

2017

Sustainability Report

BAOSHAN IRON & STEEL CO., LTD.



SINCERITY
COORDINATION

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MESSAGE FROM TOP MANAGEMENT

Manager




In 2017, all the cadres and employees of Baoshan Iron & Steel Co., Ltd. (hereinafter referred

to as Baosteel Co., Ltd. or Baosteel) took the positive attitude of self-denial and self-transcendence, and took the firm belief of deepening reform and long-term success. They grasped the opportunities of the country's supply-side structural reform and the steel industry's de-capacity, and calmly responded to market fluctuations. They skillfully dominate the multi-base operations, and work around the target of maintaining domestic best business performance and top three EBITDA in the world. They focus on the five capacities of cost revolution, technology leadership, service advancement, smart manufacturing and urban steel mills, overcoming the arduous task of Baowu integration, the full operation Zhanjiang Iron and Steel, the intensive technical reconstructions and rising environmental protection costs and some other difficulties and challenges, maximizing the competitive advantage of Baosteel Co., Ltd., the synergy effect of Baowu integration, and the wisdom of all employees. They made concerted efforts to get substantial achievements in Baowu integration, cost reduction, steel manufacturing, R&D, market expansion and some other aspects. The company achieved an annual revenue of RMB 289.50 billion, and a total consolidated profit of RMB 24.04 billion. This new record handed over a delightful and inspiring outcome to the investors and all employees.

In 2017, Baosteel Co., Ltd. produced 45.51 million tons of iron, 47.05 million tons of steel, and 46.170 million tons of billet steel, which included 508,000 tons of uniquely-owned advanced products.

The total energy consumption for the year was 28.03 million tons of coal equivalent, and the comprehensive energy consumption per ton of steel was 596 kg of coal equivalent, which was 3 kg lower than the annual objective.

The annual investment ratio of R&D, sales ratio of new products and pilot production proportion of new products were 1.85%, 17.97% and 71.8% respectively in 2016; we applied for 1246 patents, among which patents for invention accounted for 74%; direct new returns generated from R&D amounted to RMB 1.941 billion. The annual fixed-asset investment reached RMB 10.99 billion.

Baoshan Base continues to play the flagship role in the steel-making sector of Baosteel Co., Ltd., making significant contributions to achieve the No.1 among the domestic counterparts and rank the forefront among global steel enterprises in terms of the annual profit. The construction of urban steel mills, product structure optimization, and smart manufacturing upgrades have steadily advanced in Baoshan Base. The Qingshan Base focuses on "reform, adjustment, and foundation", fully promoting internal reforms, and promoting Baowu integration at full speed. All in Qingshan Base took a leap towards a new horizon. In Dongshan Base, the 1550 cold-rolled units Base were successfully put into operation. All the projects under construction were completed and put into

operation. In the first year of comprehensive production and operation, all major processes produced stably, all exceeding the annual production target. The Meishan Base has solidly promoted various tasks to create a best ever operating performance, while confronted with multi-challenges of reform, operation pressures, coal consumption limit and more and more serious environmental protection requirement during the last year.

In terms of the capital market, Baosteel Co., Ltd. completed the merger and acquisition of the shares of WISCO in February 2017 and re-listed in the month of trading. The company's impressive operating results have gained high recognition in the capital market and Baosteel has once again entered the SSE 50 Index. The international rating agencies fully affirmed the company's good operating performance and stable asset-liability structure. Standard & Poor's, Moody's and Fitch have successively raised the company's credit rating. The company continues to maintain the highest credit rating among global steel companies. The company won the "China Top 100 Enterprise Award" and ranked 44th. CEO Dai Zhihao won the "China Top 100 Outstanding Entrepreneur Award".

In 2017, the project "Developing Renewable Energy with Plant Resources"(Golden Sun Project) was nominated for the "Sustainability Excellence Award" in the Steelie Awards. The project "Research on Baosteel LCA-based and environmentally friendly production process" won the "LCA Leadership Award" of the World Steel Association, reaching the international leading level. The projects "Research and application of high-efficiency energy-saving and environmentally friendly sintering technology and equipment" and "Development and application of hot-rolled strip plunger-type laminar cooling system" won the second prize of the National Science and Technology Progress Award.

In 2018, the Baosteel Co., Ltd. will still be faced with enormous challenges and pressures. Firstly, although the company's operating performance in 2017 reached a record high, it is worth noting that the progress rate of its peers in the same period is far higher than that of the company. The rank of the company's performance growth as well as its profit level have declined. Secondly, China's steel production capacity is huge, and the steel industry's over-supply situation has not been fundamentally changed. The steel industry's de-capacity task will last for long time, and we should not be blindly optimistic towards the staged rebound of steel market prices. Thirdly, with the promotion of Baowu integration, we will encounter more and more problems in terms of the balance of sales and production among the four bases, the unification of KPI management, and the assimilation of employees' ideas. Fourthly, the Baosteel Co., Ltd. has entered the critical stage in deepening reforms. The institution downsizing and the efficiency improvement of all employees must be accelerated, and much efforts must be made regarding subsidiary reduction and reversing some units' negative operating profitability.



Manager

Note:

Baoshan Base refers to Baosteel's manufacturing site in Shanghai and it is also called as headquarter base, including the directly-controlled factories and departments, the Tube, Pipe and Bar Business Unit, the BNA;

Qingshan Base refers to the Wuhan Iron & Steel Co., Ltd. or WISCO;

Dongshan Base refers to Baosteel Zhanjiang Iron & Steel Co., Ltd. or Zhanjiang Iron & Steel Co., Ltd.;

Meishan Base refers to Shanghai Meishan Iron & Steel Co., Ltd.

Our overall management guiding ideology in 2018:

Adhere to the supply-side structural reform as the main line, embrace the new era, shoulder new missions, start a new journey, further intensify reforms, accelerate Baowu integration, strengthen multi-base manufacturing management, and vigorously upgrade the "five abilities" and continue to maintain Operating performance first in China's steel industry.

Our Overall Business Policy in 2018:

One body with two wings, synergy of four bases, reforms and innovation to seek development

Differentiated competition, reforms in cost, being green and lean to gain better achievements

The company's overall operating objectives in 2018:

To keep its operating performance at the top of the tree in China

To challenge to be top 3 around the world in terms of EBITDA per ton of steel

To reduce the full-caliber cost by 2 billion yuan

To achieve 2 billion yuan of benefits through Baowu synergy

To increase the employee's labor efficiency rate by more than 8%

According to the company's general management policy and business objectives in 2018, combining with the planning requirements and the requirements of China Baowu Group, the company will focus on the following aspects during the year:

- To further promote the Baowu integration. We will complete the transplantation and coverage of 7 information systems among the company to generally realize the information integration of China Baowu in 2018. We will deepen the "three unified" management of procurement, sales, and R&D to achieve the staged and substantial effects in the second year of integration. We will implement embedded support projects such as sales and equipment management to promote integration work.
- To lead the industrial technological advancement by adhering to technology leadership. We will stick to the development path of differentiated new products to do a good job of forward-looking product planning and layout. We will closely track the development direction and industrial trends of advanced technology to promote process technology level with landmark technology breakthrough. We will make full advantage of "one-house with multi-center" R&D organization system to determine the technology-leading direction, goals, paths and initiatives, as well as to share innovative results and experiences.
- To strengthen the multi-base cooperation and to improve product manufacturing capabilities. We will focus on improving the consistent multi-base management capabilities, and promoting manufacturing management system "collection control + territorial management" to cover all bases. We will strengthen the bottleneck process and work-in-process inventory management of each base, and enhance the ability of key product resources to ensure timely delivery of contracts.

- To implement a new three-year cost reduction project. The year of 2018 is the first year of the new three-year cost reduction project. The company will adopt a unified principle and method to realize cost reductions for the extension and coverage of all manufacturing bases and subsidiaries. The reduction measures will be implemented among all bases, business units and subsidiaries to effectively support the company's overall business objectives.

- To deepen urban steel mills and green development strategy. The Baoshan base will solidly promote the seventh round of three-year environmental protection action plan and clean air plan. Qingshan Base will implement the ore stockyard management projects, flue gas desulfurization and denitrification, and other projects to improve the overall compliance capability. Dongshan Base will strengthen the source management of waste water, and monitoring of environmental protection facilities to ensure the compliance of environmental discharge standards. Meishan Base will implement the construction of environmental protection projects such as the denitrification transformation of the 4# sintering, the electric dust removal of the 5# sintering, the coke dust removal transformation of the 1# coke oven, the enclosure of the 8# material yard and so on.

- To deepen marketing management and maintain market leadership. We will strengthen the synergy of multi-base mutual supply and improve the flexibility and risk resistance of the company's production organization. We will promote the market development and continue to maintain the market share of the high grade steel. We will further explore the i-service (smart service) model to promote the construction of smart supply chain and information projects, and carry out the construction and pilot application of the Baosteel Marketing Data Center Platform.

- To Continuously deepen corporate reforms. We will optimize the configuration of functional organizations in each manufacturing base, and deepen the centralized and unified management of marketing, procurement, and research and development. We will improve the management mode of multi-manufacturing bases, and further improve the integrated operation and coordination mechanism, and gradually realize the same quality, same service, same brand and same price among different bases. We will continuously promote the sharing of technical personnel and establish a multi-base human resources sharing mechanism. We will carry out post redesign to serve to the smart manufacture reforms.

- To further promote smart manufacturing to gather more competitive advantages. Baoshan Base will promote the 1580 hot rolling smart manufacturing achievements, starting the cold rolling C008 intelligent workshop construction task, launching the smart factory and intelligent interconnection transformation project, and comprehensively improving the digital and intelligent level of the company's operation and management. The Qingshan Base will comprehensively launch the three-year rolling plan of informatization and the smart manufacturing plan. Dongshan Base will fully take advantage of the informatization and intelligentization of the new production line and promote smart manufacturing work across the board. Meishan Base will focus on smart logistics, promoting the blueprint planning of its whole logistics process, and push forward 13 unmanned driving and iron-making area logistics control projects.



ABOUT THIS REPORT



Our commitment

The Board of Directors of the Company and all its members guarantee that this Report is free from any false records, misleading statements or major omissions, and hereby undertake individual and joint liabilities for the authenticity, accuracy and completeness of the information contained in this Report.

Basis of the report

This Report is compiled mainly based on Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (Version G4) and Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR2.0). Meanwhile, the Report is compiled by making reference to the following documents including 2009 Report Work Memos of Listed Companies No. 1-Compilation and Deliberation of Internal Control Report and Corporate Social Responsibility Report issued by Shanghai Stock Exchange, the Guidance for Compilation of Report of Company Performance of Corporate Social Responsibility, the Notice on Strengthening Undertaking of Social Responsibility by Listed Companies and Issuance of Guidelines of Shanghai Stock Exchange on Environmental Information

Disclosure of Listed Companies, Worldsteel Sustainability Indicator Reporting Guide 2014 and World Bank Eco2cities Sustainable Framework.

Scope of the report

Unless otherwise specified, this Report mainly describes such business operations as economic, environmental and social work of all production units for the main steel business of Baosteel Co., Ltd. (including the Company Headquarters Base, the Tube, Pipe & Bar Business Unit, Wuhan Iron & Steel Co., Ltd., Shanghai Meishan Iron & Steel

Co., Ltd., Baosteel Zhanjiang Iron & Steel Co., Ltd., Baosteel Huangshi Coating Sheet Co., Ltd., Baosteel Special Steel long products) and such organizations as the Baosteel Central Research Institute, Shanghai Baosteel International Economic & Trading Co., Ltd, Shanghai Baosight Software Co., Ltd. from Jan. 1, 2016 to Dec. 31, 2016.

CNY is adopted as the unit of the financial data in this Report. For the purpose of convenient reference, you may use the exchange rate of 1USD=6.5342CNY for calculation (as per the benchmark exchange rate issued by the People's Bank of China on Dec. 31, 2017). If euro is adopted, it is recommended using the exchange rate of 1EUR=7.8023 CNY for calculation under the same standard.

Text Language and Issue Form

This Report is published in both Chinese and English. In case of any discrepancy between the two versions, the Chinese version shall prevail.

This Report is issued to readers in print and PDF electronic document formats. The PDF file can be downloaded and read from the website of Baosteel Co., Ltd. (<http://www.baosteel.com/>). To reduce impact on environment, we advocate that readers may download and read the electronic version as far as possible and we are going to reduce the quantity of printed version year by year.

Recycled paper is adopted for the printed version of this Report. In order to save the use of paper, we control the length of the Report to the greatest extent. For more information that is not included in the Report, you may visit the website of Baosteel Co., Ltd. or read the annual financial statements of the Company.

In case of any question about the content of this Report, please contact us by phone or letter at the following address:

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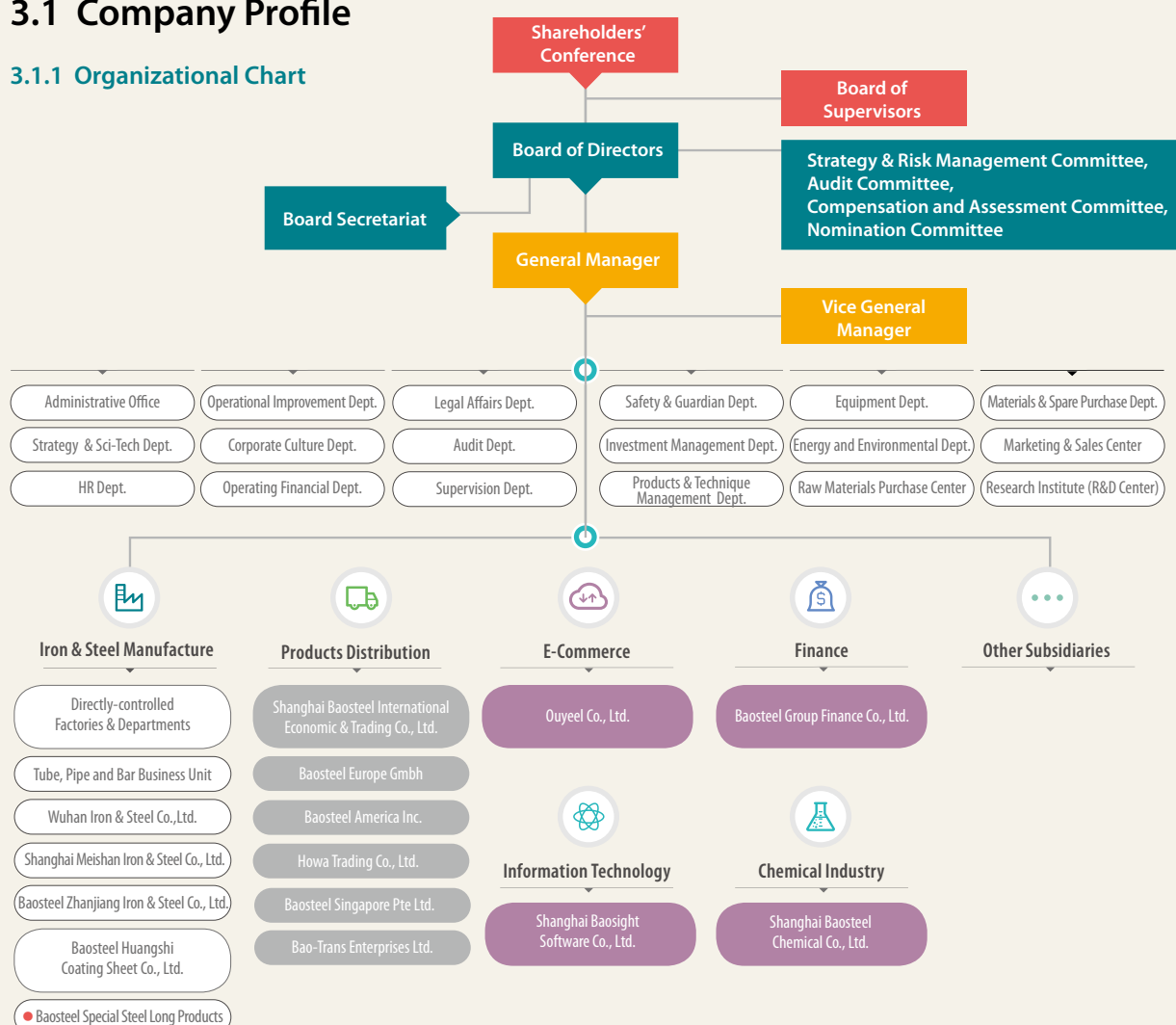
Fax: 0086-21-26649000

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COMPANY OVERVIEW

3.1 Company Profile

3.1.1 Organizational Chart



Note:

1. Valid till Dec. 31 2017;
2. The management of Baosteel Special Steel long products is consigned to Baosteel;
3. Some changes have been made compared to 2016, please refer to the Chinese version.
4. Shanghai Baosteel International Economic & Trading Co., Ltd. is referred as Baosteel International.



3.1.2 Controlling shareholders and Actual Controllers

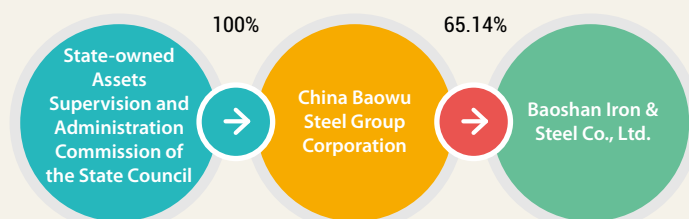
Description	China Baowu Steel Group Corporation Limited
Unit leader or legal representative	Ma Guoqiang
Date of establishment	Jan. 1, 1992
Principal business and operation	China Baowu Group is a government authorized investment organization and a state-owned holding company, mainly operates state-owned assets within the scope of State Council, and conducts relevant financial investment and operation.
Stock rights of other listed companies at home and abroad which Baowu Group as controlling shareholder and stakeholder	By the end of Dec. 31, 2017, China Baowu Group directly or indirectly holds above 5% stock rights of other listed companies as following: Bayi Iron & Steel (50.02%, A-share), SGIS Songshan (53.05%, A-share), Shanghai Baosight Software Co., Ltd.(55.50%, A-share), Shanghai Baosteel Packaging Co., Ltd.(59.89%, A-share), China Pacific Insurance (14.93%, A-share) and New China Life Insurance (12.09%, A-share), Hangzhou Iron & Steel Co., Ltd. (20.18%, A-share).
Description of other situations	N/A

Controlling shareholders and actual controllers

Its actual controller is the State-owned Assets Supervision and Administration Commission of the State Council.

Changes in controlling shareholders and actual controllers

There was no change in the controlling shareholder or the actual controller during the reporting period.



Other institutional shareholders with more than 10% shares

As of the end of the reporting period, there is no other institutional shareholder with more than 10% shares of Baosteel Co., Ltd.

3.1.3 Changes in Share Capital

Please refer to the annual financial report of Baosteel Co., Ltd. for changes in its share capital, and no more information is given here.



3.2 Business Ethics and Values

Core values: Sincerity & Coordination

Sincerity: be loyal and keep faith. The Company and its employees shall be loyal to the motherland, people, enterprise and mission; and keep faith with investors, shareholders, users and suppliers. The Company shall keep faith with its employees, employees shall be loyal to the Company, and employees shall keep faith with each other.

Coordination: to achieve a common goal shoulder to shoulder. Coordination contributes to effective integration of enterprise resources, giving play to the effect of integration, and realizing the maximization of overall profits and the integral value.



3.3 Key Performance Indicators

3.3.1 Operating Indicators

By the end of 2017, main product data and operating revenues are as shown in the table below:

Monetary unit: RMB 100 million

Item	2017	2016
I. Total operating revenue	2895.0	2464.2
II. Total operating cost	2679.8	2356.8
Including: operating cost	2484.3	2182.1
Selling expenses	33.7	29.3
Management cost	96.3	91.5
Financial expenses	33.7	39.8
Asset impairment loss	11.3	5.6
Investment income	30.4	10.8
III. Operating profit	249.2	119.2
IV. Total profit	240.4	118.9
V. Net profit	204.0	93.4

3.3.2 Social Contribution Value per Share

In 2017, social contribution value per share of Baosteel Co., Ltd. is RMB 2.583 per share:

	Basic earnings per share: RMB 0.860 per share
+	Tax revenue to the country within the year: RMB 0.889 per share
+	Salary paid to employees: RMB 0.671 per share
+	Interest on borrowings paid to creditors such as bank: RMB 0.163 per share
+	Value created for other stakeholders such as external donation: RMB 0.001 per share
—	Other social cost caused by environmental pollution, etc.: RMB 0 per share
	Social contribution value per share: RMB 2.583 per share





SUSTAINABLE DEVELOPMENT MANAGEMENT

4.1 Connotation of Sustainable Development Management

Our Mission

Creation Beyond Vision

Company Vision

To build itself into the most globally competitive iron and steel enterprise and a listed company with the greatest investment value.

- Dare to be the first, striving for first-class, being brave in self-denial, transforming and innovating actively, catching up with the strongest competitors, and leap from followers to leaders.
- Creating performance, contributing value, and continuously reward the trust and expectation of shareholders and investors with outstanding performance.

Sustainable development vision

To be the leader in iron & steel technologies

To be the best practitioner of environmental friendliness

To be a corporate model of mutual development of employees and the company

Basic Connotation of sustainable development:

To be the leader in iron & steel technologies;

Establish the leading position in terms of iron & steel technologies, and improve the value contribution of technical innovation.

To be the best practitioner of environmental friendliness:

01. Strictly observe national energy conservation and environmental protection laws, regulations and standards and perform the international environmental convention. Complying with environmental protection laws and regulations is our minimum standard;

02. Implement the strictest internal control standards, improve production processes, optimize the energy structure, reduce energy consumption, lower energy cost, and continually reduce the energy consumption and environmental impact by the enterprise and in the course of product use;

03. Ensure that no substance harmful to the environment and health which is prohibited by relevant laws and regulations is added deliberately. Meanwhile, reduce the harmful impact on the environment caused by products within their service life;

04. Promote the reduction, reuse and reclamation of industrial wastes and help the cyclic utilization of urban wastes;

05. Give priority to suppliers and subcontractors with good environmental protection performance, improve the consciousness and performance of suppliers in terms of sustainable development, actively provide green solutions for customers, and devote itself to jointly building a green industrial chain;

06. Promote continuous improvement of partners in terms of energy conservation and environmental protection management and performance, issue product environmental statement based on life cycle assessment, publicize the environmental performance of core products to facilitate customers and other interested parties to compare impact during full life circle of different products;

07. Develop and promote products and systems with high energy efficiency and high resource efficiency, propel the R&D and promotion

of energy conservation and environmental protection technologies to share with users advanced environmental design concepts and technologies, and provide the society with products and services with excellent environmental performance;

08. Keep a watchful eye on climatic change, take an active part in domestic and overseas energy conservation and environmental protection exchange and cooperation, improve the ecological environment on the earth; actively cooperate with governments, enterprises and conduct international cooperation, carry out popularization and application of international research achievements, and achieve synchronous development with advanced energy conservation and environmental improvement technologies of various countries;

09. Improve the awareness of environmental protection and ecological harmony among employees, and promote environmentally friendly behaviors of employees in terms of work, life, social participation, etc.

10. To be an urban steel mill jointly building wonderful life

- Actively respond to urban ecological red line protection and planning implementation, continue to improve the ecological landscape of industrial park, and synergistically improve the local environmental quality;
- Actively respond to the city's development strategy of resource conservation and environmental friendliness, and implement positive mechanism for controlling the amount of resource consumption and pollution reduction;
- Get into the swing of urban ecological civilization construction, and become an integral part of city service function and industrial culture;
- Get into the swing of community co-construction, pay close attention to the opinions and requirements of interested parties, and seek harmonious development.

To be a corporate model of mutual development of employees and the company:

01. Taking responsibility jointly: the enterprise and employees share joys and sorrows and jointly shoulder the responsibility related to employees' growth and development; employees and the enterprise are a community of common destiny, and jointly shoulder the responsibility of enterprise in facing up to challenges and seeking sustainable development. Taking responsibility jointly is an important basis for mutual development of employees and the company.

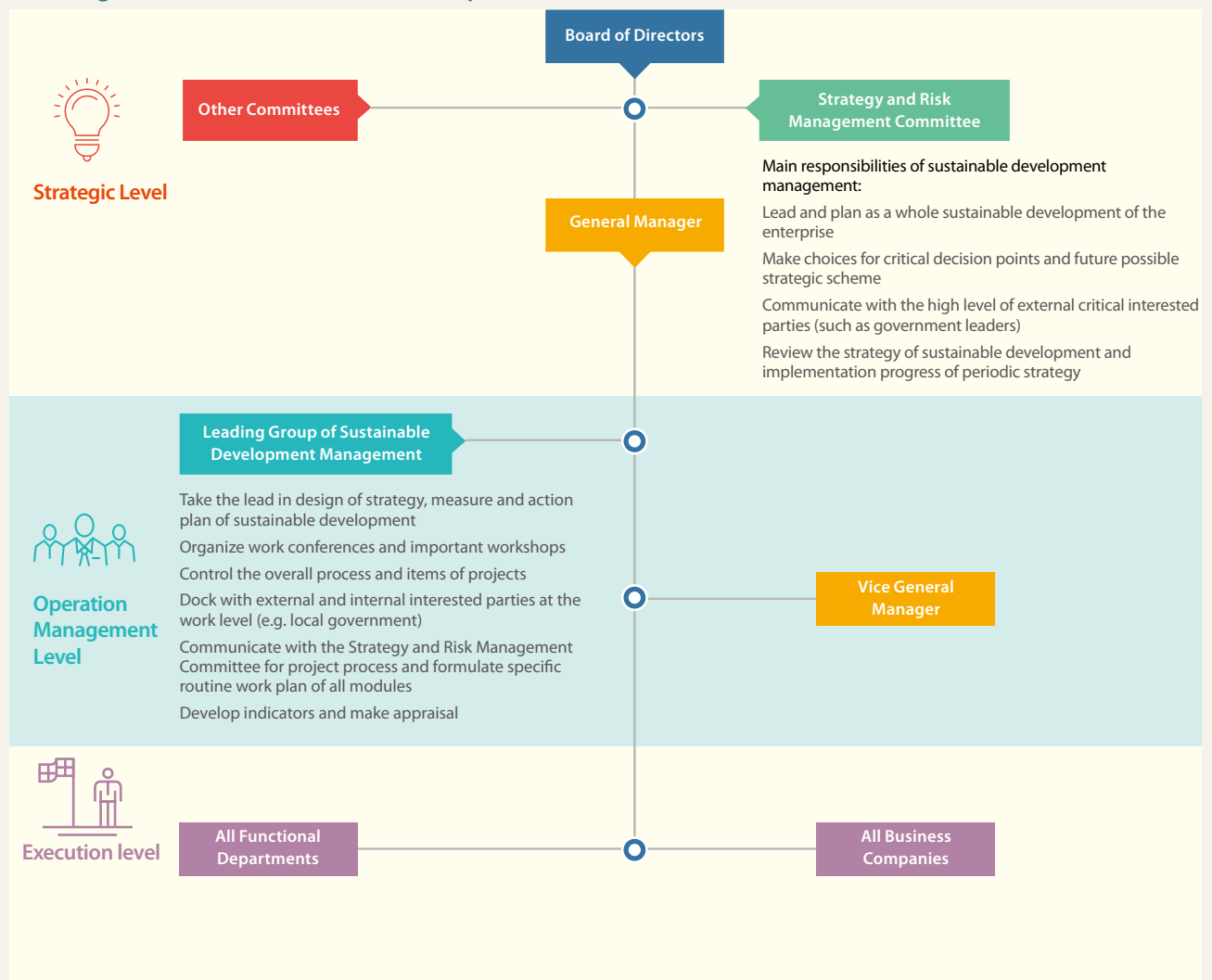
02. Co-creating value: the enterprise provides a stage and environment to help employees realize the value of life; employees make contributions to the enterprise to help the enterprise realize value maximization. Co-creating value is a prerequisite for mutual development of employees and the company.

03. Sharing achievements: the enterprise and all employees creating value share development achievements, and the enterprise meets the material and cultural needs of its employees; employees and the enterprise share individual contributions and achievements to meet the needs of enterprise for improving operation performance. Sharing achievements is the internal impetus for mutual development of employees and the company.

04. Mutual promotion: the enterprise provides resources and platforms to promote improvement in skills and quality of employees; employees inspire their potentials up to the hilt to promote realization of the strategic target of the enterprise to improve capacity. Mutual promotion is the goal of mutual development of employees and the company.

4.2 System support related to Sustainable Development

4.2.1 Organizations for Sustainable Development



4.2.2 System Guarantee of Sustainable Development

Integrating Management system

Four bases of Baosteel have been certified to the following management system*, including the Quality management system, Energy management system, Environment management system, Occupational Health and Safety Management System, Measuring Management System and Standards of Laboratory Management. The company complies to the requirement of the above management systems, improving the management and raising its profit.

体系类别	体系名称
Quality management system	ISO9001
	QS9000/ISO TS16949/IATF16949*
Environment management system	ISO14001
Energy management system	ISO50001 (GB/T23331)*
Occupational Health and Safety Management System	OHSAS18001
Measuring Management System	ISO10012-1
Standards of Laboratory Management	ISO/IEC17025

Notes:

- 1) Zhanjiang Base is expected to get the certification of Energy management system in 2018;
- 2) Qingshan Base is not certified with QS9000;
Dongshan Base is not certified with QS9000 or ISO TS16949
Meishan Base is not certified with QS9000 or ISO IATF16949

Carbon Trading Pilot System

Baosteel Co., Ltd. has actively participated in the pilot work of carbon emission trading of Shanghai Municipal Government, issuing the Measures of Baosteel Co., Ltd. for Carbon Asset Management. And it started the carbon cost accounting data system project to strengthen the carbon emission data management. Meanwhile, the company is in active cooperation in basic work such as preparation of various data for startup of national carbon market. In 2017, the company has completed its carbon quota settlement of the year of 2016.

Supervision and Credit Management System

Baosteel continuously promotes its construction of supervision and credit management system. It explores the integration of auditing, discipline inspection and supervision, patrol inspection, deliberating the Communication System of Baosteel Inner Discipline Inspection. Based on the requirement of IATF 16949, the Company deliberating the Guide for Employee Anti-corruption by focusing on anti-corruption, illegal gift receiving. The Guide goes with Baosteel negative list of Engineering, Procurement and Sales to formulate a 1+3 institutional system of being honest and clean for Baosteel Employees.

Clean production auditing

In 2007, Baosteel, as well as the former WISCO, was among the first batch who won the title "Clean Production Environmentally Friendly Enterprise" conferred by CISA.

In 2017, Baosteel has passed the new round audit of clean production.



4.2.3 Training Guarantee of Sustainable Development

In 2017, the company continues to launch series of training of Urban Steel Mill to support the implementation of urban steel mill planning among the four manufacturing bases. The training contents includes Environmental Management, New Technical Researches of Energy and Environmental Protection, Thermal System Efficiency Promotion, as well as System Construction for Urban Steel Mill.

4.3 External Recognition of Sustainable Development

In the Chinese metallurgical industry, Baosteel Co., Ltd. was the first to pass the ISO14001 environmental system certification and is one of the first companies to pass the Energy Management System(GB/T23331-2009) certification in 2010. Baosteel Co., Ltd. is among the first batch awarded titles such as National Environment-friendly Enterprise, Cleaner Production and Environment-friendly Enterprise in the Chinese iron & steel industry and Green Company in China by the China Entrepreneur Association. Since 2006, Baosteel Co., Ltd. is nominated the title of Chinese Vanguard Company of Sustainable Development Goals by the UN Global Compact Organization. In 2017, Baosteel's practice for complementing sustainable development win the first prize of the Annual Management Innovation by the Chinese Iron & Steel Association.

- Major award titles of Baosteel Co., Ltd. in 2017

Major Event/Title	Granting Organization
Highest credit rating in global iron & steel industry	S&P, Moody's and Fitch Ratings
Being selected among the second Chinese Vanguard Enterprises of "Achieving Sustainable Development Goals (SDGs)"	UN Global Compact Organization (UNGC)
Winning the title of the fifth National Civilized Unit successively	Civilization Office of the Central Communist Party Committee
Winning the title of the Best Energy Management Enterprise of Shanghai in 2016	Shanghai Engineering and Technology Association
Ranking 35th in Top 500 Chinese enterprises in 2017	Fortune(China)
Ranking 44 th in Top 100 Enterprises in China	Summit Forum for Top 100 Listed Companies in China
China Moral Enterprise Award	The 17th top 100 Forum of China's Listed Companies and the 3rd China's 100 Cities' Comprehensive Development Forum

- Major award titles of China Baowu Group in 2017

As an important holding company of China Baowu Group, Baosteel Co., Ltd. made tremendous contributions to China Baowu Group in winning the following honors

Major Event/Title	Granting Organization
Selection into Global Top 500 in consecutive 14 years, ranking 204th	Fortune
Ranking 3th in Shanghai Top 100 Enterprises	Shanghai Enterprise Confederation, Shanghai Enterprise Directors Association, Shanghai Federation of Economic Organizations

4.4 Disclosure of Supervision Information

Baosteel Co., Ltd. strengthens production process management and environmental risk control. The compliance rate of the on-line monitoring for discharges of key pollution sources reached 100% and there was no significant environmental risk event throughout the year.



ECO-FRIENDLY BAOSTEEL



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The company continuously push forward the strategy of “green production, quality goods and smart manufacturing” and “building an urban steel mill characterized by city-industry integration, ecological friendliness and harmony”, which is focused on five capacities (cost reform, technology leadership, service first, smart manufacturing and urban steel mill), so as to gain the new developmental impetus of building a world first-class steel company.



5.1 Green Products

5.1.1 Green Steel Products

Baosteel Co., Ltd. actively seeks the green development and low-carbon solution for the entire industrial chain. The Company specializes in production of such super-quality steel products as carbon thin steel, heavy plates and steel pipes with high technique and high value-added. In addition, the Company has formed the strategic product group represented by high-grade automotive sheet, highly efficient and high-grade non-oriented silicon steel and oriented silicon steel with low temperature and high magnetic induction and tin plate packing material. Meanwhile, it occupies a leading position in such five domestic carbon steel product markets as cold rolled, hot rolled, heavy plate, steel pipe and so on.

Product Structure

Baosteel Co., Ltd. owns domestically leading series of products: such main varieties as automotive steel and silicon steel occupy the leading position in the domestic high-level markets. The quality control level is among the forefront of the industry. Partial varieties including cold rolled super-strength steel have reached the international advanced level and some varieties have realized first launch around the world.



Cases of first launch and new products

707,500 tons

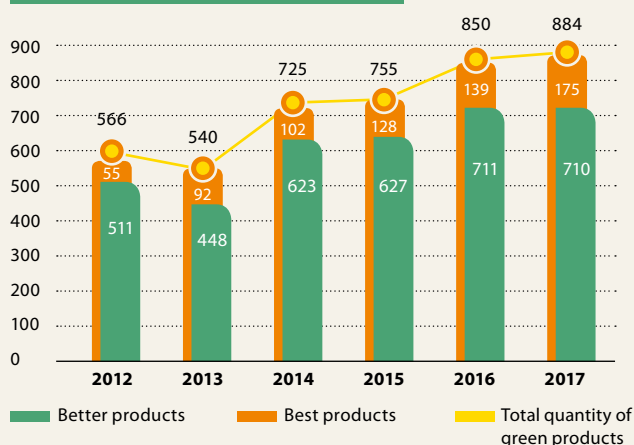


In 2017, the development volume of new products amounted to 707,500 tons. The proportion of pilot production of uniquely-owned products was 71.8%, and the volume of uniquely-owned new products reached 508,000 tons. Such four products as Ultra high strength alloying hot-dip galvanized steel plate QP980GA, extremely low iron loss oriented silicon steel B20R065, low noise oriented silicon steel B27R095 - LM, 30Cr13+Q235B martensitic stainless steel rolling composite plate realized first launch around the world.

Baosteel Green Product

Baosteel Co., Ltd. Spares no efforts to minimize the environmental impact in the manufacturing process, adopting varieties of measures for lowering energy consumption and reducing production cost, and developing new production process with high energy and resource efficiency. Meanwhile, the company focus on the users' needs and the industrial trend with the means of developing and proposing high efficiency product, sharing the advanced eco-friendly design concept and techniques, supplying products and service of excellent environmental performance. The Company issues products' environmental statement based on life cycle assessment, publicizes the environmental performance of core products to provide objective data for comparison of environmental performance between the same products in the same industry and between different products from different industries.

Sales of green products (Unit: 10,000 tons)



Notes: Data originated from the Baoshan Base, Meishan Base and Qingshan Base.

External Certification for Baosteel Green Products

All eight varieties of products of complete series of Baosteel Co., Ltd. passed the Intertek Green Leaf Mark certification. In 2017, Baosteel's products have also been certified for such industries as automobile, household appliance, crane, special steel and urban railway transportation.

Note: Intertek is one of the largest consumer goods testing, inspection and certification companies. Intertek Certification for Baosteel's green products is based on assessment of environmental protection, control of poisonous and harmful substances, energy efficiency and resource utilization efficiency, as well as product life, packaging and recovery.



Users' Certification for automobile steel

Baosteel's automobile steel is recognized by 18 major vehicle factories, including Beijing Benz, GM, Volkswagen, Ford, Toyota, Honda, Nissan, Changcheng, Guangzhou Automobile and so on, which covers more than 30 types of car and 216 important vehicle accessories. By the end of 2017, 57 Baosteel ultra high grade steel were recognized by the following vehicle factories, such as Benz, GM, Ford, Fiat, Nissan, Honda, Toyota and so on. 13 different grades of steel were recognized by the vehicle parts manufacturers, such as Shape Corp., Johnson Controls, Lear Corporation, Faurecia and so on. Zhanjiang automobile plate's recognition is being promoted as planned and enters the market, of which the inner control user and most of automobile parts recognition were realized. The plate steel is in batch supply phase.

Typical Green Products

Based on the methodology of LCA method, Baosteel actively develops "environmentally-friendly products" represented by such high-efficiency steel as electrical steel, high-strength steel, coated and galvanized products and weathering resistance products to reduce the steel usage amount from downstream users, extending the steel service life and improving the utilization efficiency of social resources. The products are widely used in such green energy fields as solar energy, nuclear power and wind power generation and other fields such as automotive, food packaging and railway carriage.

Electrical steel

Electrical steel is mainly divided into highly efficient non-oriented electrical steel and high magnetic induction oriented silicon steel.

The iron cores of electric motors made from highly efficient non-oriented electrical steel instead of traditional electrical steel are characterized by obviously decrease no-load current, improvement in motor efficiency and improvement in comprehensive operating indicators. Oriented silicon steel is the ideal material for iron core used for low-energy-consumption transformer. The capacity of producing oriented silicon steel is an important sign of measuring the manufacturing technology level of a steel company. Baosteel generally grasped the key technological of oriented and non-oriented silicon steel manufacturing and realized batch production. At present, the high grade oriented silicon steel produced by Baosteel has been supplied for the use of the three Gorges Dam and widely used in the UHV transmission projects as well as various kinds of high efficiency motors.

Low carbon performance for Baosteel green products

Baosteel AHSS steel is used in the manufacture of automobiles. The weight of the automobile can be reduced without reducing the strength of the car body. If we take a certain construction vehicle (body weight 9000kg) for instance. With the use of AHSS, we will be able to reduce the body weight of 2700kg, saving fuel consumption of about 8.1-16.2 liters / 100 kilometers, and reducing the operating cost about 7000 yuan/vehicle, and realizing the reduction of CO₂ emissions of about 18.63 tons/vehicle.

Baosteel coated plates (tinplate products) are used in the manufacture of food and beverage cans, whose thickness are continuously reduced to achieve carbon emission reduction. This helps to achieve a reduction in total carbon emissions from a single steel tank by 15%.

Baosteel high efficiency electrical steel helps to reduce the total amount of carbon emissions in the process of transformer manufacture and use compared to the common grade electrical steel by 15%. This steel can achieve substantial carbon emission reduction during its utilization even though the emission amount in the manufacturing process remains the same as normal products.

Baosteel S450EW weathering steel can be used to make railway cars, which will increase the service life of the products. The usage of S450EW for making cars helps to extend the life of the vehicle by more than half. By extending the service life of the car, each cargo can save about 3.75 tons of steel, thus 7 tons CO₂.

High strength steel plate (AHSS): weight reduction and energy saving

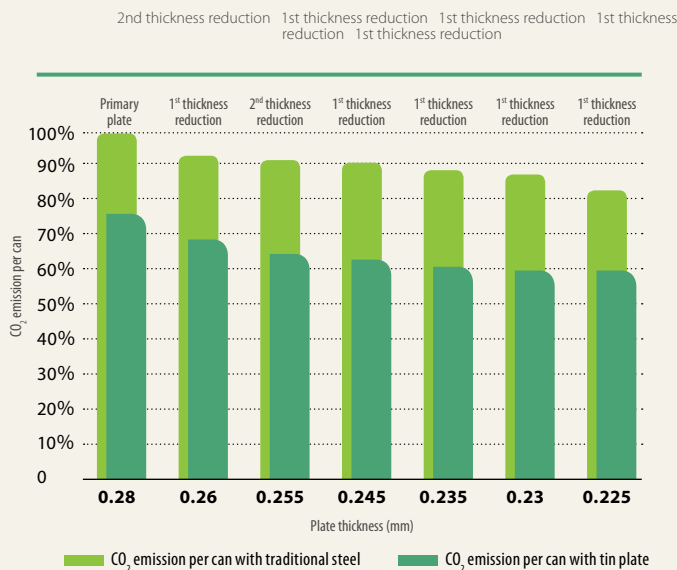
High strength steel plate, characterized by high strength and long life, is a kind of sustainable green product. If high strength steel is used for automobile manufacturing, not only materials can be saved but also the passive safety level of automobiles can be improved.

Coated steel products: Low carbon and healthy

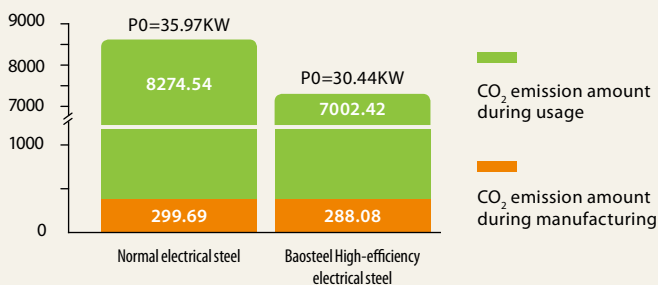
Baosteel coated steel are widely used in household appliances, food packaging, building and other industries. For example, Baosteel colored coating plate is used to produce communication machine cabinet, set-top box shell. The product is beautiful and has good corrosion resistance. The product performance is superior, the manufacturing process is relatively simple. Baosteel coated product is also widely used in food packaging, such as beverage packaging, can packaging. The material is solid and corrosion resistant. Baosteel color coating plate can be manufactured without chromium and with superior corrosion resistance.

High weather resistance products: low-carbon and weather-resistant

The high weather resistance products of Baosteel are widely used in manufacturing containers, railway carriages and automobile carriages. The new high weather resistance steel products researched and developed by Baosteel, under the same weather-resistant conditions, have higher strength; thus, high-strength emission reduction of containers are achieved, and the energy conservation and emission reduction of containers during service is improved.



Comparison of CO₂ Emission for transformers using Baosteel and normal electrical steel





5.1.2 Green customer solutions

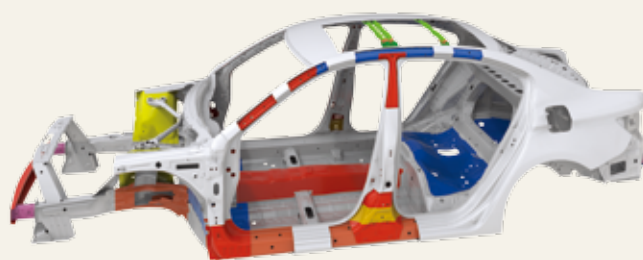
Solutions based on customer demand

Baosteel Co., Ltd. gives full play to the technical advantages of green steel products in R&D, forming, analysis and research into users' application technology, focuses on such aspects as technical service, product expansion, early vender involvement (EVI), integrated solution (package arrangement) and win-win scheme to meet special demands of customers and touch customers. "Early Vender Involvement" refers to that the material manufacturer involves in the early R&D phase of the downstream users to fully understand requirements of the user for raw material performance, so that materials with higher performance and personalized service can be provided for customers.



Jointly producing new energy vehicles by enhancing EVI cooperation

In 2017, Baosteel conducted the first level EVI cooperation for the B101 with the Fujian Yundu New Energy Company. Based on the B101 white vehicle body data, Computer Aided Engineering collision results, Baosteel provided 7 suggestions for structure optimization and 53 suggestions for car body lightweight, without compromising the car's collision protection performance. Finally, Baosteel helps the user to realize the weight reduction of vehicle body for 23kg.



The first Forum of Baosteel Steel for New Energy Vehicle Driving Motor

On March 30th, 2017, the first Forum of Baosteel Steel for New Energy Vehicle Driving Motor was held in Suzhou. More than 200 guests participated in the forum. They came from related industrial association, universities and research institutes, vehicle manufacturing factories, driving motor supplier and so on. All the participants shared their opinions and wisdom for the green future. All these excellent perspectives towards the industry, the technology, the service and products showed their confidence in the future of new energy vehicles, which inspired all Baosteel people in the development of the oriented silicon steel used driving motors.

5.2 Green Manufacturing

Baosteel Co., Ltd. stands on three functions of whole-process integrated steel mills (manufacturing of advanced steel products, high efficiency energy processing and conversion, comprehensive utilization of big amount of waste resources), sticks to the principle of giving priority to resources utilization efficiency and cyclical utilization "3R" (reduction, reuse and recycling), constantly reduces the resource and energy consumption during production via seeking low-carbon process path with continuous improvement; based on the full life-cycle environmental management concept, from the source prevention, process management and control to end disposal, advanced production processes and pollution control measures are adopted in an all-around way and process management is strengthened so as to complete the production process of steel products with lowest consumption and minimum discharge.



5.2.1 Indicators of Comprehensive Utilization of Resources and Energy

Energy indicators

The level of comprehensive utilization of energy and resources of Baosteel has always been at the advanced level in the industry. The company's energy and resources utilization levels in 2017 are as follows (same Statistical caliber compared to that of 2016):

● Main resource consumption in 2017

Type of Resource	Unit	Consumption
Finished product minerals of iron ore	10,000t	2185
Scrap steel	10,000t	298.8
Natural gas	100 million M ³	1.6
Outsourced electric power	100 million KWh	32.23
Raw water	10,000 M ³	6048

● Main energy indicators in 2017

Type of Indicator	2014	2015	2016	2017
Comprehensive energy consumption per ton steel	1.00	0.97	0.97	0.96
Total recovered volume of complementary energy	1.00	1.04	1.11	1.12
Raw water consumption per ton steel	1.00	0.95	0.93	0.89

Notes: Data is proportional to that of 2014

Compliance rate of hazardous waste disposal is

100%



waste paint barrel was incinerated by the BOF in 2017

9920 tons



Indicators of comprehensive utilization of by-product resources

The company's utilization and disposal work for industrial solid waste and hazardous waste is progressing as planned, in which the comprehensive utilization rate of resources is greater than 99%. Hazardous wastes are entrusted to units with qualified hazardous waste disposal companies, and all the filing work in the Environmental Protection Bureau is completed. The safe disposal of waste can be traced back, and the compliance rate of hazardous waste disposal is 100%.

In order to promote the construction of urban steel mills and give full play to the its potential of solid waste consumption, the company has accelerated the development of the "zero-factory" model of solid waste. The waste paint barrel incineration project of the converter was transferred from emergency to pilot promotion. Since the trial operation began in 2015, the external social paint buckets have been disposed of 12,000 tons in 2016 and 9,920 tons in 2017. The incinerator disposed of the self-produced hazardous waste project completed a total of 2,944 tons.

5.2.2 Energy-saving Management and Carbon Emission Reduction

Baosteel Co., Ltd. closely follows the cutting-edge technologies of low-carbon processes in the iron & steel industry, and sticks to the constant improvement path for whole-process technical energy saving, optimization of energy structure and productization of gas and chemical engineering. A wide range of advanced technologies in enhancement of heat transfer, recovery of low-grade waste energy, fluid system optimization, industrial furnace energy-saving, etc. are adopted. The application scale of new energy and the proportion of low-carbon fuel are being raised step by step.

Energy saving by management optimization






The company promotes the “three-stream one-state” energy value management system*, focusing on key energy efficiency factors and key energy sources to ensure continuous improvement of “power saving, solar terms and water saving”. In 2017, the company's waste heat power generation increased by 90 million kWh; the company cooperated with the city's green power dispatching to guide the peak-shifting power consumption, optimize the power supply and distribution system operation to improve the power factor (controlled above 0.90). The company optimizes the operation of the air separation system. The control level of oxygen release is the best in history. In addition, the company has reduced the water loss in network, promoted water saving in drinking water, improved the water quality of the circulating water system, and saved 2 million tons of new water throughout the year.

Note: Three-stream one state: energy flow, value flow, information flow, and equipment status

Energy saving by technology adoption

Baosteel Co., Ltd. applies the industrial BAT technology in an all-round and whole-process manner to constantly reduce the energy consumption during steel production. In 2017, the company achieved 88,700 tons of equivalent coals of technical energy-saving amount. The company planned to complemented 11 Energy Management Contract(EMC) projects, 3 of which has been accepted. The projects of 3# sintering ORC electricity generation, PV generation over the raw material silo proof, EAF waste heat recovery have been put into operation.



Process	Measures of application of energy-saving technologies and complementary energy recovery of key equipment
 Iron-making procedure	High-temperature and high-pressure dry quenching in coke oven and auxiliary power generation Coal moisture control technology for new coke oven Sensible heat recovery of raw gas of coke oven ★ Sintering flue gas waste heat boiler Technology of waste gas ignition of sintering machine Technology of waste gas and hot air sintering of sintering machine Sintering sensible heat vertical furnace recovery ★ (Being added into the list in 2017) ORC electricity generation by sintering waste heat ★ (Being added into the list in 2017) Blast furnace dry dust removal and TRT power generation (#2/4 blast furnace) Dry granulation and sensible heat recovery of high-temperature melted slag ★ Recovery of waste heat of flue gas of hot blast stove High-temperature melted iron heat dissipation, sensible heat of furnace body cooling water and sensible heat recovery of blast furnace gas ★
 Steel-making procedure	Steel-making evaporation cooling OG system Mechanical vacuum pumping technology Electric furnace flue gas waste heat boiler Low-heating-value gas regenerative baking RH energy storage expansion optimization Steel ladle capping Recovery of radiant heat of billet steel ★
 Captive power plant	Transformation for energy efficiency improvement of boiler flue gas system of 3x350MW power plant
 Steel-rolling procedure	High-efficiency combustion technology of furnace (regenerative combustion technology, etc.) Air-gas preheating technology Alternative energy for technological energy-saving ★ Recovery of waste heat of low-temperature flue gas Evaporation cooling of heating furnace Oxygen-enriched combustion of heating furnace High-temperature flue gas waste heat-based band steel technology Technology of recycling of disperse protective gas
 Energy public & auxiliary facilities	Inter-stage compression heat collection and utilization of air compressor ★ Sensible heat recovery of smoke discharged from boiler Low-temperature waste heat-based seawater desalination technology used for strong brine treatment ★ Recovery of waste heat for sludge drying ★ Technology of accumulation of cold with ice in blast and oxygen production areas Such technologies as regional energy network ★ Water supply by different quality and cascaded utilization of water system Recovery of rainwater in the district and reduction in water intake quantity (Zhanjiang Base) Overall application of large water pumps and fan variable frequency driving Energy-saving LED lighting system

Note: ★ standing for breakthrough technologies

Baosteel high efficiency waste energy utilization

[CASE 1] Sintering low temperature waste heat recovery for electricity generation by ORC in Baoshan Base

The company's organic Rankine cycle (ORC) low-temperature waste heat power generation system was officially put into operation to recover the low-temperature waste heat from the chimney of the sintering cooler and the low-pressure steam heat generated by the double-pressure waste heat boiler with an installed capacity of 3MW. It is the first MW-class low-temperature waste heat ORC power generation demonstration project in China. The project is expected to generate 22,400,000kWh of total annual electricity. At present, the average power generation of the demonstration project is 1.62 MW, which is combined with the characteristics of heat source fluctuation to optimize the system. The project is expected to save about 5368 tons of standard coal per year, and the annual carbon dioxide emission reduction is about 14,000 tons.

[CASE 2] High efficiency waste energy recovery in Zhangjiang Base

Baosteel Zhanjiang Base promotes efficient use of waste energy. In 2017, it completed energy-saving projects such as "efficiency improvement of waste steam in coking-sintering area", "improvement of thick-plate LDG mixing device", and "two-grinding operation of low-load power plant". The above projects are expected to save a total of about 115,000 tons of standard coal in the whole year and reduce carbon dioxide emissions by about 300,000 tons per year.

1 kilogram of standard coal Combustion
2.6kgCO₂

One tree absorbs CO₂ amount
22kgCO₂

Notes: exchange standards



Energy saving by process optimization

Baosteel Co., Ltd. adopts the melting process energy-saving and energy substitution technologies to reduce the temperature reduction of melted iron and melted steel, optimize the rolling process, reduce the tapping temperature and time in the furnace, increase the proportion of grades of steel which can be transported under hot condition and hot charging to help explore the low-carbon process path.

The company has continuously made breakthroughs in the field of iron and steel connection, increasing iron-steel ratio and lean energy saving in steel casting interface process. In the electric furnace, the steel-casting interface energy-saving experiment was carried out, and the temperature drop of 12 degrees was achieved, which brings a benefit of nearly 10 million; the scientific research project for the online identification and fixed-point cleaning of the continuous casting defect was initiated; the research projects for industrial application of energy value-added technology was conducted, which aims at low-carbon, energy-saving and consumption-reducing, focusing on breakthrough technologies in the energy field, striving to alleviate the company's gradual severe pressure on coal control and urban steel mill construction.

Exploration and practice of low-carbon process path

Baosteel Co., Ltd. actively explores the whole-process technological energy-saving techniques to promote to low-carbon process improvement and carbon emission reduction.

Raining water utilization in Zhangjiang Base

The Zhanjiang Base of Baosteel Co., Ltd. made full use of the abundant rainwater resources in the area, changed the traditional "1+1" (municipal water supply + sewage reuse) water use mode, and built two rainwater collection pools with a total volume of 1.2 million cubic meters, which was used to collect, discharge, store rainwater and isolate different areas. In this way, this helps to ensure the water supply demand of the whole plant and greatly reduce the consumption of water around the river.

Development of Baosteel's new generation offline quenching equipment technology

The company independently developed a new generation of water quenching equipment for steel pipe based on controlled cooling technology. It was successfully put into operation in 2017, achieving a batch application of 150,000 tons. After the new generation of equipment is put into operation, the power consumption of the pump is reduced by 33%~50%, and the cooling time is shortened by 15~20%. This achieves a significant increase in cooling capacity and a significant saving in water consumption.



5.2.3 Environmental Protection

Baosteel Co., Ltd. constantly strengthened the environmental protection process management via various engineering, management and technical means, to ensure the compliance of discharge of pollutants and continuous improvement of all the main environmental protection indicators.



Key control measures

Roundly responding to the national and local clean atmosphere action

The raw material yard of Baoshan Base, covering an area of nearly 1.9 million square meters, is the largest bulk raw material yard in Eastern China. As an active control project of Baosteel Co., Ltd. for reducing unorganized emission, the project of full enclosing of the stock yard was originally planned to be completed in six years (2014-2020). To respond to the plan of undertaking atmospheric controlling within a prescribed limit of time in the Yangtze River Delta region, the Company overcame various difficulties and shortened the construction period to four years. It is expected to be completed in 2018. In 2017, the phase 1 and phase 2 mixing area BA, BB and the flux material stockyard OA, OB have been enclosed.

Renovation of ultra-clean emission of coal-fired generator sets of Baoshan Base is listed into the clean air action plan of Shanghai. Currently, the Company promotes the renovation as planned to ensure meeting the ultra-clean emission standards "5-35-50" (dust: 5mg/Nm³, SO₂: 35mg/Nm³, NOx: 50mg/Nm³) for thermal power generating units in a whole-time and whole-process manner. In 2017, the transformation for No.1 and No.2 units has been completed.

Engineering application of industrial demonstration technology

Dongshan Base of Baosteel Co., Ltd. (Zhanjiang Iron & Steel) adheres to the highest starting point and the highest standard of environmental protection in construction, and takes the lead in independent engineering integrated application of cutting-edge exploration technologies and demonstration technologies of many industries. Environmental protection technologies such as comprehensive treatment of flue gas from large coke oven, integrated flue gas treatment of sintering, whole sealing of raw material system, metallurgical dust & sludge rotary hearth furnace, coking waste water wet-land treatment, sea water desalination as well as

rainwater collection and reusing represent the most advanced environmentally friendly factory technologies of the present steel industry.

The Meishan base sintering machine adopts the self-integrated denitration technology "ozone oxidation+circulating fluidized bed", and has become the first flue gas desulfurization and denitration project for the whole sintering heads in China mainland, reducing the NOx emission by 816 tons per year.

The Qingshan Base invested 40 projects in environmental protection, and 12 of which were completed and put into operation, including dust treatment in the drop hammers workshop. The total amount of major pollutants decreased by 4.79% year-on-year. The industry's leading technology such as "activated carbon catalysis + SCR shading denitrification" is applied in the base, and the coke oven and sintering flue gas purification effect is stable.

Schedule of indicators of emission levels of pollutants of Baosteel

Item	2013	2014	2015	2016	2017
SO ₂	1.00	0.88	0.70	0.70	0.70
Smoke and dust	1.00	0.96	0.81	0.70	0.68
NOx	1.00	0.78	0.69	0.69	0.51
Waste water	1.00	1.20	0.89	1.27	1.13
COD	1.00	1.00	0.59	0.81	0.63
Oil	1.00	1.00	0.60	0.70	0.50

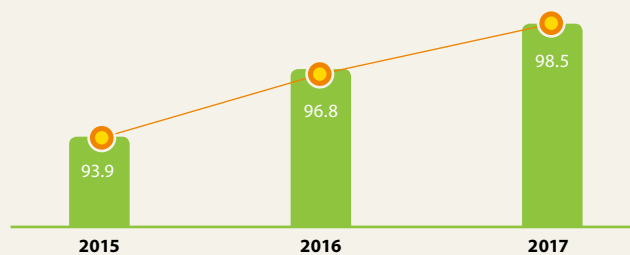
Notes: all the datas are represented by ratio based on those of 2013, and same data scale compared to last year

Effectively improve process control level of factory and ensure the stability and high efficiency of environmental protection facilities.

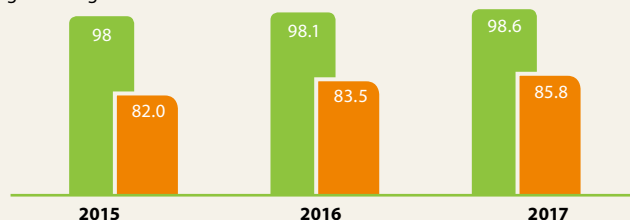
On the one hand, Baosteel Co., Ltd. constantly optimizes the production process and takes efficient pollution control means, and on the other hand, constantly improves the equipment operation and maintenance level, strengthens the process control level during production process, so as to ensure stable and efficient operation of environmental protection facilities. The Company prepared related environmental protection equipment management documents, and implement them in a strict manner. According to the characteristics and importance of various environmental protection facilities, control of various important environmental protection facilities (such as sintering desulfurization and denitrification plant, power plant desulfurization and denitrification plant, etc.) is strengthened, and their operation, maintenance and management are conducted with support of various professional teams, so as to constantly optimize the equipment operation status, and provide support for pollutant emission compliance and total emission reduction of the Company.

The figures below respectively show the annual comprehensive desulfurization and denitration efficiencies of the sintering machines and the generating set of Baosteel:

Comprehensive desulfurization degree of sintering machines (%)



Annual comprehensive desulfurization and denitration efficiencies of generating set

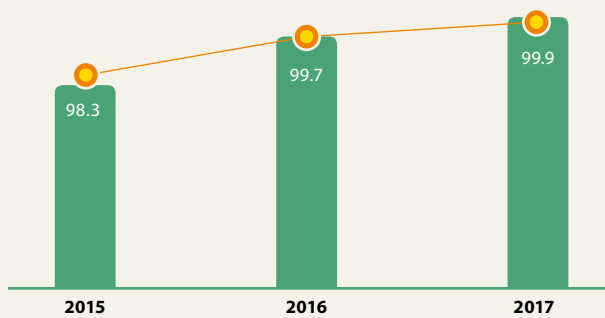


■ Comprehensive desulfurization efficiency (%)
 ■ Comprehensive denitration efficiency (%)



See the figure below for synchronous operation rate trend of the Company's key environmental protection facilities in recent three years:

● Synchronous operation rate of key environmental protection facilities



Strengthening management system construction and constantly improving environmental risk management level

In 1998, Baosteel Co., Ltd. became the first steel enterprise passing the ISO14001 environmental protection system certification in the steel industry of China. In 2017, under the framework of the new ISO14001 environmental management system, the company take into consideration the environmental factors that can be controlled in activities, products and services according to the requirements of the environmental management system standards, and considers the life cycle perspective to complete the adding, evaluation, judgement of a new round of environmental factors. Besides, the company finished the integration of life cycle concepts into product design, material saving, procurement, sales operations, etc., The company revised relevant professional management documents to ensure that procurement activities related to important environmental factors are controlled.

"Endeavoring to realize "zero waste" of solid wastes and byproduct resources of metallurgical factory

In recent years, the comprehensive utilization rate of solid wastes of Baosteel Co., Ltd. has kept higher than 99% basically, including more than 25% solid wastes for recycle. All granulated blast furnace slag is utilized in a comprehensive manner, of which more than 90% is utilized deeply as superfine slag powder. For steel slag, after metal extraction and being recycled, the remaining part is all used in cement, building materials, ships, etc. The iron-containing dust and sludge is recycled in blast furnace to the greatest extent. All pulverized fuel ash and gypsum are for comprehensive utilization in architectural industry.

The slag deep processing center of Baoshan Base was finished in 2017. After it is put into full operation, all the slag could be further sorted and processed to realize the 100% collection of metals. The slag residuals could be 100% returned back to production, leaving the tailing with iron content less than 1.5%. All the tailing will be 100% commercialized. 2 million tons of high quality construction material could be made every year.



Comprehensively improving the monitoring level for industrial pollution source and regional ecological environment

The company promoted the upgrade of the active online monitoring system for flue gas. The following monitoring systems were added, for example the SO₂, NOx monitoring for sintering, coke oven, the particulate matter, SO₂, NOx and hydrogen chloride monitoring for solid waste incineration facilities. The company also established a comprehensive range of VOCs and noise monitoring networks. The company strengthened the self-monitoring of pollution sources as well as the disclosure of environmental information, carrying out full-factor monitoring of pollution source for waste water, and also the monitoring of dioxins, mercury, fluoride and blackness as a complement to the conventional pollutant monitoring of pollution source gases. The company steadily promoted the construction for the on-line environmental management platform. The company promoted the interconnection of the real-time EOP (Environmental Online Monitoring) environmental monitoring system and EMS (Energy Management System) system, forming an E2MS management system to achieve 7*24 integrated monitoring system for hourly industrial safety and stability requirements. All the work helps to the transformation of the on-line environmental management monitoring from the end to the whole process.



5.3 Green Supply Chain

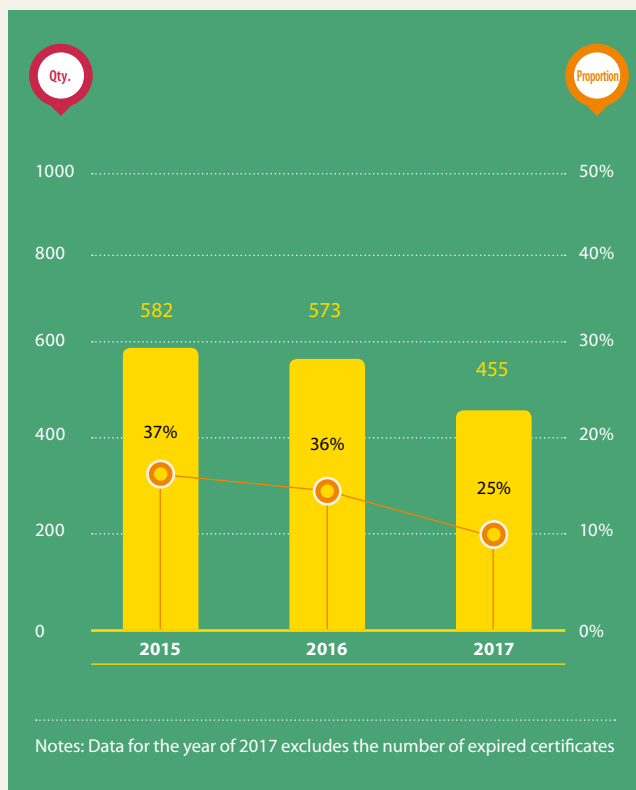
Baosteel Co., Ltd. implements environment-friendly management, and extends the environmental protection and sustainability concepts to all links of supply chains such as raw material supply and equipment procurement. Through formulating a series of procurement policies and advocating the concepts of resource saving, environmental friendliness and product life cycle value maximization, the Company delivers the concept of green operations to upstream/downstream enterprises, guides the suppliers to pursue civilized, healthy and clean production as well as coordinated development of economic benefits, environmental benefits and social benefits, and works with the suppliers together.

5.3.1 Management of Green Supply Chain

Green management of suppliers

Baosteel constantly propels suppliers to conduct certification of relevant environment management systems (e.g. ISO14001 environment management system). For introduction of new suppliers, the suppliers who have passed the environment management system certification will be preferred. For selection of a ship carrier, Baosteel requires that the carrier shall pass the ISM/NSM system certification or the carrier's ship must be managed by the ship management company certified by ISM/NSM system. In 2015, 100% of key carriers passed the ISM/NSM system certification. Meanwhile, during purchase of various materials, equipment and spare parts, the Company dynamically identifies green products and purchases them preferentially. In 2017, the ratio of green materials, equipment and spare parts purchased by the Company was 8.1%.

Environment management system certification for qualified suppliers of materials, equipment and spare parts (Data for Baoshan Base and Zhanjiang Base)

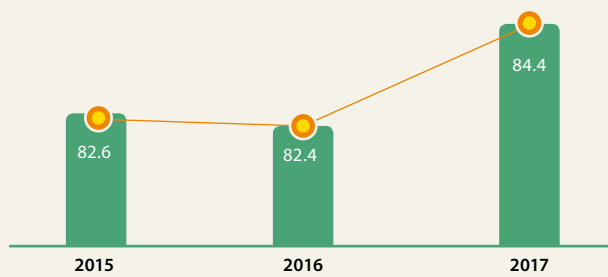




5.3.2 Promotion of Partner Development

Sunshine procurement

Baosteel implements “sunshine procurement” strategy. Through signing honesty and integrity agreement, perfecting punishment means against adverse events, invitation for bids and procurement pursuant to law and promoting open purchasing, the Company and suppliers create an honest, fair, just and open supply chain environment jointly. By the end of 2017, all 1,581 (and 1591) qualified suppliers of materials, equipment and spare parts for the Baoshan Base (and Meishan Base) in 2017 have signed an honesty and integrity agreement. In 2017, the ratio of competitive purchasing of materials, equipment and spare parts for the Baoshan Base and the Zhanjiang Base accounting for 84.4%. The Data for the recent 3 years is as follows:



E-commerce development

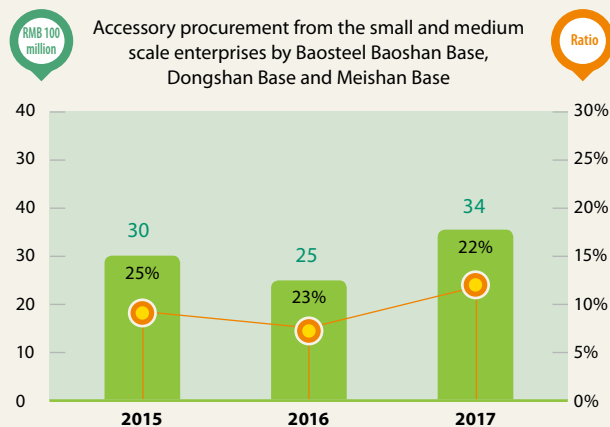
The company adapts to the characteristics of the Internet era, continuously develops e-commerce, enhances the level of information sharing, reduces resource consumption, and cooperates with the company's development strategy and transformation needs. In 2017, the company completed the procurement and supply information system upgrade project, covering the Baoshan base, Zhanjiang base and Meishan base. The upgraded system has reached the industry leading level, can more effectively support the improvement of procurement costs, comprehensively promote the improvement of procurement and supply efficiency, support the intensive, fast-paced smart logistics system, and support the intelligent procurement system of interconnection, mobile and real-time sharing. Realize cloud-based big data applications to ensure stable operation of procurement business specifications. In 2017, the proportion of electronic label applications reached 68% of goods, the proportion of electronic contract shares rose to 96%, and the proportion of important key items electronic warranty books reached 66%.

Promotion of green development

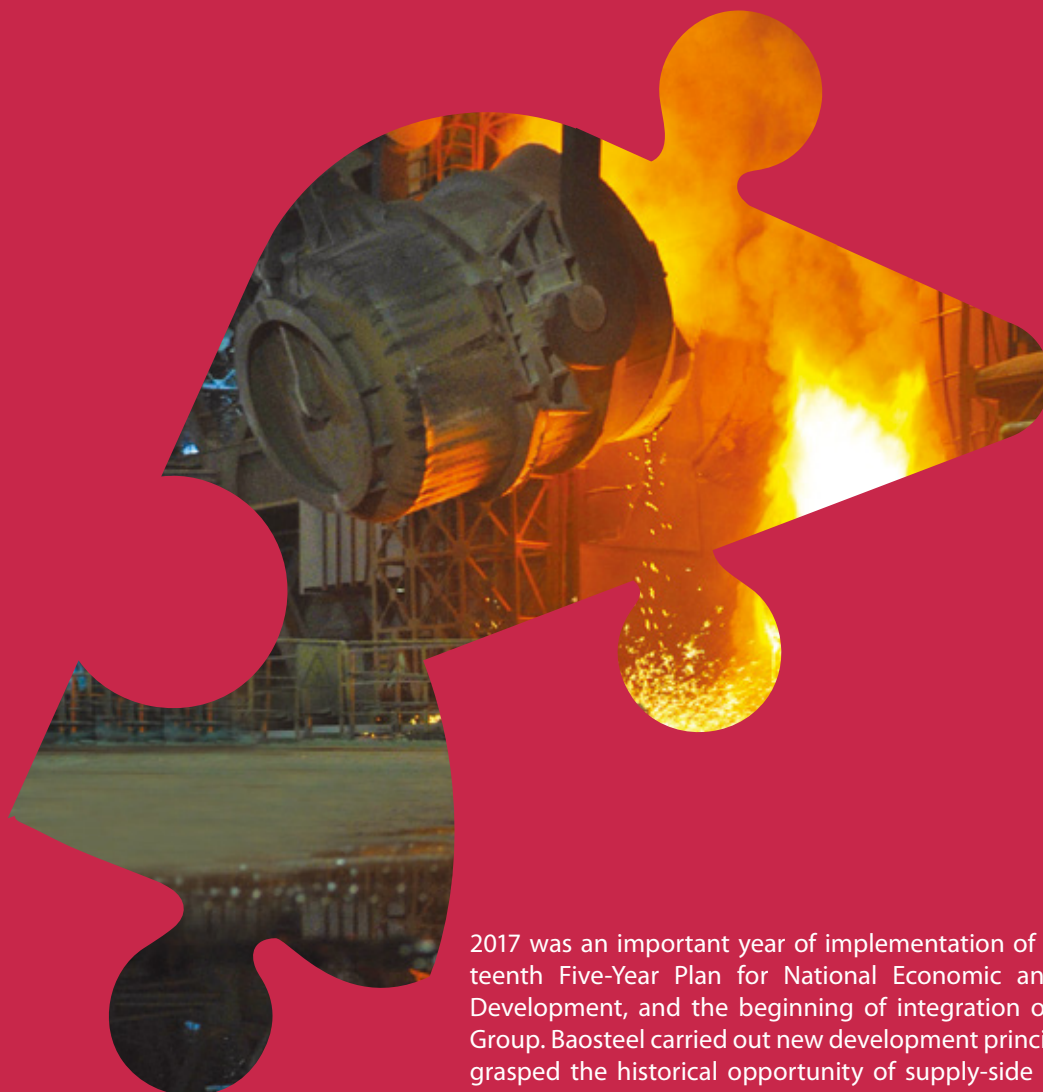
Baosteel is committed to “becoming the driver of green industrial chain and the best practitioner of environmental friendliness”. For the partners in the supply chain, the Company selects some suppliers in better conditions for research and cooperation, evaluates their basic data about the environment based on the full life circle theory (LCA), gradually establishes the LCA database for environmental performances of the products supplied by the suppliers, regards the LCA evaluation results as the important reference for access of products, and gives priority to the products with good environmental performance. By this way, Baosteel provides basis for the green purchasing of the Company on the one hand and guides relevant partners in improvement of their green development level.

Improvement of partners' benefits

In 2017, the company included the Meishan Base in the management for the first time. See the figure below for actual performance data of the materials, equipment and spare parts purchased by Baoshan Base, Zhanjiang Base and Meishan Base from middle and small-sized enterprises in recent three years. (The middle and small-sized enterprises are defined as those with a registered capital of not more than RMB 10 million.)



COMPETITIVE BAOSTEEL



2017 was an important year of implementation of the Thirteenth Five-Year Plan for National Economic and Social Development, and the beginning of integration of Baowu Group. Baosteel carried out new development principles and grasped the historical opportunity of supply-side reformation. With leaders' positive attitudes of self-denial and self-transcendence, Baosteel focused on the construction of five core capacities, which are cost revolution, technology leadership, service advancement, smart manufacturing, and urban steel mill. In 2017, Baosteel handed out beautiful answers with excellent completion of various tasks of production and operation.

6.1 Main Actions

6.1.1 Research & Development of New Products and Technologies

Optimizing research project management mode, and accommodating multi-base technology management requirements

Clarify the classification method of the company's scientific research projects with companies' major projects, company direct management projects and base projects, and generally manage the project management, expense management and intellectual property management to form a management pattern of unified planning and implementation at different levels. Standardize the definition of the first-issued product and new product, and use the application of the product as qualification condition. The first-issued product represents the technical direction of the technology field and has core competitiveness. It is difficult to quickly imitate replication in the short term. It is the first time in the world to successfully realize industrial trial production and gain market recognition; greater economic and social benefit potential; master core technology and key processes; and realize the order of business contracts. In the definition of new test products, it is divided into company's new test products and base's new test products, which highlights the role of product leadership and reflects the role of self-improvement of the base itself.

Practicing the value management team's innovation management, expanding the value-creation team pilot, and driving rapid expansion of new product market scale

In order to speed up the breakthrough of new products in terms of variety, quality and output, quickly introduced to the market and transformed into the company's business performance, with the basic principle of 'benefit and risk sharing', Baosteel formed a value-creating team for composite board. The team has operated for one year. The sales volume of composite plates reached 4,641 tons, and the profit was 2.95 million yuan. Compared with the year before the implementation, the sales volume increased by 2.4 times and the profit increased by 2.56 times. In order to further deepen the practice of value-creating team management, in 2017, the heat treatment production line value-creating team was launched, and the second-phase value-creating team of coated iron and composite board was planned, to further explore the operating mechanism of the value-creating team and deepen the incentive mechanism of technological innovation through 'benefit and risk sharing'.



New products of high-end oriented silicon steel achieved world premiere

Baosteel's thin gauge oriented silicon steel B20R065 has achieved world premiere. The S15 type distribution transformer has been successfully manufactured in Henan Senyuan. The no-load loss is reduced by 4% compared with the design value. The high-end scoring low noise oriented silicon steel B27R095-LM achieved world premiere and low noise power transformers were successfully produced. Baosteel's new oriented silicon steel products not only meet the high requirements for iron loss and magnetic induction of high-efficiency energy-saving transformer cores for oriented silicon steel, but also improve noise and insulation control levels, operational safety and service life. The core material is more economical, and processing is more convenient. The company's two high-end oriented silicon steel new products, not only achieved the upgrade of the company's own product sequences and process technology, but also promoted the development of China's power facilities to high-end.



6.1.2 Forming a platform of energy conservation and environmental protection BAT as well as demonstration of new technologies

In 2017, Baosteel implemented 58 environmental protection projects, which were focused on upgraded treatment of flue gas from sintering machine, coke oven, and power plant, upgrading and renovation of process dusting facilities and furnace facilities (replacing old facilities with new ones), upgrading and updating of environment monitoring facilities, fugitive emission control and recycling of metallurgy wastes.

Baosteel greatly promoted the implementation of energy conservation projects. In 2017, 9 energy conservation technological upgrading projects were completed (4 in the fourth quarter), 17 new projects were established, 26 projects were in progress (including new projects). The total amount of energy saving was increased by 88,700 tons standard coal in 2017, and the carbon emission was decreased by 252,000 tons.



Second-generation regenerative energy-saving roaster

The second-generation regenerative combustion technology is a revolutionary technology in the energy-saving technology of flame furnaces, which is valued by the combustion engineering community. Through the calculation of practical data, the second-generation regenerative ladle roaster is more than 30% higher than the conventional roaster in

heat efficiency, and the gas is saved by about 30%. This technology has been applied in Baosteel, and the main improvements are three aspects of process improvement, operation improvement and equipment improvement. After the application of technology, the annual reduction of coke oven gas consumption was about 8 million m³, equivalent to about 5,000 tons of standard coal, while significantly reducing NOx production and emissions.





Baoshan Base Waste Emulsion Disposal System

Baoshan Base's own power plant put on trial a system of waste emulsion disposal. It was used to dispose of the waste emulsion produced by the company's cold rolling and silicon steel production lines. At present, the system has reached the designed capacity. Another unit will also be put on trial. It will be put into operation in the second half of 2018. After the two systems are put into normal operation, the company can eliminate waste emulsion 4000t per year, and gaining nearly 30 million, which also reduces the company's environmental risks and operational difficulties.



Meishan base sintering desulfurization and denitrification co-processing

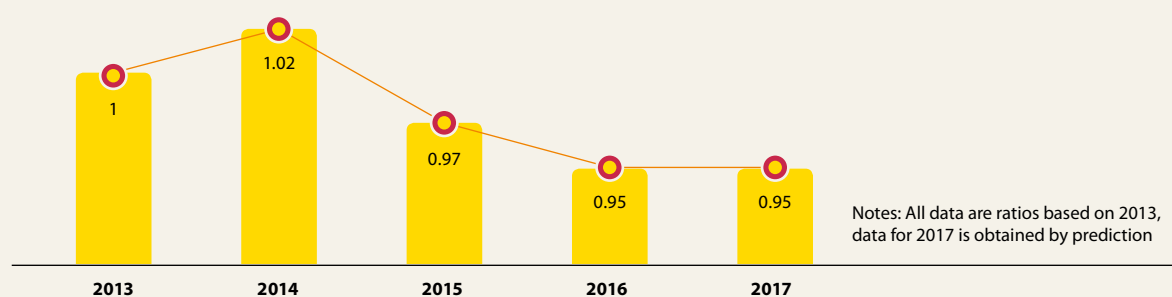
In 2017, the world's first desulfurization and denitrification co-processing project for sintering machines was officially put into operation at Meishan Base. The system is independently integrated by Baosteel and adopts 'ozone oxidation + circulating fluidized bed' technology to fill the blank of the low-temperature desulfurization and denitrification process route in the domestic and international sintering industry. After the system is put into operation, the desulfurization and denitrification efficiencies of Meishan Base are 95% and 75% respectively, and the annual emission reduction of SO₂ is about 6,000 tons and NO_x is about 1000 tons, achieving ultra-clean emission capacity. In addition to the significant improvement in flue gas purification capacity, compared with the traditional flue gas purification system, the equipment floor area is reduced by about 50%, the investment cost is reduced by about 35%, and the operating cost is reduced by about 30%. At the same time, the system takes application of technologies such as ash bit balance coordination control and bed stability control in order to reduce energy consumption.

6.1.3 Carbon Management

In June 2017, Baosteel completed the agreement and settlement of 2016's carbon emission allowances. The total gap of carbon emission allowances in 2016 were 1.07 million tons. From May to June in 2017, Baosteel bought allowances by purchasing CCER, negotiating transfer, listed truncation, or other methods, with a total cost of RMB 26.56 million in the carbon market.

Also in 2017, research on the management mode of the carbon asset in Baosteel official launched. This research tried to focus on summarizing and modifying the carbon asset management mode during the trial-for-ignition period, and constructing a complete carbon asset management system in the company, rationalizing carbon asset operation mode, combining carbon asset with production cost, and also covering Meishan, Dongshan, and Qingshan. The final goal was to realize integration and professionalization of carbon asset management in the company.

Emission of CO₂ from 1t steel



6.1.4 Strengthen Industry-University-Research Collaboration

The company focuses on the strengths of the colleges and universities, and builds long-term and stable scientific and technological cooperation relations with Northeastern University and Shanghai Jiaotong University at a higher starting point and higher level. Cooperated with Northeastern University to carry out in-depth cooperation around the development of steel pipe online cooling technology, and successfully developed the technology of controlled cooling of hot-rolled seamless steel tubes; cooperated with Shanghai Jiaotong University closely in-depth around the technical fields of intelligent manufacturing, material development and use. Build a network of cooperation between Europe, North America and Asia Pacific. Initiate international cooperation with the Colorado School of Mines and the Northeastern University of Japan.



6.1 Enterprise Competitiveness

6.2.1 Enterprise Investment

Research & development investment

In 2017, the R&D investment rate was 1.85%, the sales volume of new products was 17.97%, the proportion of pilot production of uniquely-owned products was 71.8%, there were 11 new products launched initially and important technologies, 13 high-tech achievements were accredited, and Baosteel applied for 1246 patents, including 74% of invention patents.

Investment in environmental protection

The environmental protection cost composition included expense cost and capital cost, which were respectively RMB 6.312 billion and RMB 1.722 billion, including all bases and subsidiaries.



6.2.2 Industry Lead

Patent conditions

In 2017, Baosteel applied for 1246 domestic patents, including 922 invention patents, accounting for 74%; 1003 domestic patents were authorized, including 622 authorized invention patents; 31 international patents were applied for, 59 patents were authorized; the applied international patents include 21 PCT patents of the Golden Apple Project.



Baosteel intelligent factory construction progressed steadily

Baoshan Base hot-rolling 1580 intelligent workshop demonstration pilot was basically completed. Technical and economic indicators improved significantly. Process energy consumption decreased by 6.5%, internal quality loss decreased by 30.6%, waste decreased by 10%, and fully automatic input rate increased by 10.5%, which are much better than setting targets, and formed a group of steel smart factory core technology and steel intelligent manufacturing practice cases, and provided a scalable and reproducible experience for steel workshop-level smart manufacturing upgrades. The cold rolling intelligent workshop project, which was reported by the cold-rolling C008 hot-dip galvanizing units, was awarded the 2017 Intelligent Manufacturing Demonstration Pilot Project of the Ministry of Industry and Information Technology. The project plans to form a 'digital steel coil' specification and become an intelligent steel cold rolling 'efficient, no light' factory.

Awards



National Science and Technology Progress Award, 1: 'Development and Application of Hot Rolled Strip Plunger Laminar Cooling System' (second prize).

National Science and Technology Award, 1: 'Research and Application of Energy-efficient and Environmentally-friendly Sintering Technology and Equipment' (second prize).

Metallurgical Science and Technology Progress Awards, 16: 'Research on Baosteel products based on LCA production process and environmental friendly', 'Coke oven gas enhanced sintering technology development and application' (first prize); 'Wugang converter-RH refining process network-Integrated technology innovation', '600-750MPa high-precision yoke steel manufacturing technology innovation for large-scale hydropower projects' etc. (second prize); 'Key technology development and application of UOE welded pipe for acidic environment', 'Baogang Fine-punching (BJ) Development of a series of hot rolled coils', etc. (third prize)

China Patent Award: 'A method for producing hot-dip galvanized steel sheets with excellent surface friction characteristics' won the 19th China Patent Excellence Award.

4) Shanghai Science and Technology Progress Awards, 2: 'Automatic Control of Hot Rolling and Rough Rolling Shape Control and Quality Improvement Technology' (Second Prize); 'Application Technology for Realizing High Environmental Protection and High Efficiency of Coke Oven' (3rd Prize)

Guangdong Metallurgical Science and Technology Progress Awards, 8: 'Baogang Zhanjiang Steel Raw Material Field Intelligent System' (special award); 'Dangerous Waste Dry Waste Desulfurizer Recycling Technology', 'Zhanjiang Steel 2250 Hot Rolling L2 Control System Integration', 'Zhanjiang Steel 2250 Hot-rolled Product Manufacturing Capacity Improvement and Innovation' (first prize); '380t Mixed Iron Car Insulation Cover and Intelligent Control Device', 'New Mineral Application and Acid Pellet Product Development' (second prize); 'A Conveyor Belt Returning Device', 'Lifting Process of Railway locomotive Class Capacity' (third prize).

Scientific and Technological Progress Awards of Hubei Province, 12: 'Development and application of key technologies for producing high quality coke with low-quality coking coal and high-quality ratio', 'Integration of environmentally-friendly and fingerprint-resistant electroplated zinc plate manufacturing technology for liquid crystal modules' (second prize); 'Development and application of hot-rolled automotive sheets for high-quality heavy commercial vehicle girders', 'Innovation and functional enhancement of key components of bulk metallurgical bulk material conveying equipment' (third prize).

High-tech achievements in Shanghai, 13: 'Anti-fatigue crack propagation excellent steel plate (S355J2/S355J2-Z35, S355ML/S355ML-Z35, S420ML/S420ML-Z35, S460ML/S460ML-Z35); 'High-strength expansion of automobile chassis Kong Steel (JSH440W, JSH440WF, SAPH440-F, SAPH440HE-RS, SAPH440SF, SP231-440FPQ); 'Metal plate for bismuth glass (B295GT, ASTM SA-836)' and so on.

High-tech achievements of Zhanjiang, 4: 'X70 and above series of pipeline steel'; '510L/520L high-strength hot-rolled coil for automobile structure'; 'hot-rolled sheet coil for container auto-board'.



Research and development results and industry leading technology



Focus on on-site major technology development and improve product manufacturing capabilities

- Steelmaking developed a double slag dephosphorization stage design model to achieve customized dephosphorization. The steelmaking ratio using double slag method reached 37.8%. Through the research and improvement of ladle slag upgrading, the free oxygen in the molten steel is reduced, and the oxygen output of the GA outer plate reaches 21.7ppm.
- The in-line quenching technology of hot-rolled seamless steel tubes was developed for the first time and industrialized production was realized. The creative use of the super-large expansion rate perforation process has taken the lead in solving the series of production quality problems caused by the Yantai 460 unit in rolling the large-diameter thin-walled tube capillary "tail ring".
- Focusing on high-quality, low-cost production line targets, research on hot rolling intelligent detection-control-decision integration process model technology, build 1580 production line hot rolling virtual manufacturing system, improve Baosteel's comprehensive competitiveness of hot rolling, and the overall technology has reached international advanced level. Local international leadership.

Accelerate energy-saving and environmental protection technology innovation and support the construction of urban steel mills.

- Power plant coal-fired unit to absorb cold-rolled emulsion engineering test, metallurgical furnace kiln for hazardous waste self-disposal and co-processing process;
- Completed the industrial test of blast furnace fly ash and converter blast fly ash, and opened up a new path for the coordinated disposal of fly ash in the metallurgical process of urban steel mills;
- Proposed a technical roadmap from CCS (carbon capture and storage) to CCU (carbon capture and utilization) Baosteel version, Baosteel version of CCU is different from EU ULCOS, Japan COURSE50, more sustainable and economic value, try to recover from waste heat By reducing CO₂ capture cost, increasing the calorific value of blast furnace gas after CO₂ capture can replace high calorific value coke oven gas or for increasing the output of CCPP, from capturing CO₂ for steelmaking instead of Ar gas and O₂, improving converter smelting performance, And the use of CO₂ high attachment value, etc.;
- In-depth study of cold-rolled wastewater reuse technology, using reverse osmosis membrane technology to achieve 99.3% desalination rate, 60% of efflux cold-rolled wastewater can be reused for production, and concentrated water produced by reverse osmosis membrane is treated with high-efficiency biological nitrogen removal technology After reaching the standard discharge;
- The first LCA-based environmental declaration (EPD) for beverage coated iron products, beverage packaging cans, coated iron cans compared to tinplate cans, reducing life cycle energy consumption by 4%, is the market for coated iron packaging materials. Competition and promotion provide support.

6.2.3 Products Having Broad Influence

Research and application of Baosteel's third-generation ultra-high strength steel-QP steel

In 2017, Baosteel QP steel achieved stable supply in batches. The annual sales volume of QP steel exceeded 10,000 tons for the first time, with an increase of 332.9%. At the same time, the world premiere of QP980 GA products was achieved, and the industrial trial production of QP1180 GA was successfully completed, which laid a solid foundation for the promotion and application of Baosteel's third-generation hot-dip galvanized ultra-high-strength steel to Japanese users.

Oriented silicon steel products achieve energy saving and noise reduction

Baosteel's thin gauge oriented silicon steel B20R065 has achieved world premiere. In Sengyuan, Henan, the S15 type transformer has been successfully manufactured, and the no-load loss is reduced by 4% compared with the design value. The advanced scoring low-noise oriented silicon steel B27R095-LM achieves the world's first and succeeds in manufacturing low noise power transformer.

Hot rolled, stainless steel products

Baosteel successfully manufactures the ultra-high-strength structural steel BS1100E used in high-end crane booms for the first trial production of Xugong and Zhonglian. The performance and quality indicators have reached the physical level of imported products. Baosteel achieved the world first for the corrosion-resistant heterogeneous martensitic stainless steel clad plate (30Cr13+cand the first commercial contract production of nickel-base alloy 8825 composite pipeline steel, and also the first batch production of the marine duplex stainless steel 2205 composite board.

Stable supply of low temperature steel used for LNG ship

Baosteel large-thickness large container ship steel obtained the certificate of the DNV GL, ABS, CCS classification society, and was among the first domestically certified enterprise. The LPG marine low-temperature steel developed at the same time obtained 7 liquefied vessels low temperature certificate such as CCS/ABS classification society.

Steel products used for making spring

Baosteel 2050MPa spring steel passed SAIC certification and became the only supplier in China, and realized import substitution. Baosteel 2100MPa spring steel realized batch trial production, leading the application of high-strength spring steel in the international development, and successfully providing weathering steel for high-speed railway vehicle bogie.

1100MPa grade ultra-high-strength steel boosting high-end engineering vehicles light-weight

Baosteel Co., Ltd. successfully developed 1100MPa grade ultra-high strength steel and became the first hot-rolled structural steel production enterprise in China with a strength of 1100cMpa. Baosteel provide tailor-made solution for the user to meet the processing requirements of welding, bending and other processing requirements, and these products are able to achieve comparable performance standards with imported products. This has been recognized by users, setting an example of joint upstream and downstream to improve China's manufacturing capabilities. In July 2017, Xugong Company officially purchased BS110E and BWELDY1100QL4 steel plates from Baosteel for the production of crane booms.



Baosteel products used for the Hong Kong-Zhuhai-Macao Bridge

The Hong Kong-Zhuhai-Macao Bridge is the longest sea-crossing bridge in the world and is expected to be open to traffic throughout the middle of 2018. Baosteel Co., Ltd. participated in the project and provided key materials and services for the construction. During the project, Baosteel has already carried out a 10-year project tracking in 2012 before Baosteel successfully won the bid for the structural steel plate of the bridge, and organized several technical exchanges to provide materials for its design and supply of steel. Besides, Baosteel provided to the project with thick plate material of high precision.


6.2.4 Global Layout

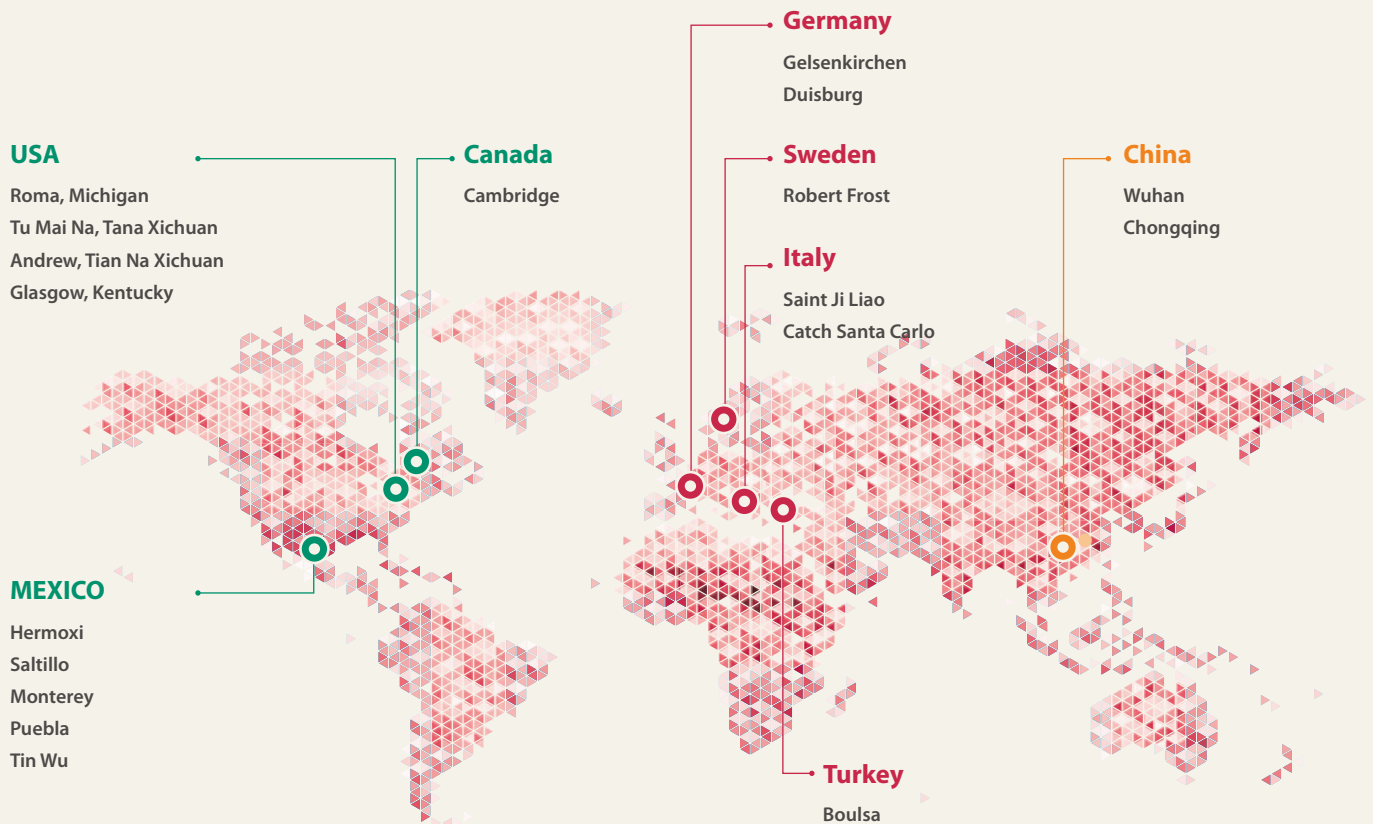
Overseas processing center expansion

After the merger of Baowu, the company's overseas processing and distribution capabilities have been further enhanced. The company invested in three overseas processing centers, namely: Baosteel Korea Steel Processing Center, Baosteel India Sanand, Baosteel Indonesia Steel Processing Center, etc. The total processing capacity is 410,000 tons, and the actual processing volume in 2017 is 146,000 tons. After the company's overseas laser tailoring company merged with WISCO International (ie WISCO Group International Economic and Trade Co., Ltd., the same below), the total overseas production capacity was 79.5 million pieces. In 2017, sales reached 59.02 million pieces, totaling 670,000 tons. WISCO International Laser Tailoring Co., Ltd. has the world's largest market share, with a market share of 29% in Europe and 51% in North America. The products provide global products and service support for automakers.

Export of steel products

In 2017, the export volume of steel products of the Company reached 3,839,000t (not including the Qingshan Base), and the proportion of sales volume was 8.3%.

 Global distribution of WISCO Laser Tailoring Co., Ltd.





6.2.5 Other Driving Force for Growth

Effects of Baosteel-WISCO Integration

2017 is the first year of the merger of Baowu. In order to promote the integration of Baowu, and to improve the company's performance, in the past year, the company has promoted the integration in accordance with the overall path of "four steps" and completed the first day plan, the hundred-day plan and the annual plan. And the results have been remarkable throughout the year. During the implementation of the annual plan, the five special working groups and related functional business lines completed 680 tasks, 196 milestones and 52 collaborative quick wins. The synergy and quick win projects promoted by the five special working groups achieved a profit of 1.356 billion yuan, and the company achieved a synergistic benefit of 2.033 billion yuan, exceeding the annual target. Fifteen operational management information systems were launched, and functional management was basically covered. Some of the R&D, sales, and procurement businesses have been centralized and unified.



Innovative research and development capabilities

The company vigorously promoted the "Golden Apple" program and continued to enhance its innovative research and development capabilities. In 2017, the company's "Golden Apple" program achieved substantial progress in its mission, and applied for more than 150 invention patents. The new direct economic benefits are expected to exceed 480 million yuan, which strongly supports the company's technological progress and production and operation. The implementation of the "Golden Apple" program has also formed a good interaction with the company's talent cultivation, providing a good platform for the growth of scientific research talents, becoming a "staircase" for the growth of scientific and technological personnel and a "stage" for demonstrating capabilities.

Academic exchanges and cooperation at home and abroad

The company closely follows the characteristics of the development of the steel industry and the technical hotspots and problems. It focuses on the company's strategic planning objectives and closely tracks the dynamics of metallurgical conferences at home and abroad. The company uses the World Steel Association's expert resources and research results to serve Baosteel's management and technological advancement, internationalization strategy and scientific and technological personnel growth; using the steel industry's global steel enterprise technology output and excellent practice sharing platform to demonstrate the image of China's steel industry. The company's "Using Plant Resources to Develop Renewable Energy" project was nominated for the Steeli Award for Sustainable Development Excellence. The company dispatched 15 groups throughout the year and 24 participants attended international academic conferences. At the same time, the company takes into account domestic academic exchanges, strengthens overall organization and planning, pays attention to the effect of participation and internal sharing, and organizes participation in 35 domestic conferences and 309 participants.



Baosteel-Tata Steel Exchange for Safety, Environmental Protection, Smart Manufacturing

On September 28, 2017, a 12-member delegation of Tata (Europe) Steel Company led by Paul Brooks, Director of Environmental, Safety and Health of Tata (Europe) Steel, come together with John Johnson, CEO of the British Commodity Institute Share exchange, to Baosteel. The Company introduced the work and achievements in environmental protection in recent years. The two sides also conducted in-depth exchanges on issues such as carbon emission reduction and smart manufacturing.



China Baowu-CSC Exchange tends to be comprehensive and interactive

Baosteel and CSC (Taiwan, China) regularly carry out special exchanges. In 2017, the 2 sides conducted exchanged visits four times throughout the year. The two sides focused on production line equipment and technology, production efficiency and process, on-site basic management, factory logistics management and intelligent technology, energy conservation and environmental protection cooperation research and development projects, etc.

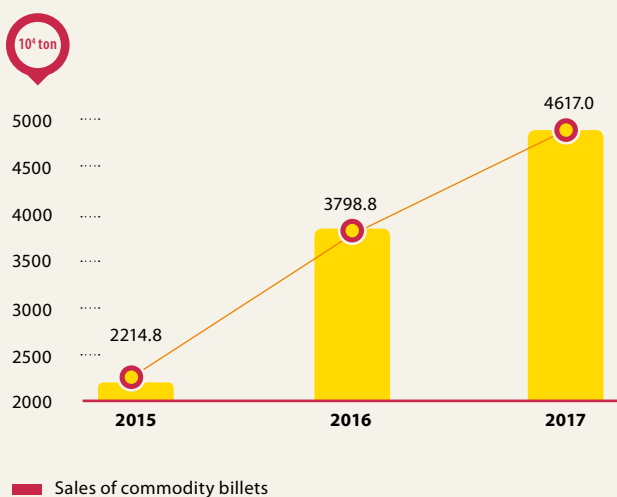
6.3 Economic Value Created and Distributed

6.3.1 Operating Revenue and Operating Costs

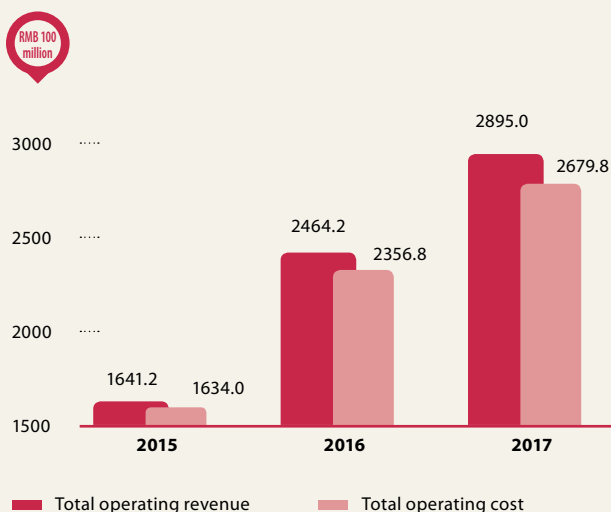
Since 2017, the supply-side structural reform has been continued. The steel industry has achieved remarkable results in de-capacity and banned local strip steel. The advantageous production capacity has been accelerated, and the steel industry as a whole has turned losses into profit. In 2017, the domestic crude steel output was 832 million tons, with a year-on-year increase of 5.7%. After 2016, it increased for two consecutive years.

Upstream, the China (domestic) steel comprehensive price index rose from an average of 75.42 in 2016, and rose to 121.8 at the end of 2017. In 2017, the annual average annual growth rate exceeded 40%. At the same time, the average price of the 62% iron ore Platts index rose 22% from last year; the average annual price of coal rose 86% from last year.

- The company's sales of commodity billets in the past three years are as shown:



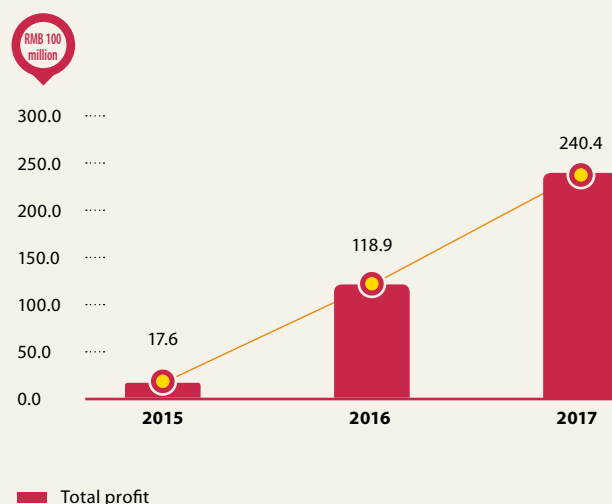
- The company's revenue and total operating cost are as following:



6.3.2 Profits

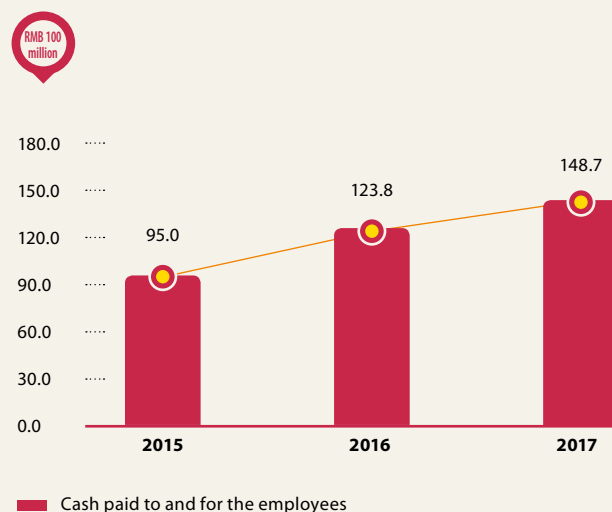
The company seized the opportunity of national supply-side structural reform, steel production de-capacity and market recovery. By strengthening production and sales synergy, continuously optimizing the coordination of the four regions, and carrying out the cost reduction of the whole system, the company realized a total profit of 24.04 billion yuan, a year-on-year profit of 11.89 billion yuan, up 12.15 billion yuan, an increase of 102%.

- The company's total profit for the past three years is shown in the figure:



6.3.3 Employee Remuneration

Cash paid by the Company to and for the employees amounted to RMB 14.87 billion in 2017. The situation in the past three years is as shown in the figure below:





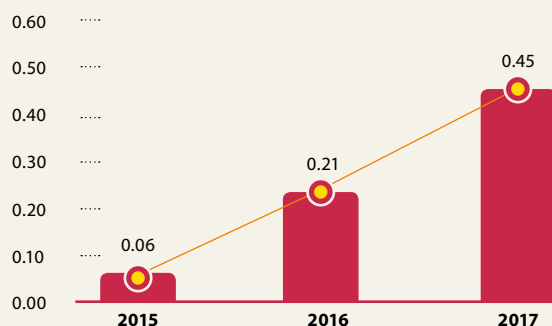
6.3.4 Retained Earnings and Dividend Distribution

As a legal entity, the Company realized net profit of RMB 9.401 billion in 2017. According to provisions of the Articles of Association of the Company, net profit of 10% realized by the Company as a legal entity was set aside as legal reserve, i.e. RMB 0.940 billion to realize the long-term and continuous sustainable development and return the investors in a better way; net profit of 10% realized by the Company as a legal entity was set aside as public reserve fund, i.e. RMB 0.940 billion in 2017; The Company always attaches importance to returning its shareholders and sticks to the principle of cash dividend distribution, so it proposes to distribute cash dividend of RMB 0.45 per share (tax inclusive) to all shareholders listed on the date of registration of stock rights as confirmed in the dividend distribution announcement. The total amount for cash dividend distribution is RMB 10,020,650,343.75 (tax inclusive), accounting for 52.27% of the net profit that belongs to the shareholders of the parent company.

The sales volume of billet steel of the Company in the past three years is as shown in the figure below.



RMB yuan/share



■ Cash dividend distribution

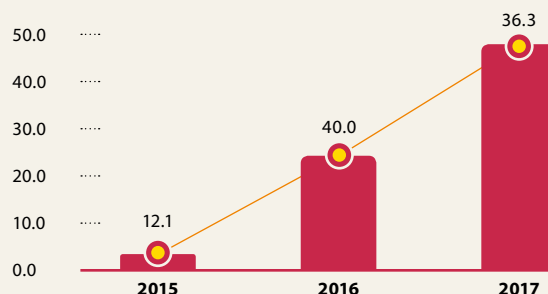
6.3.5 Fund provider

The Company deals with changes in the financial environment vigorously, expands direct financing channel, studies and judges profit and exchange rate trend and continuously implements debt structure optimization scheme.

In 2017, the company seized the opportunity of low-interest RMB direct financing window. When the direct financing market interest rate was relatively low at the beginning of the year, it issued 3 billion yuan of ultra-short-term financing bonds and 3 billion yuan of medium-term notes, and completed the preparation of corporate bonds and DFI registration. Once a suitable release window appears, the company can quickly initiate bond issuance and obtain low-cost financing. The company continues to pay attention to multi-currency, multi-term, multi-variety indirect financing portfolios. On the basis of balancing the consideration of exchange rate risk management costs, the company increases overseas low-cost foreign currency financing and effectively reduce the company's comprehensive financing costs.

In terms of risk management, the company researches and forms a quantitative assessment model of exchange rate risk, scientifically assesses risk exposure through VaR risk quantification method, calculates the hedge ratio of risk exposure, and formulates annual risk management strategy. In the process of implementing the risk management strategy, the company combines the changes in the market, adjusts the risk hedging ratio in a timely manner, and smoothes the impact of exchange rate and interest rate risk on profit and loss. In terms of the use of derivatives tools, the company refined its operations in a "rolling plus layer" manner, reducing risk-locking costs in a market environment where exchange rates fluctuate in both directions.

Baosteel selects financial institution cooperators according to comprehensive conditions of financial institutions, such as the credit status, business strength and market credibility, and coordinates the cooperative relationship with the financial institution in an integrated manner. As the Company always attaches importance to developing cooperative relationship with banks, currently, it has signed cooperation agreements, overall credit granting agreements and agreement on lending and returning at any moment with leading commercial banks, which guarantees the financing channel and financing amount. The Interest expense for the corporate merging was RMB 3.63 billion in 2017.



■ Interest expense

6.4 Investor Relations

Baosteel-WISCO merging smoothly

The Baosteel Group's share swap and merger of Wuhan Iron and Steel Co., Ltd. was officially launched in October 2016. It was officially approved by the Board of Directors and the shareholders' meeting, as well as the external report approval of the State-owned Assets Supervision and Administration Commission and the China Securities Regulatory Commission. The Shanghai Stock Exchange, China Securities Depository and Clearing Co., Ltd., intermediaries, Baosteel and Wuhan Iron and Steel Co., Ltd. cooperated closely, and the on-site multi-party verification was consistent, and the stock exchange was completed on time and in good quality.

On February 27th, the company's stock resumption listing ceremony was held on the Shanghai Stock Exchange. Chairman of the company Dai Zhihao and general manager Zou Jixin rang the listing, witnessing the important milestone of Baosteel.

Strengthen the development of investor relations activities

Benefiting from the improvement of the supply and demand side of the steel industry and the substantial growth of the company's performance, the capital market's attention to the company in 2017 has increased significantly. The company seized this opportunity and vigorously carried out various investor relations activities. In the whole year, the company's investor relations team received 103 batches of investors, about 535 people; held 31 conference calls; the company participated in 10 communication accounting firms organized by internationally renowned investment banks such as JP Morgan Chase, UBS, Citigroup and Credit Suisse; The strategic exchanges of domestic brokers such as Shenwan, Everbright, Changjiang and Xingye have been held in 20 sessions, and all types of investor relations activities have increased by more than 100% compared with 2016.

In addition to investor communication activities in response to investor requests, the company also actively carried out various activities and investors to conduct extensive exchanges: (1) In line with the release of regular reports, 4 online performance announcements were held, and the company's management focused on Small and medium-sized retail investors communicate; (2) For international investors, a telephone exchange meeting for overseas investors is held on the performance announcement date to ensure that international investors can also grasp the current situation of the company's operations; (3) for annual reports and interim reports The company has held two field analysts' performance conferences, mainly for institutional investors. The above activities were hosted or attended by the company's management, especially in the field performance conference. The company's chairman and general manager and other executives exchanged face-to-face with investors and received high praise. Take the 2017 mid-year report release conference as an example. There are 57 research institutes such as participating funds and brokerage firms, totaling 70 people, which is the highest in the past five years.



Attract more international investors

In view of the fact that international capital pays more attention to the fundamentals and long-term development characteristics of listed companies, in 2017, the company's investor relations management strengthened communication and communication with international investors. The company has participated in two overseas investor conferences and organized three overseas non-offers. Trading roadshow. During the overseas non-trading roadshow, the company's management actively visited some shareholders who held the company's stock for a long time, and conducted in-depth communication and exchanges on issues such as industry prospects, mergers and acquisitions, and the company's long-term development strategy.

The company's outstanding performance in 2017 and the deepening of communication with international investors have attracted many international capital inflows. In 2017, the proportion of international investors' shareholdings continued to rise. Among the top 100 shareholders of the company at the end of the year, the shareholding of international investors increased by 79% compared with the end of February (China Baowu merger and resumption).

Rating Agency	2015	2016	2017
Standard & Poor's	A-	BBB+/STABLE (BB+)	BBB+ STABLE
Moody's	A3	A3/STABLE (BAA2)	BAA1 STABLE
Fitch	A	A-/STABLE (BBB+)	A STABLE

RESPONSIBLE BAOSTEEL



The Company is a people-oriented enterprise which pays attention to demands and voice of all stakeholders.

7.1 Staff as Treasure

Baosteel Co., Ltd. is dedicated to becoming a model of seek joint development of both employees and the company, provides competitive welfare and remuneration for its employees, gives a full play to the strengths of the employees, and provides sufficient vocational skill training and broad career development space for its employees.

7.1.1 Staff Team

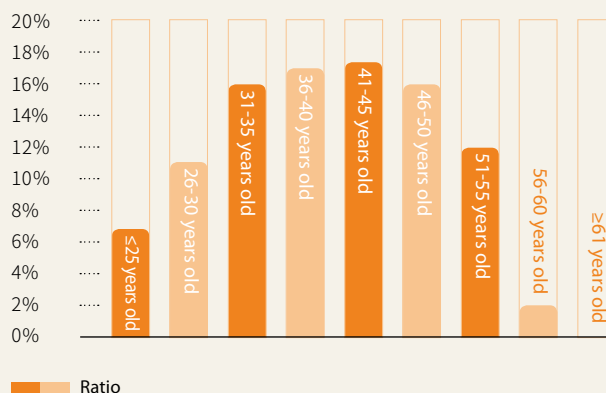
There were 57154 in-service employees at the end of the report period. Employees are mainly distributed in Shanghai, Jiangsu Province, Guangdong Province, Shandong Province, Hubei Province and some overseas areas.

The Company provides equal employment opportunities for employees of different sexes and ages. Male/female ratio is 6.8: 1 due to the characteristics of the steel industry. Female employees are mainly on the management and technician and business posts.

The company has a group of high-quality professional teams, among which, 36% of the staff are technical and management personnel. And 51% of technicians are with intermediate and above titles. The company is mainly staffed by highly educated personnel, of which 72% are junior college or above.

The Company has a young staff team which is full of vitality and has reasonable age structure: 45 years old or below, accounting for 69% of the total.

● Distribution of the age of staff



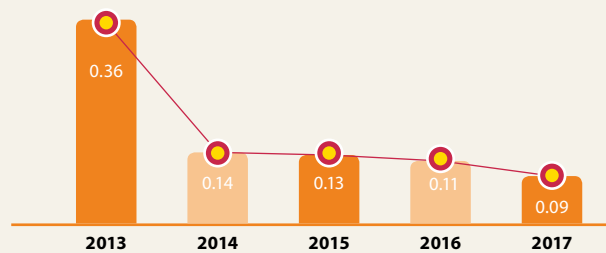
7.1.2 Safety and health

Employee safety

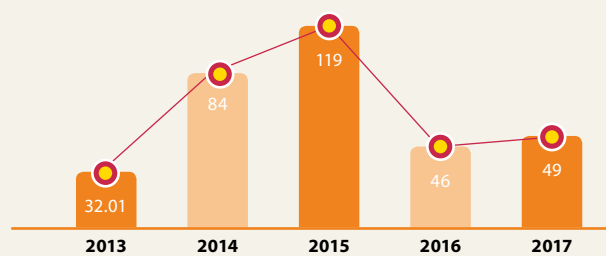
The company attaches great importance to the safety of its employees and continuously improves the quality and safety management. In 2017, the company adhered to the principle of systematic planning, and deepened the safety management which centered on employees. The company focused on the safety behavior of employees and the safety status of materials, effectively improving the "123" safety management mode of managers, front-line employees, and cooperative security systems to improve the level of system support.

The safety situation of the Company was stable on the whole in 2017.

● Frequency of injury (number of people injured/million man-hour)



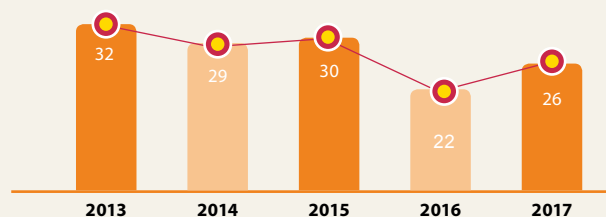
● Injury severity rate (number of lost work days/ million man-hour)



Physical and mental health

To meet the demand of employees for physical and mental health, the Company continuously enriches and optimizes the health security plan for employees and provides diversified health security service programs for the employees to select according to their personalized demands. Meanwhile, employees are entitled to the rest day, holidays and festivals, paid annual leave, family leave and other holidays as provided by the national laws and regulations and company system. Salary for working overtime and work on various holidays are paid in strict accordance with regulations of the national policies and company system.

● Number of people injured



Notes: after the integration of Baosteel and WISCO in February 2017, the data includes that of the WICO from then on.



7.1.3 Harmonious Labor Relations

The Company abides by such laws and regulations as the Labor Law of the People's Republic of China, Labor Contract Law of the PRC, Trade Union Law of the PRC and Social Insurance Law of the PRC as a model, respects the human rights of employees, cares for employees, protects interests of employees in a practical way and enters into and performs labor contract with employees in accordance with law.

The Company meticulously implements the comprehensive contract system for all employees, collective contract system, system of congress of workers and staff; gives a full play to and strengthens the advantage of the workers congress system as a "platform" through establishing and strengthening the labor union organization, labor dispute mediation organization, labor law supervision organization, and supervision and inspection organization for labor protection; promotes the work of consultation on an equal footing and collective contract work in depth and extensively, which ensures the stability of the staff members and promotes construction of a harmonious enterprise.



7.1.4 Welfare and Remuneration

Competitive Welfare

The Company adopts a remuneration system that is competitive externally and fair internally. By tracking the market salary level, the company conducts salary analysis of internal units, reasonably determines the compensation strategy, and links employee compensation with the company's operating performance and individual performance. By vigorously promoting the efficiency improvement and cost reduction of all employees, the company continuously improves its performance and achieves employee income growth. At the same time, the company builds a sustainable medium- and long-term incentive mechanism, binds core employees with company interests to form a community of destiny, and promotes the common development of employees and enterprises.

Monetary Incentive policy with KPI orientation

The company adheres to the "efficiency and efficiency orientation" and implements the "employee's total wages" policy, so that the employees can share the dividends of labor efficiency improvement. The company further strengthens the salary according to the principle of linking salary with performance, guiding all units to do the annual salary distribution work, dynamically adjust the bonus delivery rhythm to enhance employee perception. The company focus on key, outstanding performance, accurate and timely implementation of key work and outstanding performance rewards.

Complete insurance system

The company establishes and implements a multi-level insurance and welfare system to provide employees with effective protection and enhance the company's cohesiveness and centripetal force. In terms of statutory welfare, the company fulfills its responsibilities and obligations in accordance with the law, and pays all social insurances in full and on time, including basic pension insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance and housing provident fund. In terms of corporate welfare, the company provided enterprise annuity plans, supplementary housing provident fund, health protection plan, health checkup and free working lunch as well as purchasing commercial accident insurance for employees. At the same time, in order to alleviate the housing pressure of young workers, according to relevant policies and regulations, The company provides monetization rental subsidies and purchases of first-home payment concession loan plans for employees who meet the application requirements, so that employees can "settle and work".

Accommodation support for young staffs

The company has set up a preferential loan system for the first-time house and the first-home concession loan system. Since its establishment, it has provided subsidies for young workers, and has provided preferential loans for the first suite, benefiting nearly 2,000 people.

7.1.5 Care for Employees

Employee relationship

Baosteel establishes rules and regulations and advocates mutual assistance to ensure that the work of helping household in hardship is carried out steadily. The Company ensures emotional stability of the employees in difficulty through further improvement of the Management Measures of Helping Families in Financial Difficulties and Visiting Underprivileged Homes and adjusting the standard of helping families in financial difficulties; allocates 15% of employee donation that year to the grassroots trade union to intensify the help with employees in difficulties through formulating the Management Measures for Using of Daily Donation; intensifies employee assurance by arranging the employees to apply for the journeymen fraternity insurance in Shanghai.

Baosteel internal hot line 8088

The company set up 8088 internal hotline as an important channel for employees to express their appeals. In 2017, they received 98 calls, including parking licenses, IC card loss, and provident fund withdrawal. They were all coordinated and resolved in the first time. It played an active role in improving employee satisfaction and various work management levels.



Balance between life and work

To create an excellent working environment, the Company performs important renovation project construction by layer and by category by following the principle of “being compulsory, feasible and reasonable” according to the practical situation of each department. It creates excellent working environment for the employees through various effective and practical measures to help the employees to keep balance between life and work.



Baosteel Staff Art Festival

In May 2017, the company planned and launched the “Aibo Steel, Love Art, Love Life” staff calligraphy and painting photography exhibition, using staff’s works to beautify the public places such as staff lounges, offices, etc., to enhance employees’ sense of pride and belonging.



Diversification and equal opportunity for all

Baosteel practices the management concept of equal opportunity for all, by following the principle of fairness and equity in the process of formulating various policies and plans, and advocating the concept that all people are equal. Discrimination against sex, age, nationality, religious belief and political positions is strictly prohibited during recruitment, promotion and appraisal. The system of equal pay for equal work is implemented for male and female employees. The Company encourages graduates who have returned from abroad to work in Baosteel Co., Ltd., tracks information of the people studying abroad and vigorously introduces high-level overseas talented professionals.

The Company lays great importance to employees of ethnic minorities and gives certain allowance to some ethnic minority employees. Some ethnic minority employees hold important management positions in the Company.

Meanwhile, the Company pays attention to taking care of special groups, such as concerning about the physical and mental health of women employees, implementing the maternity leave and breastfeeding leave; and implementing the policy of giving financial difficulties allowance to the poor.

Employees getting involved in corporate governance

The Company lays great emphasis on the democratic management, implements democratic management work through workers congress and plant condition briefing and makes proposals involving the immediate interests of employees. Democratic procedures are performed to ensure the participation right and right of the employees to know the truth. During enforcement of various proposals, the Company organizes multiple staff representative symposiums, take opinions repeatedly and ask relevant department to modify and improve the scheme to ensure that relevant policies that have been issued by the Company are acknowledged and accepted by vast staff members. In 2017, the company held the fifth session of the Workers’ Congress of the Fourth Session, organized employee representatives to seriously review the proposals of the Workers’ Congress, extensively collected opinions and suggestions from the staff, and effectively implemented the democratic management of employees, and completed and signed Baosteel Co., Ltd. 2017-2018 Collective Contract.



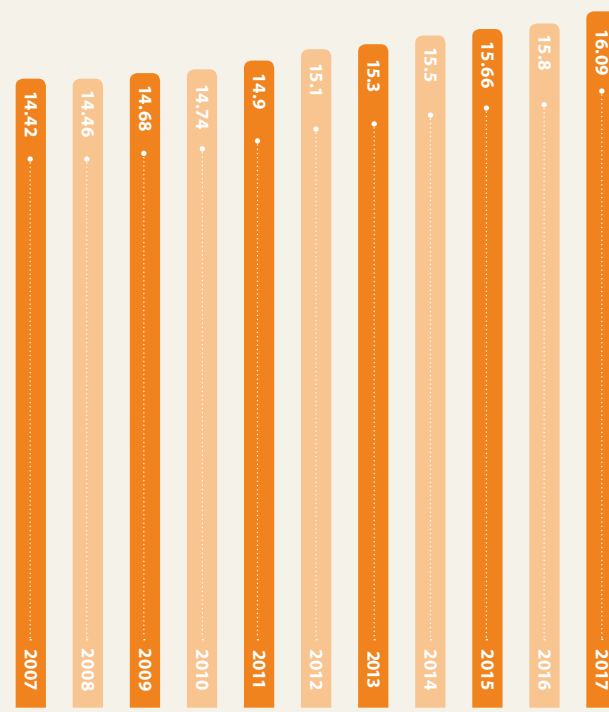
7.1.6 Employee Development

With the vision of “being a model of common development for employees and enterprises”, the company will focus on capacity building, continuously strengthen international talent training, and continue to promote the development of stratified and classified talents in a targeted manner, and constantly improve the training system for the growth of employees. The quality training program will accelerate the growth of key populations and adapt to the management needs of Baowu integration and Baosteel Multi-base Management.

Staff Training

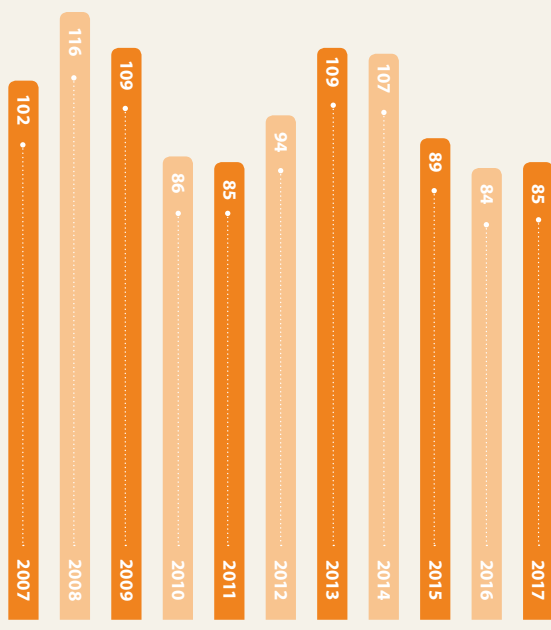
In 2017, the company focused on development strategy and production management strategy, focusing on the contents of “deepening reform and Baowu integration”, continuously optimizing project design, improving the growth traction mechanism, expanding quality training resources, and tapping potential and accurately carrying out talent training. The employees were trained 85 hours per person and participated in 147,000 training sessions. The average number of years of education for employees increased year by year. At the end of the reporting period, employees were educated for an average of 16.09 years.

Per capita education year





● Per capita training class hour



Training of Strategic Talents

The company closely follows the corporate development strategy and production management requests of "Deepening Reform, Baowu Integration, Smart Manufacturing, Urban Steel Mill, Safety Management", and takes the capacity building as the main line. By combining with "task of strategy, value of performance, training for actual combat and Informationized management", the company continuously optimize the project design, improves the growth traction mechanism, expands the quality training resources, further potential tapping, and push forwards the elaboration of talent training plan precisely.



Training of Globalized Talents

The company closely follows the national "Belt and Road" strategy, and combines the development plan with the "intelligence" resource platform of East China Normal University to carry out the special training of Baosteel "One Belt, One Road" international operation. The company takes advantage of its overseas business development planning, builds an international talent team, steadily promotes the Deep Blue Plan, and selects outstanding managers and technical business backbones for overseas study and internships. The company fully relies on the cooperation platform of "Baoao R&D Center", focusing on "Technology Innovation System Construction" and "Technology Innovation Capacity Building". It selects scientific research managers and technicians to go to Australia to participate in training and research projects, which provides intellectual support to adapt to the company's strategy of Technology Advancement.



● Baosteel "One Belt, One Road" international management special training

Conduct three team capacity improvement training

The company focused on the improvement of the ability and quality of the three teams, and tapped the potential and precisely carried out the talent training work. It achieved good results in three aspects: leadership, technical ability and on-site ability.

"Leadership": The company focuses on the promotion of key tasks such as "deepening reform, Baowu integration", closely following the hot issues such as "production management, cost management, equipment management", and adopting the "team-action-learning" approach. The company carried out the "competition capacity improvement" theme practical joint exercises and other projects. Some managers were selected to participate in the "Leadership Workshop for State-owned Enterprises", "Scientific Research on Enterprise Party Building Work" and "Intelligent Manufacturing and Digital Factory Workshop" organized by Dalian Senior Management College.

"Technical Ability": The company draws on the excellent corporate practices of Nippon Steel and other companies. Based on the 2016 Young Technician Training Program, the company plans to include "innovative thinking, innovative tools and methods, and innovative projects". The vision and ideas of young technicians are based on self-confidence, positive and open innovation, enhance innovation ability and responsibility, and contribute new generation wisdom to the company's sustainable development. The company focused on the quality and technical problems that need to be solved or focused on, continuously optimized the training plan and implementation process, organized 8 Golden Apple team training, 7 issues of TOP10 theme training, and 8 sessions of master seminars.

"On-the-spot ability": By inheriting and promoting the spirit of artisans and promoting smart manufacturing, the company is committed to building a team of skilled personnel with excellent skills and reasonable echelons, and conducting "Golden Blue Collar" training courses for highly skilled personnel. Conducting a "Silver Blue Collar" seminar for high-potential skills. Pay attention to the construction of professional skills and talents, strengthen multi-skilled training and cooperate with trade unions to organize various skill competitions to promote learning by competition and to become talents. Deepen the cooperation of "dual system" enterprises, further optimize curriculum design, dig deep into the needs of employers, and realize the seamless connection between reserve talents and employers' needs.

7.2 Neighborhood as Treasure

By adhering to the concept of “integrating itself into the local ecological environment and realizing symbiosis with the communities”, the Company strengthens the publicity of environmental protection, performs its due social responsibility vigorously, contributes to the society and makes every effort to create and consolidate stable and harmonious society-enterprise relationship.

Each year, the company conducts different kinds of charitable activities, such as special donations, July First special party fee donations, to bring the welfare of Baosteel to surrounding residents, which has been unanimously recognized by the government departments and the surrounding residents. By strengthening communication, residents can understand the development of the company in real time, further eliminate their environmental concerns, which shows the attitude and responsibility of the company. By further strengthening interaction with local government departments, the company establishes mutually beneficial support, and build a new type of win-win cooperation that seeks for common development.

The company also adheres to the interactive mechanism of building a platform with the nearby community, and regularly communicates with the Yuepu Village and the Shenxiang District. The company normally organizes regional people's congress representatives, resident representatives, and youth members to carry out the “Factory Open Day” activities. During the tree planting festival on March 12 and the June 5 World Environment Day this year, representatives of people's congress of the district, surrounding residents, ethnic minority representatives and youth representatives participated in the activities. Besides, the related representatives participated in the 2016 sustainability report meeting and the green tour and walking activities of the plant. In this way, they witnessed the development achievements of Baosteel's production, environmental protection and ecology, which helps them to get a new understanding of the company.

Baoshan Base Volunteers' charitable activities

In 2017, the company carried out various co-construction with community streets such as Yuepu, Miaoxing and Zhangmiao, and organized volunteers to participate in service activities for the people, such as services for the Sunshine House, care activities for the school, and condolences for the elderly. A total of 770 participants participated in the year.



Dongshan base "green manufacturing, communicative connection" open day activities

In order to actively disseminate the company's practices and achievements in environmental protection and social welfare to the public, and demonstrate the unremitting efforts and sincere will of Zhan Steel and the community, the Dongshan Base conducted joint construction activities with Dongjian Town and Guangdong Ocean University.



7.3 Stakeholders as Treasure

Adhere to a high proportion of dividend policy

A high proportion of cash dividends has always been an important measure for the company to return investors, and it is also a powerful manifestation of the company's investment value. As of 2016, the company has implemented a cash dividend distribution for 17 consecutive years, with a cumulative dividend of 64.216 billion yuan (including cash repurchase), and the dividend ratio reached 49.75%.

The company's current dividend distribution policy was reviewed and approved by the 2012 Annual General Meeting of Shareholders. It was stated in the company's articles of association: “The cash dividends distributed shall not be less than 50% of the net profit attributable to the parent company in the current audited consolidated statement”. In the year of the steel industry winter in 2015, the company used all the annual net profit for cash dividends.

With the advancement of supply-side reforms, the profitability of the steel industry has improved with the signs of high profits, high dividends, and low valuations. The company's stock is being favored by more and more value investors.

Diversification of channels of communication with shareholders

In order to maintain smooth and convenient communication with shareholders, the company continues to promote the diversified construction of communication channels with shareholders. The regular communication methods include IR mailbox, investor relationship hot-line, and “Shangzhen e-interaction” and “panoramic network-playing world” investor interaction platform. The company has always actively and timely interacted with shareholders. Within the company permit, the company disclose as detail as possible to better serve small and medium investors. The WeChat platform is also an important window for companies to deliver information to shareholders. In 2017, the public WeChat of “Baogang's Board of Directors” issued 81 articles covering the latest industry news, company news, company stock prices, key performance data and interaction questions between the company's management and shareholders, which got many praises.

The company's official website is a “business card” for the capital market. The company's operation, management, environmental protection and other aspects of the information on the official website have comprehensive and timely disclosure. The company's announcements, financial reports, and actual records are all online in a timely manner, greatly improving the convenience of shareholders to access company information. In 2017, Baosteel ranked first in the voting for buyers and sellers of well-known magazine Institutional Investor on the investor relations website of Asian regional listed companies.

Improve readability and timeliness from media campaigns

Since the opening of the “Baogang's Board of Directors” in 2014, the content release has become stabilized, and information is transmitted on a weekly, monthly and quarterly pattern including company news, data, company prices, performance, etc. .

In 2017, during the process of making WeChat public account materials, the company strengthened its division of labor with the external design department, emphasizing clear and concise, beautiful and generous, and continuously improving the reader's experience. At the same time, it strengthened the timeliness of WeChat release and ensured the performance. The class announcement issued the relevant WeChat at the first time after the Shanghai Stock Exchange was connected to the network. By the end of 2017, the adheres of the WeChat public account increased by 20% compared with the beginning of the year.

URBAN STEEL MILL



The year of 2017 is of great importance for the company to promote the implementation of the Urban Steel Mill strategy. Baosteel accelerated the whole-process upgrade of energy-saving and environmental protection with equipment innovation, production process optimization and factory management improvement, which helps to promote the regional ecological co-construction and its integration into the city's good life.



The Company comprehends the concepts of innovation, coordination, greenness, openness and sharing based on the status of the urban resources and environment as well as the requirements of planning and development, and is devoted to improving the green manufacturing level and the regional environment quality continuously. By focusing on the functions of energy conversion and circulating utilization of resources of the steel enterprise, the company shares technology and resources with the city actively and facilitates industry development of the city. The company undertakes social responsibility energetically and engages itself in the charitable and public service and community construction, and takes construction of “urban steel mill” which integrates city and industry and is characterized by ecological harmony as the core goal of sustainable development of the Company.

8.1 Joint construction of urban ecological environment

8.1.1 Construction of local ecological environment

Steadily push forward the project of regional fugitive dust control

The construction activity of the enclosed renovation project in the raw material yard is constantly pushed forward at the Baoshan base as scheduled. The project duration is shortened to 4 years from 6 years. It's estimated that the regional dust-fall can be reduced by 30% after the project is completed, fugitive dust can be decreased by 65% and the floor area can be decreased by 25%. Meanwhile, solar photovoltaic cell panels will be installed at the roof of the greenhouse for power generation, which is estimated to increase green power of 8MW.

In 2017, the enclosure of the phase 1 and phase 2 mixing materials yards BA, BB and auxiliary material yards OA and OB were completed. The C-type enclosed transformation of the phase 1 and phase 2 ore yards G, H and I strips was carried out as planned. Coal silo construction is progressing steadily, with a maximum storage capacity of 14,000 tons per silo.

Orderly carrying out ecology afforestation construction of the mill area

Baosteel actively responds to the regional municipal development strategy and aims at building the urban steel mill. Baosteel endeavors to green, beautify, sweeten, clean and improve the environment and create a modern garden mill featuring in advanced concept, leading technology, pleasant surroundings and beautiful scenery. In 2017, Baoshan Base completed a greening construction area of 308,000 square meters, of which 160,000 square meters were newly added green area. Among them, the construction of new plant boundary forest belts was 112,000 square meters, and 5 areas of 17 were completed in terms of green land remediation. With the use of combined road cleaning mode and new cleaning vehicles, Baoshan Base seeks to achieve control targets of road dust as well as improve the road cleaning standards. The Qingshan base has newly planted 115,000 trees and shrubs, with an area of nearly 70,000 square meters of new greening and a new green area of 74,900 square meters. The major projects of Dongshan Base passed the environmental protection acceptance.




35.16%

Baoshan base has a green coverage rate

39.46%


Meishan base has a green coverage rate



 The project of No.1 Road environmental improvement of Meishan Base

The renovation of the factory environment along the No. 1 road of Meishan Base lasted for one year, including the construction of 65 buildings including factory buildings and warehouses, and the area was about 22,000 square meters. The project completed the renovation of overhead power and communication cables along the line, and the length was about 1Km; the land was built green, and the newly added and renovated green space was about 79,000 square meters. The new sidewalk of the project will be 2Km, the newly added green space will be 39,000 square meters, and 3 unmanned gates will be reconstructed. 90 new street lamps will be newly installed. In 2017, Meigang added about 115,000 square meters of green space, and the green coverage rate increased from 37.61% in 2016 to 39.46%.



 The project of Zhangjiang constructed wetland

Zhangjiang Base invested 49 million yuan to build two artificial wetlands in the factory, with an area of 80,000 square meters, and this project can handle 20,000 tons of coking wastewater and domestic wastewater every day. The coking and cold-rolling wastewater after treatment is used for blast furnace and converter slag respectively, saving 3.2 million tons of water per year. The use of artificial wetland to purify coking wastewater is the first in China. The constructed wetland can not only improve the ecological environment, but also building one of the key landscapes in the factory.

Strengthening disclosure of the enterprise environmental information

In 2017, the company continued to strengthen the information disclosure and add the monitoring points and factors of pollution sources. According to the requirements of the new pollution permit, the company added the monitoring factors such as mercury, blackness and ammonia in the pollution source monitoring system. The company added the monitoring points such as the workshop outlets in the monitoring system in terms of the pollution source wastewater. Based on the disclosure requirement of all the 20 monitoring factors in the steel industry, the company added characteristics monitoring of power plants such as temperature and total residual chlorine. There was no over-standard phenomenon throughout the year, and pollutants were discharged to the standard. At the beginning of each year, the company has formulated its own monitoring and information disclosure plan and reported to the Shanghai Environmental Protection Bureau. At the end of the year, it completed its own monitoring report and reported it to the local environmental protection government agency for record.

Baoshan Base has achieved the release of ambient air quality linked to local meteorological agencies, ensuring real-time analysis of ambient air quality in the area of 30km², and sends real-time air quality information to surrounding communities by multiple means including mobile APP.

8.1.2 Resource Sharing and Recycling

Baosteel makes full use of the characteristics of process equipment of the steel enterprise and its important role in energy and resource transformation and utilization, actively engages in urban industry development, achieves resource contribution to the city and resource sharing with the city, and promotes development of recycling economy of the city.

Energy sharing

In recent years, the company vigorously promotes the recovery and utilization of waste heat resources. Low-temperature waste heat has become a scaled and mature operation mode as a substitute for municipal energy and heating for the community. In 2017, the company's project of hot water production with low-temperature waste heat was further explored, and included low-temperature waste heat from iron making, steel making and rolling process. At present, it has formed an annual capacity of 500,000 tons of hot water. At the same time, the company vigorously promotes the optimal allocation and resource sharing of regional water resources, and maximizes the service of the city while reducing energy consumption.

Sharing water with nearby community

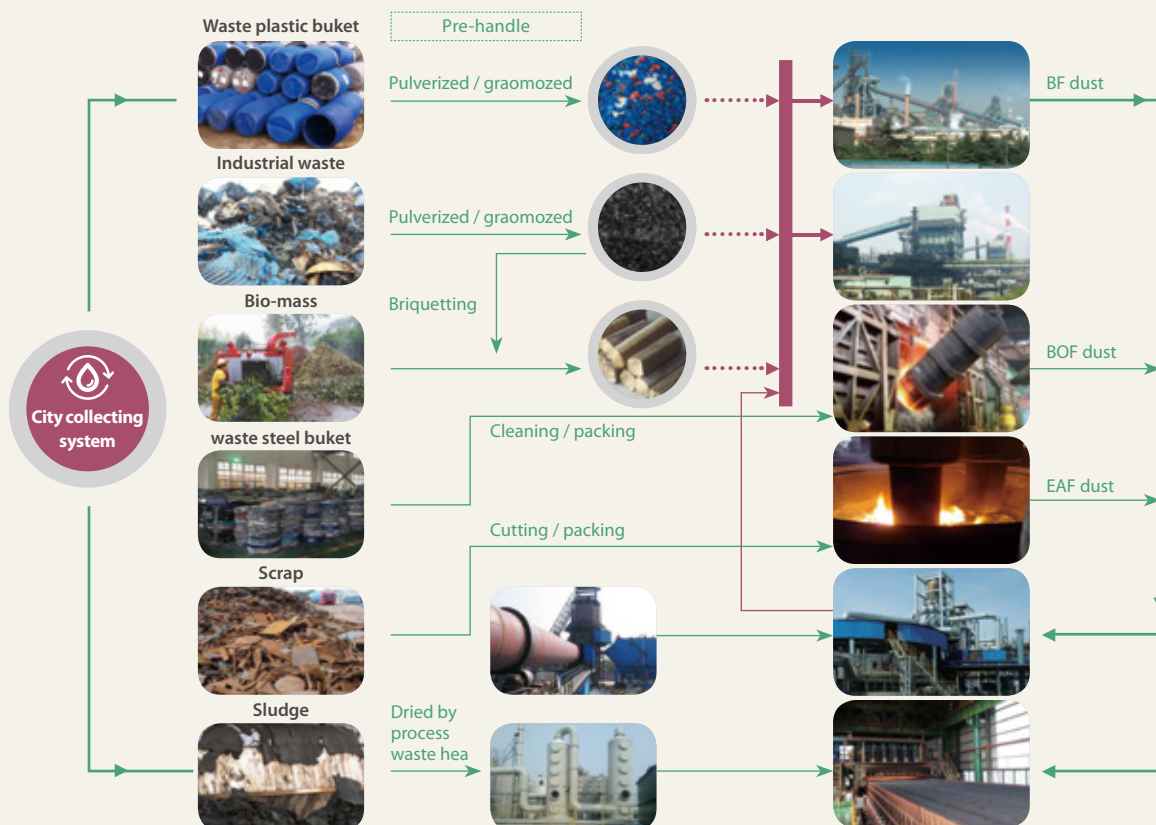
In recent years, the company has continued to promote water-saving work, and supplied the surplus water from Baosteel Reservoir (the main source of water supply in Baoshan base) to municipal users. The project was completed in July 2017, expanding 1.5 million cubic meters and forming an annual water supply capacity of 7-8 million tons, which can meet the demands of 27% of the surrounding municipal users during the dry season.

Efficient utilization and joint treatment of waste of the urban steel mill

The company continues to innovate and make breakthroughs in the joint use of metallurgical kiln for municipal waste treatment. The scope of disposable waste resources is further expanded, the process technology is further improved. And the company is constantly accelerating its pace to treating metallurgical waste resources from relying on comprehensive utilization to making building materials products and serve the market. In 2017, the company's project of incineration of waste paint barrel with converter was transferred from emergency treatment to pilot processing, and the annual disposal of external social paint buckets was 9,920 tons.

Zero disposal of municipal waste with metallurgical kiln

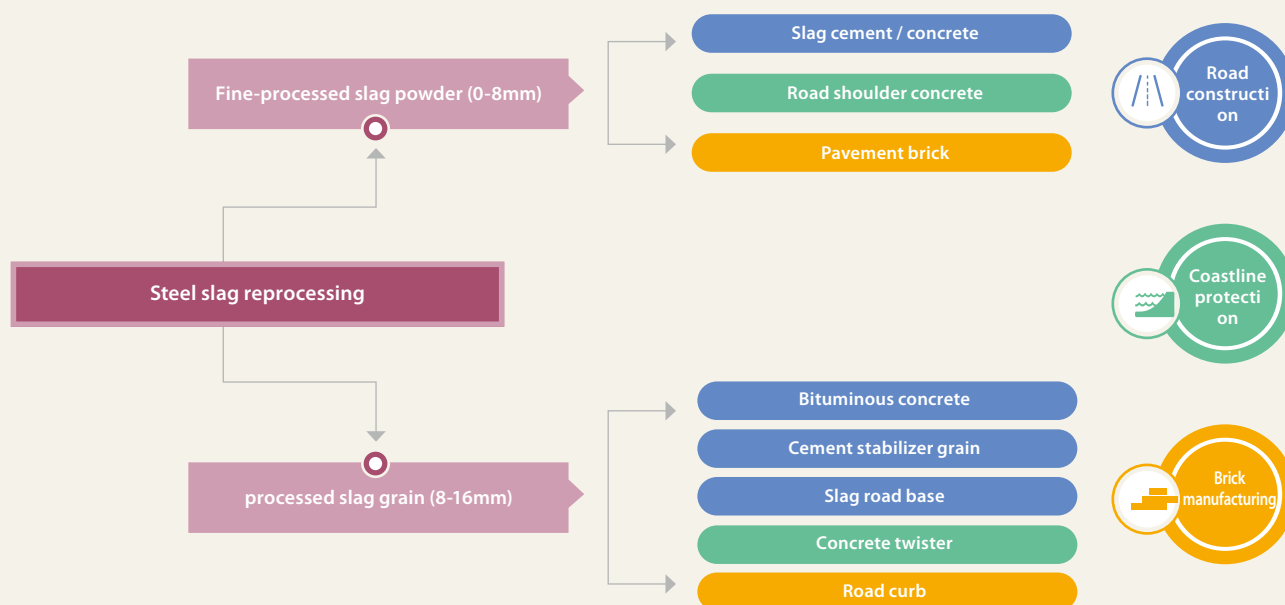
The metallurgical furnace has the characteristics of high furnace temperature (up to 1600°C), complete flue gas purification facilities and no secondary solid waste generation. It is an ideal way to dispose of solid waste. Baoshan Base actively explores and implements "zero-waste" disposal methods for safe, efficient and low-cost treatment of various types of urban and industrial solid waste, and uses waste furnaces such as converters, electric furnaces, blast furnaces and coke ovens to dispose of scrap steel, waste plastics and industrial waste, social waste paint buckets, etc., to achieve recycling of resources. The main technology routing is as follows.



Utilization of metallurgical steel slag for the development of sponge city

Metallurgical slag is rich in ferrite resources and silicon-based, calcium-based inorganic materials, and can be recycled as a substrate for road materials, chemical materials, and environmental functional materials. The company uses metallurgical slag materials to serve the promotion of the sponge city construction. The company's steel slag pro-

cessing center project reached design yield in 2017. The secondary slag processing materials can be returned to the production process, and the recycling of iron resources can be realized. At the same time, the tailings with <1.5% iron content can be 100% commercialized to achieve an annual output of 2 million tons of high-quality building materials.



8.2 Helping Urban Industry Development

8.2.1 Urban Strategic Emerging Industries

Baosteel actively engages in urban industry development, and provides support for development of city strategic emerging industries based on its characteristics.

Exploration and development of smart manufacturing and digital steel factory

Baosteel Co., Ltd. comprehensively promoted the implementation of smart equipment, smart factories, intelligent interconnection, IT infrastructure reform and other four major directions and 13 types of measures, aiming at improving cost, quality and service competitiveness, forming new competitive advantages and becoming a domestic steel enterprise leader in smart manufacturing. In 2017, the company launched 58 smart equipment projects, 6 smart factory projects, 4 smart interconnection projects, and 4 IT infrastructure transformation projects, providing nearly 500 employees with opportunities to bid farewell to the hard environment and transformation to higher value positions. The following projects were comprehensive launch, such as Baoshan base iron making, steel making, cold rolling, transportation and other units intelligent equipment transformation project group, finished product factory efficiency improvement project group, Dongshan base cold rolling, finished product warehouse unmanned transformation and other project groups, Meishan base materials, refining Steel and other units intelligent equipment transformation project group and so on. Baoshan Base's hot rolling 1580 intelligent workshop demonstration pilot was basically completed, and the technical and economic indicators improved significantly. A number of steel smart factory core technologies and steel intelligent manufacturing practice cases were formed, which provided a scalable and reproducible experience for the steel workshop-level intelligent manufacturing upgrade.

8.2.2 Technology Output

The company utilizes an engineering cooperation platform to integrate social resources, actively promote technology industrialization, and enable the company's superior technology to be applied in other steel mills to jointly improve the technical level of China's steel industry. The company signed a framework agreement with a Shanghai-based enterprise on energy-saving technologies, and used the company's abundant market resources to actively carry out technical exchanges with domestic and foreign steel companies. At present, four companies have industrialized intentions. The company's self-developed environmentally friendly descaling process that can replace the existing pickling and descaling, thus the BMD technology (Baosteel Mechanical Descaling Technology) with the characteristics of "low cost, high quality and no pollution" was first settled in Anhui. Baosteel has contributed to the construction of environmentally friendly enterprises, and the project has now entered trial production. The company conducted technical exchanges with companies from Hebei Province, Guangxi Province, Russia and other enterprises to prepare for the technical output.

8.2.3 Finance and Tax Contribution

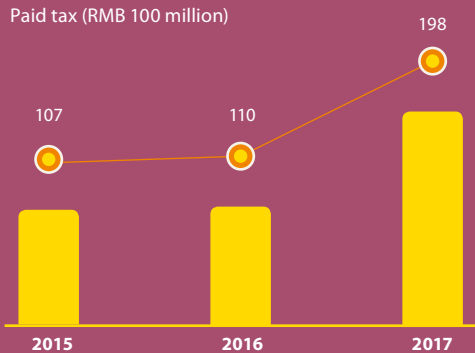
Baosteel gives back to society through honest operations and with good performance. In 2017, we turned over various taxes of about RMB 19.7 billion in total to the state. Due to good tax-paying credit, the Company has obtained the honor of "Shanghai A-class Taxpayer" for consecutive years.

Baosteel complies with various national tax laws and codes strictly and uses relevant preferential policies properly. Tax deduction and exemption in 2017 is as follows:

- As per income deduction policy for comprehensive utilization of resources, income tax of about RMB 27 million was exempted in 2017.
- As per weighted deduction policy for technology R&D expenses, income tax of about RMB 0.29 billion was deducted in 2017.
- As per the policy of using investment of special equipment (environmental protection, energy and water saving and safe production) to offset corporate income tax, income tax of about RMB 10 million was exempted in 2017.
- As per weighted deduction policy for salary of the disabled, corporate income tax of about RMB 2 million was deducted in 2017.
- As per the policy of special financial support for high-tech achievement transformation project in Shanghai, financial aid of RMB 148 million was received in 2017.



Paid tax (RMB 100 million)



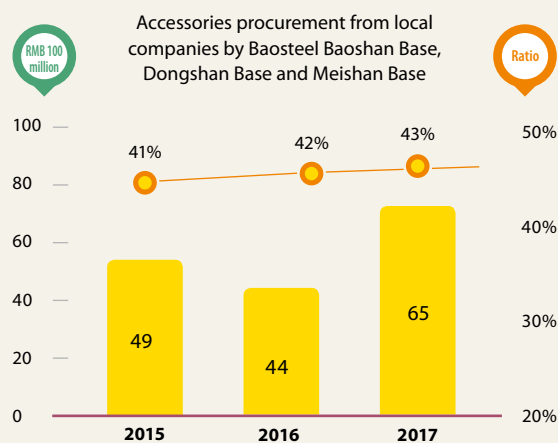
Note: customs value-added tax and customs duties are included in the tax data.

8.2.4 Support for Enterprises

Baosteel actively fulfills its social responsibility, supports development of local enterprises and small and medium enterprises based on its solid capital strength and overall control capability of market, establishes a close relationship with the local market, and promotes development of local economy.

Supporting development of local enterprises

The supply of spare parts for the company's Zhanjiang base fully exploits local resources and leverages its cost competitiveness and rapid response. As of the end of 2017, Zhanjiang Base has developed a total of 71 local equipment suppliers. In the same year, the company included Meishan Base for the first time in this management. In the past three years, the total local procurement performance data of the company headquarters and the three bases of Zhanjiang and Meishan are as shown below (the company headquarters, Zhanjiang Iron and Steel, Meigang, and the three bases are registered in Shanghai, Guangdong, and Jiangsu respectively, and are defined as local supply).



Supporting small and medium enterprises

In 2017, the total amount of waste materials and spare parts recovered at the company headquarters was 57,700 tons. Among them: 21,200 tons of waste refractory materials, 28,600 tons of waste materials, and 0.79 million tons of zinc slag. The company adopted the "old-for-new" approach to some of the used cold-rolled rolls and hot-rolled rolls by innovating the waste materials and spare parts disposal methods, relying on external enterprises for recycling. The above-mentioned enterprises are generally small in scale. By cooperating with the company, the operating costs are reduced, and at the same time, the benefits are obtained. The company also realizes the cost reduction through the recycling and disposal of the waste materials and spare parts, and the two parties cooperate to achieve a win-win situation.

8.3 Co-building Wonderful Urban Life

8.3.1 Enriching urban cultural life

In the reform and development practice of more than 30 years, Baosteel has created Baosteel culture with "spirit of strictness, road of study and innovation and target of striving-for-the-best" as the mainline and "Sincerity & Coordination" as the core value. Baosteel culture is the spiritual wealth created by all Baosteel people and the power source to promote a new undertaking of Baosteel. In the process of building urban steel mill, Baosteel people enrich the cultural connotation of Baosteel with urban culture and actively integrate Baosteel culture into urban dominant culture with an open mind.



 Baosteel Carnival on World Environment Day

In order to promote the exchanges between enterprises and community residents, and advocate the concept of environmental protection, in early June, Baosteel Co., Ltd. launched the "Green Motion Baosteel-Creating a Change of Life" carnival event. The employees of the company and the residents of the Yuepu community performed together to invite residents to participate in the event. They went into Baosteel, learned about Baosteel, and promoted the integration and cultural exchange between Baosteel and the community.

8.3.2 Support Development of Public Welfare

In 2017, in order to further implement the spirit of the important instructions of General Secretary Nanping on poverty alleviation and work hard, and resolutely win the fight against poverty, the company invested a total of 17.98 million yuan in poverty alleviation funds, accounting

for 92.14% of the external donation funds. The company carried out 25 poverty alleviation projects and sent 3 aid and cadres. Baosteel actively fulfilled its social responsibility behavior and established a good corporate image. It won the "China Moral Enterprise Award" at the "Top 17 China Listed Companies Top 100 Summit Forum and the 3rd China Top 100 Cities Comprehensive Development Forum".

In 2017, the company directly invested 15.94 million yuan in its poverty alleviation in Yunnan. The aid construction project directly relieved more than 4,780 poverty-stricken people in the local area, and implemented the construction of water-destroyed farmland in Minsheng Village, Meizi Town, Ninglang County, and the whole village promotion of the village of Pudong Village, Yangliujing Township, Guangnan County, and Zhenyu County, and also the industrial support projects such as the construction of pig farms in Enle Town.



 Charity Bazaar on World Environment Day

In conjunction with the "World Environment Day" activities, the company organized the Yunnan charity sale activities, and preferred the industry to support more than 20 varieties of agricultural products for sale, and purchased and sold 72,000 yuan of products. The proceeds were donated to the public welfare charity around Baosteel.

"Hand in Hand" Public Welfare Action

The company continued to promote the "hand in hand" public welfare student aid operation, and completed the construction of electric classrooms, book renewal and playground hardening projects in Ninglang Xiansheng Primary School in Yunnan Province, and accumulated 360,000 yuan to the Hope Primary School in Yunnan Province to support local education development. To fulfill Baosteel's social responsibility.

8.3.3 Targeted Poverty Alleviation

Summary of targeted poverty alleviation

Baosteel Co., Ltd. actively participates in various poverty alleviation projects. You will find people from Baosteel in various poverty alleviation projects. Through a series of targeted poverty alleviation measures, we have completed a series of unit-to-unit aid programs, poor student aiding projects and infrastructure improvement projects in the poor areas.

See the following list of targeted poverty alleviation of listed companies for details.

Unit: RMB 10,000; Currency: RMB

Index	Quantity and Present Situation
1. Overall Conditions	The company donated 15.98 million yuan to the four counties and Pu'er City, and involved 22 projects. Among them, 9.98 million yuan is the planned poverty alleviation fund, 3 million yuan is the additional special poverty alleviation fund, and the 2016 poverty alleviation fund is 3 million yuan. In addition, employees donated 819,000 yuan equivalent materials. In 2017, Baosteel Co., Ltd. Sent out 97 people to the Dingdian County.
Where: 1. Funds	RMB 15.98 million
2. Materials equivalent money	RMB 819,000
3. Number of people getting rid of poverty among people in the poverty archives (person)	3,017

Index	Quantity and Present Situation
II. Itemized inputs	
1. Industry development for shake-off-poverty	RMB 436 million
Where: 1.1 Type of industry poverty alleviation project	Agriculture and forestry poverty alleviation
1.2 Number of industry poverty alleviation projects (Nr.)	11
1.3 Input of industry poverty alleviation projects	RMB 436 million
1.4 Number of people getting rid of poverty among people in the poverty archives (person)	2,896
2. Employment transfer for shake-off-poverty	
3. Relocating in other places for shake-off-poverty	
4. Education for shake-off-poverty	RMB 103 million
Where: 4.1 Input for aiding the poor students	RMB 0.39 million
4.2 Number of poor students receiving the aid (person)	240
4.3 Amount of money supported to improve the education condition	RMB 0.64 million
5. Health for poverty alleviation	
6. Ecological protection for poverty alleviation	
7. Catch-all guarantee	
8. Social poverty alleviation	
9. Other projects	RMB 675 million
Where: 9.1. Number of projects (Nr.)	7
9.2. Input	RMB 675 million
9.3. Number of people getting rid of poverty among people in the poverty archives (person)	1766
9.4 Other statements	All the projects were promoted in the whole village



Baosteel's charity practice in Jiangcheng County

At the end of 2017, on the occasion of the low temperature in winter, Baosteel launched a "warm-to-home" theme activity in Jiangcheng County, Yunnan Province. Before the new year, it sent 3,500 beds of warm winter quilts to poor farmers, and sent warmth to poor households. A subsidized Yao poor household said with excitement, "We moved into a new house built by China Baowu. This winter is no longer cold!" Since China Baowu helped Jiangcheng County, It has invested a total of 28.915 million yuan in Jiangcheng County and implemented 128 projects. It has done fruitful work. The project covers 3 communities in 48 villages of 5 towns and 2 townships in the county, benefiting 8818 households with 39,079 people. Through the implementation of the project, it has effectively promoted the comprehensive development of Jiangcheng County's economy and various social undertakings.

Follow-up precision poverty alleviation plan

In 2018, Baosteel will take the spirit of the 19th National Congress as a guide, and strive to make real moves on precise measures, achieve practical results in precise advancement, and see results in precision landing. The company will combine the poverty alleviation and development program of Yunnan Province, rely on and serve the local government's poverty alleviation plan, integrate the company's targeted poverty alleviation work into the local poverty alleviation system, and increase assistance to deep poverty areas to accurately select poverty alleviation projects. At the same time, the company will strengthen the tracking and management of funds for poverty alleviation projects and carefully organize project implementation. Under the joint efforts of local poverty alleviation cadres and Baosteel cadres, the company will help the successful completion of the 2018 support goals and fulfill the social responsibility of Baosteel Co., Ltd.

APPENDIX

Stakeholders Q&A



Questioner:



Answer:



Questioner:

What is the company's view on supply-side structural reform?

Answer:

Undoubtedly, the country's supply-side structural reforms have achieved remarkable results. First, efforts have been made to strengthen environmental protection and control. Enterprises that do not meet environmental protection standards have been restricted production or shut down, and they are forced to increase environmental protection investment. Second, the implementation of policies has helped to clean up a large number of zombie companies and improve the efficiency, reducing the financial risks. Looking back now, China has achieved rapid development in the past few decades, but this has brought some problems. The relevant rules and regulations have not been kept up to date, resulting in excessive investment, inefficiency, and bad money driving out good money. After the economic development reaches this stage, we have to seriously consider this issue, facing the future, and pursuing higher quality development. Supply-side structural reforms should have begun long ago.



Questioner:

The Beijing-Tianjin-Hebei region has implemented 2+26 production limiting. Is this good for enterprises outside the region, including Baosteel?

Answer:

As far as the steel industry is concerned, the demand for steel in the north, during the winter, is not large. During this period, a large number of construction stops, which leads the demand for the steel to go south. This shows the unreasonable structure of the Chinese steel industry. The construction of Xiong'an New District has determined that the steel industry in Hebei Province is the main area for supply-side structural reform target. The frequent limited production in the future will make it difficult for steel companies to exert their scale effects and bring difficulties to production organizations. The surrounding steel enterprises should be early to do some strategic thinking. These problems do not exist in Baosteel. Thanks to the strategic layout in advance, one of the reasons for our construction of Zhanjiang Iron and Steel is to adjust the structural industrial layout in the case of overall oversupply.



Questioner:

The steel industry is now very low in concentration, and there is still a need to further increase the concentration in the future. What do you think will happen in the future?

Answer:

From the experience of foreign developed countries, the largest steel companies account for about 40% share of the market, so the concentration of China's steel industry will be further enhanced. As China is too large, so we would said this share could be 20% conservatively. If there is no steel mill with a 20% share in China, this means that the industry restructuring is still going on. This is an inevitable law. How to measure the value of mergers and acquisitions should be based on the value creation. The companies should work together to create the value that could not be seen before, achieving the effect of 1+1>2, and the future industry restructuring should be like this.



APPENDIX

Stakeholders Q&A



Questioner:

At present, the proportion of our country's electric arc furnace(EAF) steel is only about 6%, and the average level of developed countries is now around 25%. How will China's EAF steel develop in the future?

Answer:

In the past, the cost of EAF steel was higher than that of blast furnace(BF), and this situation is expected to change in the future. In 2017, the scrap prices fell, and the cost of EAF steel was once lower than that of the BF, which was economically feasible. In addition, the environmental pressures faced by the blast furnace will become larger and larger in the future. The EAF steel will be produced with scrap steel, which is environmentally friendly. Recently, the government's statement also encouraged the blast furnaces smelting to be replaced by electric furnace smelting. From the perspective of product classification, the BF steel will be used to prioritize the production of high value-added products, and EAF are more used in low value-added or medium value-added products.



Questioner:

How is the integration of Baosteel and WISCO?

Answer:

After China Baowu get merged and re-listed, the company formulated 100-day plan, annual plan, and three-year plan to promote integration, and set a phased goal of achieving the synergy effect of 1 billion, 2 billion, and 3 billion in 2017~2019 respectively. Under the background of exploring multi-manufacturing base management mode and deepening centralized and consistent management, through marketing, procurement, research and development, finance and informationization, etc., it has achieved rapid results. The synergy effect of the 2017 win-win project is about 1.3 billion yuan, exceeding the stated goals.

In the future, the synergy effect of China Baowu will be reflected in many dimensions. In addition to reducing costs and increasing profits, good practices in the process of mutual integration and benchmarking can be transplanted to other bases to promote multi-base synergy and provide better service to users.



Questioner:

Please introduce something about the development of Zhanjiang Base.

Answer:

The year of 2017 is the first fiscal year for Zhanjiang Steel on its full operation. Zhanjiang Base achieved profitability throughout the year, exceeding its original expectations. The crude steel production capacity is close to 9 million tons, and the billet is about 8.5 million tons. In 2017, the production capacity was fully realized. In September, the 1550 cold rolling unit was put into production. In the future, the variety structure of Zhanjiang Base will continue to be optimized and the profitability will continue to increase. Zhanjiang base has many advantages, including geographical advantages, equipment advantages, efficiency advantages, cost advantages, etc. We will strive to build the Zhanjiang base into the most competitive steel base.



Readers' feedback

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