IV
	B1.1 Total employees by gender, employment type, age group and geographical region	Appendix I
	B1.2 Employee turnover rate by gender, age group and geographical region	Appendix I
B2: Health and Safety	General disclosure	Chapter IV
	B2.1 Number and rate of work-related fatalities occurred in each of the past three years	Appendix I
	B2.2 Lost days due to work injury	Appendix I
	B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored	Chapter IV
B3: Development and Training	General disclosure	Chapter IV

General Disclosure and Key Performance Indicators (KPI) in Environmental, Social and Governance Areas		
Social		
B3: Development and Training	B3.1 The percentage of employees trained by gender and employee category	Appendix I
	B3.2 The average training hours completed per employee by gender and employee category	Appendix I
B4: Labour Standards	General disclosure	Chapter IV
	B4.1 Description of measures to review employment practices to avoid child and forced labour	Chapter IV
	B4.2 Description of steps taken to eliminate such practices when discovered	Chapter IV
B5: Supply Chain Management	General disclosure	Chapter V
	B5.1 Number of suppliers by geographical region	Chapter V, Appendix I
	B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are implemented, and how they are implemented and monitored	Chapter V, Appendix I
	B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored	Chapter V
	B5.4 Description of practices used to promote environment-friendly products and services when selecting suppliers, and how they are implemented and monitored	Chapter V
B6: Product Responsibility	General disclosure	Chapter V
	B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons	Appendix I
	B6.2 Number of products and service-related complaints received and how they are dealt with	Chapter V, Appendix I
	B6.3 Description of practices relating to observing and protecting intellectual property	Chapter II
	B6.4 Description of quality assurance process and recall procedures	Chapter V
	B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored	Chapter V
B7: Anti-corruption	General disclosure	Chapter I
	B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the report period and the outcomes of the cases	Chapter I, Appendix I
	B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	Chapter I
	B7.3 Description of anti-corruption training provided to Directors and employees	Chapter I, Appendix I
B8: Community Investment	General disclosure	Chapter VI
	B8.1 Focus areas of contribution	Chapter VI
	B8.2 Resources contributed to the focus scope	Chapter VI

Feedback

Dear reader,

Hello! Thank you very much for reading the 2020 Social Responsibility Report of Maanshan Iron and Steel Co., Ltd.! In order to continuously improve the management of social responsibility report, we particularly hope to hear your comments and suggestions. Please help to complete relevant questions in the feedback table and feed it back through the following ways:

Secretary Office, Board of Directors of Maanshan Iron and Steel Co., Ltd.

No. 8, Jiuhua West Road, Maanshan City,
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Postal code: 243003

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E-mail: mggf@baowugroup.com
Website: http://www.magang.com.cn

Your information

Name:

Tel.:

Work unit:

E-mail:

Choice questions (please tick “✓” in appropriate box)

1.Please evaluate the degree to which the Report reflects the significant impact of Magang on the economy, society and environment:

☐ Very good

☐ Relatively good

☐ General

☐ Relatively bad

☐ Very bad

2.Please evaluate the response and disclosure of the Report to stakeholders’ concerns:

☐ Very good

☐ Relatively good

☐ General

☐ Relatively bad

☐ Very bad

3.Please evaluate the clarity, accuracy and completeness of the information, indicators and data disclosed in the Report:

☐ Very good

☐ Relatively good

☐ General

☐ Relatively bad

☐ Very bad

4.Please evaluate the readability of the report:

☐ Very good

☐ Relatively good

☐ General

☐ Relatively bad

☐ Very bad

5.Please make a comprehensive evaluation on the 2020 Social Responsibility Report of Magang:

☐ Very good

☐ Relatively good

☐ General

☐ Relatively bad

☐ Very bad

Open questions

1.What suggestions do you have for Magang’ s social responsibility work?

2.What do you think are the shortcomings of the Report?

3.What do you think the Report has provided you with valuable information about social responsibility?

4.What other social responsibility information do you think shall be disclosed in the Report?



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