

# **2011** Sustainability Report

BAOSHAN IRON & STEEL CO., LTD.

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## Our Commitment

The Company's Board of Directors and all its members guarantee that this Report is free of any false representation, misleading statements or material omissions, and that they are jointly and severally responsible for the authenticity, accuracy and completeness of the information contained in this Report.

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# Social Contribution per Share

The social contribution per share of Baoshan Iron & Steel Co., Ltd. was CNY 2.057 in 2011:

	Basic earnings per share:	0.420 CNY/share
+	Taxes paid in the reporting year per share:	1.013 CNY/share
+	Salaries and wages paid to employees per share:	0.520 CNY/share
+	Interest on borrowings paid to banks and other creditors per share:	0.103 CNY/share
+	Outward donations and values created for other stakeholders per share:	0.001 CNY/share
-	Other social costs arising from environmental pollutions and other incidents per share:	0.000 CNY/share
	Social contribution per share:	2.057 CNY/share

The foregoing "outward donations and values created for other stakeholders" only include outward donations.

## Green Manifesto

Baosteel is the leading provider of environmentally-friendly products and services. It also advocates and implements a green steel industry chain. While promoting a comfortable modern life, we're also committed to reducing the burden on the environment. We hereby promise:

- I. To develop the manufacturing technology with high energy efficiency and high resource efficiency, develop and promote products and systems with high energy and resource efficiency, share with the users the advanced idea and technology of environmental design, and provide products and services with high environmental performance.
- II. To strictly conform to environmental rules and regulations. We hereby promise that we shall not add any hazardous substance by intention during the process of manufacturing. In the meantime, we shall endeavor to reduce the hazardous impact of our products during its life cycle.
- III. To give priority to the cooperation with suppliers and subcontractors with good environmental performance, enhance the supplier's awareness of and performance in sustainable development, provide a green solution to users, and be committed to jointly building a green industry chain.
- VI. To publish the product environmental statement based on the LCA, reporting the environmental performance of our core products, assisting the customers and other related parties in comparing the LCA influences of different products.
- V. To actively conduct cooperation with the government, enterprises and international partners, promoting the application of international research results, and keep abreast with the world's leading technology in energy saving and environmental protection.

While enhancing the product properties, Baosteel endeavors to reduce side effects on the environment, pursuing harmony between the enterprise and the environment. The environmental management is integrated into the development strategy, business process, and daily operation of Baosteel. We are determined to continue exploring the sustainable development of the steel industry, shaping a new social role and making concerted efforts in building a better world.



#### Basis

This Report was prepared in accordance with the GRI Sustainability Reporting Guidelines (G3), the Compilation Guide for Social Responsibility of Chinese Enterprises CASS – CSR2.0 and in reference to the 2009 Annual Reporting Memo No. I for Listed Companies: Preparation and Review of Internal Control Report and Corporate Social Responsibility Report issued by the Shanghai Stock Exchange, the Guidelines on Preparation of Corporate Social Responsibility Report and the Notice on Strengthening Social Responsibility of Listed Companies and Issuance of the Notice of the Shanghai Stock Exchange on Disclosure of Environmental Information.

#### Range

From I January 2011 to 31 December 2011, unless otherwise stated, this Report mainly addresses economic, environmental, social and other activities of the various production units of Baosteel, which included company headquarters in Luojing District, Stainless Steel Business Unit, Special Steel Business Unit, Bars & Tubes Business Unit, Shanghai Meishan Iron & Steel Co., Ltd, Baosteel NSC/Arcelor Automotive Steel Sheets Co., Ltd., as well as Baosteel Research Institute, Shanghai Baosteel International Economic and Trading Co., Ltd., Shanghai Baosight Software Co., Ltd., and Shanghai Baosteel Chemical Co., Ltd.

The financial data contained in the report are measured in CNY. For convenience, the following exchange rates are used in the report: USD I = CNY 6.3009 (or CNY I = USD 0.1587) (as announced by the People's Bank of China on 31 December 2011), and the Euro exchange rate used is EUR I = CNY 8.1625 (or CNY I = EUR 0.1225).

#### Language and Publishing Format

This Report is published in both Chinese and English. The Chinese version will prevail in the event of any discrepancy between the two versions. In case of any question about this Report, please contact us by phone or by mail to the following address:

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This Report is available to readers in printed and PDF formats. The PDF document is downloadable from Baosteel website at http://www.baosteel.com. For environmental protection, we advise readers of downloading and reading the electronic version as far as possible; we will also reduce printed copies over years.

This Report is printed on recycled paper. To save paper, we control the document size at the minimum level possible. For any further information, please browse Baosteel website or read our annual financial statements.



#### Baosteel was widely recognized across all segments of the society in 2011:

Honors & awards	Issued by
"Advanced Unit ofTrade Union Work in China", "National May I Labor Award"	All China Federation of Trade Unions
"National Advanced Quality Model Unit"	General Administration of Quality Supervision, Inspection and Quarantine of the PRC.
"Outstanding Board" Award (41 winners); independent director Buck Pei won the title of "most influential independent director" (2 winners) and Baosteel Co., Ltd. deputy general manager and Board Secretary Chen Ying won the title of "most innovative deputy general manager"	Board Magazine publishing house
ChengYing:"7th XCF Golden Board Secretary of Listed Companies in China"	New Fortune publishing house
Shanghai 2007-2009 Export Name Brand Enterprise	Shanghai Chamber of Commerce for Import and Export
"Most socially responsible listed company" in "China's Listed Company Reputation List of 2011"	"Daily Economic News" publishing house
"Top 100 of China Corporate Social Responsibility", ranked the fifth among 50 domestic companies and the first among 12 domestic raw material industry companies	<i>Fortune</i> magazine (Chinese Version), U.S.
"China's most Admired knowledge-based enterprise awards (CHINA MAKE)" and the individual prize of "Best Knowledge and Technology Application"	Web of Knowledge-based Business, Center for Knowledge Manage ment Research, Hong Kong Polytechnic University
"CCTV Finance 50 Index Specimen Companies"	CCTV finance channel
Baosteel ranked 16th among Top 500 Chinese Enterprises of 2011	Fortune (Chinese web)
2010 Shanghai Top 10 Enterprises in Resource Comprehensive Utilization	Shanghai Resource Comprehensive Utilization Association
2010 Shanghai Advanced Collective for Standardized Work	Shanghai Municipal Bureau of Quality and Technical Supervision
Huangshi Company: ''Tax Payer with A-Level Tax Credit''	Hubei Provincial Office of SAT, and Hubei Local Taxation Bureau
Majishan Port of the Transportation Dept.:"Unit Reaching the Standard of the Demonstration Spot of Staff Book House''	All China Federation of Trade Unions
Meisteel: "Safe Enterprise" in Jiangsu Province	Jiangsu Administration of Work Safety
Meisteel: 2009-2010 Jiangsu Province Energy Calculation Model Unit	Jiangsu Bureau of Quality and Technical Supervision, Jiangsu Eco- nomic and Information Technology Commission
Ningbo Baoxin: "Model Enterprise of Energy Saving in Ningbo Beilun District"	People's Government of Beilun District of Ningbo
Ningbo Baoxin was one of the Top 100 Enterprises of Zhejiang Province	Zhejiang Enterprise Committee, Zhejiang Entrepreneur Association
2010 Excellent Supplier	Dongfeng Liuzhou Automobile Co., Ltd.
Three types of Baosteel's stainless steel entered the global suppliers'' list of GM	Shanghai GM motors, Pan Asia Technical Automotive Center
The Special Steel Business Unit was honored as the excellent supplier of Eton Company, and its valve steel entered Eton's list of global suppler	EATON Company

"Shanghai 15th (2009-2010) Model Units" to the following units: Steel-making plant, Units of Silicon Steel, Transportation, Equipment, Energy and Environment Protection, Material and Spare Part Procurement, Marketing Management, and Stainless Steel, BNA, and Meisteel Shanghai Municipal committee of CPC, Shanghai People's Government, Shanghai Spiritual Civilization Committee

Honors & awards	Issued by
National Advanced Party Organization in Grass- rout Unit	Organization Department of the Communist Party of China Central Committee
National Advanced Party Organization in Central Enterprises	Party Committee of State-owned Assets Supervision and Adminis- tration Commission of the State Council
Shanghai Advanced Party Organization in Grass- rout Unit	Shanghai Municipal committee of CPC
Shanghai Advanced Party Organization in Grass- rout Unit	

As one of the major company under Baosteel Group, it has contributed a lot to the Group in terms of the honors and awards:

Honors & awards	Issued by
The sixth (2010) "Love Donation Enterprise" by "China Philanthropy Award"	Bureau of Civil Administration
Model Unit of Energy Saving and Emission Reduction in Central Enterprises during the "Eleventh Five-year Plan" period	State-owned Assets Supervision and Administration Commission of the State Council
The Twelfth National Model Unit for Employee Professional Morality Construction	All China Federation of Trade Unions
Baosteel Science Association: "Model Collective of National Science Association System"	China Science Association
"China Industry Award"	China Industrial Economy League
No. 7 among the metal industry of "the most respected enterprise in the world" in 2010	Fortune magazine, U.S.
In the list of World top 500 enterprises for 8 consecutive years, ranked No. 211	Fortune magazine, U.S.
2011 ''World Top 500 Green Enterprises'', ranked No. 359	News Week, U.S.
"Golden Bee – Leadership Enterprise" in the "2010 Golden Bee Enterprise Social Responsibility-China List"	WTO Economic Herald
Baosteel "2010 Social Responsibility Report" won "Global Compact Good Report <mark>Cre-</mark> ation Award"	China Network Center of Global Compact of the United Na- tions
2011 Enterprise Social Responsibility Blue Book-No. 7 in Social Responsibility Develop- ment Index	Enterprise Social Responsibility Research Center, Economics Dept, China Social Science
Ranked 18th among China's 500 most valuable brands in 2011	World Brand Lab
Baosteel Group ranked at No. 2 on the List of "Top 100 of Shanghai Enterprises in 2011"	Shanghai Enterprise Committee, Shanghai Entrepreneur Associa- tion, Shanghai Federation of Economic Organizations



# 03

## Message from the Top Management

The production of iron and steel were totaled 2.378 million and 2.664 million tons respectively in 2011. The sales of finished products and billets reached 2.5803 billion tons. It achieved the business revenue of CNY 222.86 billion, which was 2% higher than the annual target. The annual sulfur dioxide emission was 4,401 tons lower than the annual target.

The comprehensive energy consumption per ton was reduced by 8 kg standard coal compared to the annual goal.

2011 marked the beginning of the "Twelfth Five-year" phase, when the economic situation both at home and abroad was confronted with great changes. The steel industry had entered an era of "high cost and merger profit" and steel enterprises were faced with unprecedented competition.

In view of the complicated and uncertain market environment, the Company took rational measures to seize the opportunity, overcome pressures at both the purchase and sales markets, and ensure a stable production and a good balance between production and sales. In the meantime, the Company optimized the internal resource flow, enhanced cost reduction, and maintained good overall performance.

The production of iron and steel were totaled 2.378 million and 2.664 million tons respectively in 2011. The sales of finished products and billets reached 2.5803 billion tons, among which the exclusive products and export products totaled 2.97 million and 2.75 million tons respectively. It achieved the business revenue of CNY 222.86 billion, which was 2% higher than the annual target.

The annual sulfur dioxide emission was 15,099 tons, which was 4,401 tons lower than the annual target. The comprehensive energy consumption per ton was reduced by 8 kg standard coal compared to the annual goal.

The ratio of R&D investment, new product sale and environmentally-friendly products were 2.34%, 20.58%, and 88.09% respectively. The Company filed an application for 1220 pieces of patents, of which the invention patents accounted for 41.97%. The direct effect from R&D reached CNY 1.733 billion, and the new product trial production amounted for 1.917 million tons.

In 2011, the Company received the titles of "National Advanced Quality Model Unit" issued by the annual national quality model units and award," "Most Admired Knowledge-based Enterprise," and "Most socially responsible listed company". On the list of "Top 100 of China Corporate Social Responsibility", Baosteel was ranked fifth among 50 domestic companies. It also won awards of "Advanced Unit of Trade Union Work in China" and "National May I Labor Award".

In 2012, confronted with the complicated exterior environment, and the "Penny Profit" of the steel industry, Baosteel will hold firm the belief that it will achieve success by embracing challenges proactively. It will continue to maintain the best performance in the steel industry, and endeavor to build up itself to be the most competitive base for flat carbon steel and the most valuable listed company.

In 2012, the overarching plan of the Company is "exercising product management and cost improvement to adjust to the new requirement of competition; practicing environmental management to shape new competitive advantages" The overall goal is to achieve a total operating revenue of CNY 220 billion, maintaining the best performance among domestic peers. The sales of exclusive and leading products are intended to reach 12.50 million tons, and the energy conservation from production processes is intended to reach 50,000 tons of standard coal.



Chairman of BOD: He Wenbo

President: Ma Guoqiang

The following are the major tasks:

- 1. To optimize product structure to adjust to market needs. It will adhere to the differentiated competition strategy, actively respond to the market change, enhance the manufacturing capacity of key products, further the coordination among production, sales and research, and enhance the competitiveness of major product categories.
- 2. To enforce cost control to promote the cost improvement. It will further tap on the potential of cost reduction of the whole system involving every step from purchase, on-site production, sales, and R&D to management. It will promote the cost reduction and transform the high-cost business mode by improving technologies, reducing administrative fees, and controlling various expenses.
- 3. To improve the service capacity to create value for clients. It will perfect its customer-oriented operational mechanism, push forward the construction and implementation of the technical service system for users, and distinguish itself from the peers by its early start in service. Taking the service differentiation as the main line, the Company continues to innovate the business mode, enhance the user service capacity and create value by service.
- 4. To promote environmental management and realize clean production. It will enforce the effective operation of energy management system and environmental management system, speed up the investment and apply energy saving and emission reduction technologies, improve the effectiveness of resource utilization, reduce various emissions and enhance the performance of clean production.
- 5. To adhere to the employee-oriented policy to pursue a united development. It will continue to adhere to the policy of a united development of the employees and the enterprise by providing a safe work environment, improving the overall quality of the employees, and creating harmonious atmosphere.

2011 was an eventful year; and 2012 poses more challenges. 2012 was an important year for the "Twelfth five-year plan" and the 2010-2015 Baosteel Plan, which connected the past and the future. It wass also the first year marking the transition of the steel industry from an investment-driven growth to a creativity-driven one. In the new year of 2012, the Company will need to be sober-minded and understand that the current situation and future development are both unchangeable, as well as conducting benchmarking analyses and tackling its own weakness. It will improve its creativity of steel technologies and solidify the market of the strategic products. In the meantime, by adhering to the market backward mechanism, it will construct a competitive cost structure and develop its sustainable and differentiated competitive advantages. It will stick to and deepen the administrative innovation so as to better the system and mechanism and improve the risk control system. It will also put more emphasis on the enterprise culture cultivation, shape an excellent employee team, actively fulfill enterprise's social responsibility and establish a responsible image for Baosteel. In 2012, all Baosteel employees will need to be fully ready for long-term hard work. We''ll stay aware of the challenges while holding firm confidence in and a great passion for the cause. Relying on our wisdom and abilities, we''ll give a full play to our advantages in technology, administration, service, and brand name, further enhance our market status and effectiveness of the capital to realize the business objective in 2012, and set a solid base for Baosteel development in the next 10 to 20 years.

Chairman of BOD:

President:

# 04 Capital Stock Change and Shareholders

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Capital Stock Change Shareholders and the Actual Controller 

## Capital Stock Change

#### ➡ Table of capital stock change

	Before this ch	ange		Increase/decrease of this change (+, -)			After this change		
	Amount	Ratio (%)	New shares issued	Compli- mentary Shares	Reserve transferred to stock	Oth- ers	Subtotal	Amount	Ratio (%)
I. Stock with trading restriction									
II. Stock without trading restriction	17,512,048,088	100						17,512,048,088	100
I. CNY ordinary share	17,512,048,088	100						17,512,048,088	100
2. Foreign shares listed at home									
3. Foreign shares listed abroad									
4. Others									
III. Total share	17,512,048,088	100						17,512,048,088	100

#### Changes of stocks with trading restriction

The Company has no stock with trading restriction in the reporting period.

#### Shareholders and the Actual Controller

#### Number of shareholders and top 10 shareholders

	Unit: share
Total number of shareholders at the end of 2011	601,660
Total number of shareholders as of one month before the issue of 2011 annual report	588 168

Top 10 shareholders						
Shareholder	Nature	Shareholding (%)	Total shares held	Increase / decrease in the period	Restricted shares	Pledged or locked-up shares
BAOSTEEL GROUP CORP.	State- owned	74.87	3,  1,255,230	157,737,789	0	None
RUGAO CHANGRONG ORE STORAGE LIMITED	Others	0.40	70,185,347	12,955,835	0	None
ZHANGJIAGANG FREETRADE ZONE QIANXING INVESTMENT & TRADING CO., LTD.	Others	0.36	63,419,861	40,809,317	0	None
ZHANGJIAGANG FREETRADE ZONE LIXIN INVESTMENT CO., LTD.	Others	0.33	58,626,601	24,403,417	0	None
INDUSTRIAL AND COMMERCIAL BANK OF CHINA— SHANGHAI STOCK EXCHANGE 50 ETF FUND	Others	0.32	56,389,527	2,891,925	0	None
UBS AG	Others	0.30	52,959,082	-17,969,311	0	None
BANK OF COMMUNICATION—E FUND 50 INDEX SECURITIES	Others	0.30	51,875,729	-19,400,000	0	None
ZHANGJIAGANG FREE TRADE ZONE RIXIANG INTERNATIONAL TRADE CO., LTD.	Others	0.29	51,612,776	14,980,855	0	None
INTERNATIONAL FINANCE—STANDARD CHARTERED (GOVERN- MENT OF SINGAPORE INVESTMENT CORPORATION PTE LTD.	Others	0.27	47,747,549	35,255,453	0	None
ZHANGJIAGANG HONGDA TRANSPORTATION CO., LTD.	Others	0.24	42,414,158	4,8  ,87	0	None

Top 10 unrestricted shareholders		
Shareholder	Unrestricted shares	Share type and amount
BAOSTEEL GROUP CORP.	3,  1,255,230	CNY ordinary share
RUGAO CHANGRONG ORE STORAGE LIMITED	70,185,347	CNY ordinary share
ZHANGJIAGANG FREE TRADE ZONE QIANXING INVESTMENT & TRADING CO., LTD.	63,419,861	CNY ordinary share
ZHANGJIAGANG FREE TRADE ZONE LIXIN INVESTMENT CO., LTD.	58,626,601	CNY ordinary share
INDUSTRIAL AND COMMERCIAL BANK OF CHINA—SHANGHAI STOCK EXCHANGE 50 ETF FUND	56,389,527	CNY ordinary share
UBS AG	52,959,082	CNY ordinary share
BANK OF COMMUNICATION—E FUND 50 INDEX SECURITIES INVESTMENT FUND	51,875,729	CNY ordinary share
ZHANGJIAGANG FREE TRADE ZONE RIXIANG INTERNATIONAL TRADE CO., LTD.	51,612,776	CNY ordinary share
INTERNATIONAL FINANCE—STANDARD CHARTERED (GOVERNMENT OF SINGAPORE INVESTMENT CORPORATION PTE LTD.	47,747,549	CNY ordinary share
ZHANGJIAGANG HONGDA TRANSPORTATION CO., LTD.	42,414,158	CNY ordinary share

#### Remarks on affiliation, alliance or collusion among the aforementioned top ten shareholders

According to the Medium-term Notes Prospectus published by Jiangsu Shagang Group Co., Ltd. (Shagang Group) in May and November of 2011, Rugao Cahngrong Ore Storage Limited is the joint stock company of the subsidiary controlled by Shagang Group; the shareholders of Zhangjiagang Free Trade Zone Qianxing Investment & Trading Co., Ltd. is Shagang Group"s shareholders; the actual controllers of Zhangjiagang Free Trade Zone Lixin Investment Co., Ltd., and zhangjiagang Free Trade Zone Rixiang International Trade Co., Ltd. are both the major shareholders of Shagang Group. The controlling shareholder of Zhangjiagang Hongda Transportation Co., Ltd. is the shareholder of Shagang Group. The Company is not aware of any connection among or between the top ten shareholders and top ten shareholders of shares without selling restrictions or that they are persons acting in concert as provided for in the Measures for the Administration of Acquisitions by Listed Companies.

Note: During the period from 27 September 2011 to 28 December 2011, Baosteel Group purchased another 157,737,789 shares of the Company through the trading system of the Shanghai Stock Exchange, increasing its holding of the Company's share to 74.8%. On 16 January 2012, Baosteel purchased another 17,570,037 shares of the Company through the same trading system. After the two purchases, the Group owns 13,128,825,267 shares of the Company, accounting for 74.9% of the total issued shares of the Company.

Baosteel Group has planneds to continue purchasing shares of the Company in its own name from the secondary market in the following 12 months since its first increase of shares on 27 September 2011. The accumulated holding percentage shall not exceed 2% of the Company's issued shares (including this increase). Baosteel Group promised that during the share-increase period and the legal time limit, which would not reduce its holding of shares.

The Company published the details of the share increase in China Securities News, Shanghai Securities News and Securities Times, as well as on the website of Shanghai Stock Exchange on 28 September 2011 and 17 January 2012.

# 04 Capital Stock Change and Shareholders

Capital Stock ChangeShareholders and the Actual Controller

#### lolding company and actual controller

#### Holding company

Name	Shanghai Baosteel Group Corporation
Legal representative	Xu Lejiang
Date of incorporation	17 November 1998
Authorized capital	CNY 51,082,620,998.89
Principal businesses and operations	As a governmental authorized investment vehicle and a state-owned holding company, Baosteel Group Corporation mainly deals with state-owned assets within the authorized scope set by the State Council. The Corporation has also been involved in investments in areas of iron & steel manufacturing, metallurgy and mineral products, non-toxic chemicals, electricity, piers, warehousing, transportation, and steel-related business, technological development, technology transfer, technical supporting, and technical management consulting, as well as in areas of import and export businesses approved by the Ministry of Foreign Trade & Economic Cooperation (MOFTEC), domestic and international trading where allowed, and import and export services of products and technology.

#### Actual controller

Baosteel's actual controller is the State-owned Assets Supervision and Administration Commission of the State Council (SASAC).

#### Changes of the holding company and actual controller

The holding company and actual controller remained unchanged in the reporting period.

#### The enterprise property rights and controlling relationship between the Company and its actual controller



#### Other corporate shareholders holding over 10% shares

As of the end of the reporting period, the Company has no other corporate shareholders holding over 10% shares.

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## **Governance Structure**

- Current Directors, Supervisors, and Senior Executives
- Recruitment and Termination of Directors, Supervisors and Senior Executives

Annual Remuneration of Directors, Supervisors and Senior Executives

#### Current Directors, Supervisors, and Senior Executives

Name	Position	Gender	Age	Start of term of office	End of term of office
He Wenbo	Chairman of BOD	М	56	2010.03	2012.04
Ma Guoqiang	Director, President	М	48	2009.04	2012.04
Liu Zhanying	Director	F	56	2010.04	2012.04
Zhao Zhouli	Director	М	55	2011.04	2012.04
Zhu Junsheng	Director	М	51	2011.04	2012.04
Wu Yaowen	Director	М	68	2009.04	2012.04
Buck Pei	Independent Director	М	54	2009.04	2012.04
Katherine Tsang	Independent Director	F	54	2009.04	2012.04
Edward C.Tse	Independent Director	М	55	2009.04	2012.04
Li Li	Chairwoman of the Board of Supervisors	F	58	2009.04	2012.04
Lin An	Supervisor	М	55	2010.04	2012.04
Zhou Guiquan	Supervisor	М	56	2009.04	2012.04
Zhang Pijun	Supervisor	М	53	2009.04	2012.04
Zhu Kebing	Supervisor	М	37	2009.04	2012.04
Li Yongxiang	Vice President	М	51	2009.04	2012.04
Jiang Licheng	Vice President	М	53	2009.04	2012.04
Chen Ying	Vice President, Secretary to the Board	F	40	2009.04	2012.04
Lou Dingbo	Vice President	М	49	2009.04	2012.04
Pang Yuanlin	Vice President	М	48	2009.04	2012.04
Zhou Jianfeng	Vice President	М	48	2009.04	2012.04
Wang Jing	Vice President	F	48	2010.08	2012.04

Notes: The term of office will end at the date when the 2012 Annual Shareholders' Meeting is finished.

#### Recruitment and Termination of Directors, Supervisors and Senior Executives

The Board of Directors received a resignation letter from Mr. Sun Haiming, an independent director, on 2 April 2011. According to the "Provisions of Shanghai Municipality on Curbing Corruption and Upholding Integrity among High-Ranking Leaders with Higher Education'', leaders in the field of higher education should not hold concurrent posts such as enterprise leaders or independent directors in an economic entity either in or outside of the university. Taking into consideration of his current work situation, Mr. Sun Haiming applied for the resignation from the post of independent director of the Company and the post of member of the Audit Committee subordinate to the Board of Directors. But according to the rule No. 104 of the Articles of Company, the Board of Directors is composed of 9 to 15 directors. With Mr. Sun's resignation, the members of the Board would be less than 9, which is the minimum requirement, during a certain period. Therefore, Mr. Sun Haiming had to carry on his duties in accordance with relevant laws, rules and the Articles of Company, until 29 April 2011, when new director candidates would be approved by the General Shareholders' Meeting.

The Company held the eleventh meeting of the Fourth Board of Directors from 29-30 March 2011. Director Mr. Fu Zhongzhe and Director Mr. Dai Zhihao, due to other commitments, applied for resignation from the post of director of the BOD and other posts in the BOD.

As approved by the 2010 General Shareholders' Meeting held on 29 April 2011, Mr. Zhao Zhouli and Mr. Zhu Junsheng were elected as additional members of the Fourth Board of Directors.

Current Directors, Supervisors, and Senior Executives

- Recruitment and Termination of Directors, Supervisors and Senior Executives
- Annual Remuneration of Directors, Supervisors and Senior Executives

#### Annual Remuneration of Directors, Supervisors and Senior Executives

The remunerations of the Directors, Supervisors and Senior Executives for the year 2011 totaled CNY 16,274,800 (pre-tax, the same in the following sheet).

				(CNY Ten Thousand)
Name	Position	Compensation from share-holders or affiliated companies	Remuneration from the Company in reporting period (pre-tax)	Non-yearly remuneration from the Company
He Wenbo	Chairman of the Board of Directors	Yes	_	
Ma Guoqiang	Director, President	No	150.8	
Liu Zhanying	Director	Yes	_	
Zhao Zhouli	Director	Yes	_	
Zhu Junsheng	Director	No	135.1	
Wu Yaowen	Director	No	2.5 (Note I)	
Buck Pei	Independent Director	No	35	
Katherine Tsang	Independent Director	No	35	
Edward Tse	Independent Director	No	35	
Li Li	Chairperson of the Board of Supervisors	No	35	
Lin An	Supervisor	No	123.5	
Zhou Guiquan	Supervisor	Yes	_	
Zhang Pijun	Supervisor	No	124.3	
Zhu Kebing	Supervisor	Yes	_	
Li Yongxiang	Vice President	No	33.	
Jiang Licheng	Vice President	No	36.	
Chen Ying	Vice President, Secretary of the Board of Directors	No	33.	
Lou Dingbo	Vice President	No	34.	
Pang Yuanlin	Vice President	No	34.	
Zhou Jianfeng	Vice President	No	33.	
Wang Jing	Vice President	No	33.	
Sun Haiming	Retired Independent Director	No	14.58	2011.01-2011.05
Dai Zhihao	Retired Director	Yes	_	
Fu Zhongzhe	Retired Director	Yes	_	
Total			1627.48	

Note: "Compensation from share-holders or affiliated companies" refers to whether the Director or Supervisor or any other senior executive is paid by a shareholder or an affiliated company.

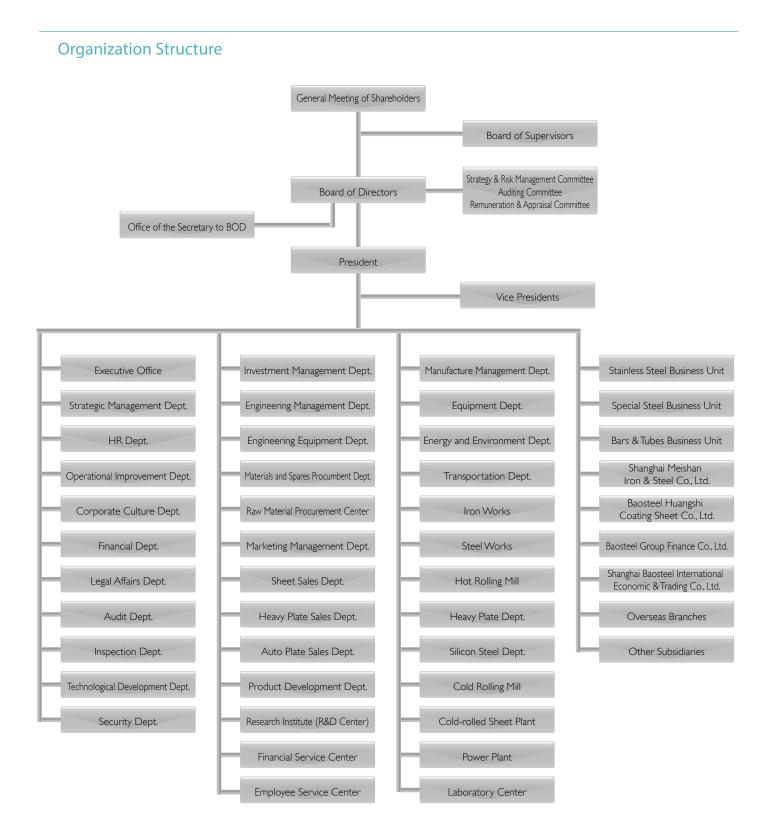
Note 1: According to the "Interim Measures for the Remuneration and Treatment of the Board of Directors of a Central Enterprise in the Pilot Program on the Board of Directors", Director Wu Yaowen stopped receiving his yearly pension from Baosteel Co., Ltd. from January 2010. Instead, he will be paid meeting allowance according to the standard set by the State-owned Assets Supervision and Administration Commission of the State Council.

When the directors, supervisors, and senior executives attend the Directors'' Meetings, Supervisors' Meetings and the Shareholders' Meetings, the Company will cover their traveling and accommodation expenses.

05

# 06 Management Improvement

 Organization Structure Management Innovation



# 06 Management Improvement

Organization Structure Management Innovation

#### **Management Innovation**

#### System and risk control

The Company responded actively to the requirements of Shanghai. According to the national *Basic Standard for Enterprise Internal Control and the Guide to Enterprise Internal Control* issued by the five ministries and committees, the Company took the lead in carrying out the pilot project of standardized internal control. An overall planning is made regarding the company system, operation system, and supervision system to better meet the requirements of national internal control and internal audit. Such planning promoted the merging of an all-rounded risk management with the system management, raising the awareness of risk control in the Company's systematic operation.

The Company continuously pushed forward the legal compliance evaluation in various fields to enforce the compliance of energy management based on relevant laws and regulations. It organized the applicability and compliance of safety regulations, integrated relevant requirements into daily review and evaluation, perfected the risk source recognition method, and designed risk control measures for major aspects.

The Company took the Energy Efficiency Factor as an important goal for energy saving, promoted the standard management of the shutdown energy management, and further standardized the procurement control of products on the national list of eliminating the outdated products. By promoting clean production and renovating the environment of the production area, the Company quickly elevated its energy management.

Since 2008, the Company has been treating the environmental risk as one of the major risk research subjects, enhancing the site control and perfecting the environmental accident treatment mechanism. In 2011, the Company put forward the environmental risk management concept featuring priority management, classification management, emission source treatment, and systematic response. Coupled with the environmental informationization and the environmental emergency system, the Company endeavored to form a PDCA cycle covering the following aspects: quantified risk assessment, implementation measures of the classification management, as well as supervision and continuous improvement.

#### Information construction

The Company implemented the second phase project of comprehensive use of resources, constructed the energy gas control information system, and promoted energy saving, emission reduction and environmental management.

The Company constructed the information safety comprehensive management system, and built the information system safety risk evaluation platform. The following key processes were included in the systematic management: information system asset registration, value appraisal, risk appraisal, and risk control evaluation.

The Company promoted the technique-sharing platform in the entire company.

#### lenhancing site management

Sticking to the idea of "efficiency and persistence", the Company continuously strengthened the management at the base level. The Six Sigma Lean operation aims at finding fundamental solutions to achieve a continuously increase of project effectiveness. 301 Six Sigma Lean operation projects were carried out in 2011.

Self-management takes hold of the base level, and lays emphasis on site improvement. In 2011, 66 JK Group won the title of "Excellency in Quality Management and Trustworthy Team" from the country, the metallurgy industry, and Shanghai City.





# **07** Anti-corruption



Insisting on the governance of root causes and symptoms of corruption, Baosteel has adopted a comprehensive control, disciplining and prevention, and prevention-oriented policy. It adheres to the idea of "centered ond core tasks, applying to the management, integrating into the process, and exerting its function" and implements measures of systematic enhancement, project-based management, and "PDCA & Earnest". The Company pays great attention to education, strengthens restrictions of system and intensified supervision, and actively carries out the corruption risk recognition and risk analysis, prevention education, efficiency supervision, and prosecution. It aims at promoting the simultaneous progress of the anti-corruption work on the one hand, and the Company's reform and business on the other, facilitating the interaction and coordinated development of the said aspects.

According to the five-year planning of Baosteel's disciplining and prevention system, it furthered the construction of five major mechanisms including education, system, supervision, cash investigation and root cause control. It stepped up the efforts to assign the responsibilities to specific units and personnel, and carried out key anti-corruption work in earnest. The Company identified key tasks in line with 21 key projects in six categories to enhance the anti-corruption system and promote probity. The measures were carefully implemented through improving the work mechanism and exercising project-based management. By taking such measures as performance evaluation, disciplining by the organization, and transfer from the post, the Company maintained an honest and pure production environment.

In order to continuously strengthen the sense of responsibility and the understanding of the overall situation, it organized various units to carry out the meeting of the Party ethos construction and anticorruption, meetings of the Party committee, and meetings of the Discipline committee. It carried out integrity education, caution education and demonstration education and informative education of the post integrity risks. It compiled 192 simulated cases. It constructed a simulated case base, carried out the prevention education according to the idea of "simple, easy, focused, and effective". Attention was paid to the classification and various forms of education, were taken to achieve effectiveness of the education.

Focusing on the business procedures, it carried out the "recognition and analysis, prevention and response" work as probity risks. In 2011, the units, through identifying the business procedures, pinned down the major direction and key process, and analyzed the probity risk point. For people in those crucial posts that were faced with probity risks, prevention measures were taken including "informative education, optimization of the system, and efficiency supervision. The Company perfected the multi-channel supervision mechanism, and further deepened the carder ethos construction. People at the crucial posts were advised of making public probity promises to enable effective supervision of the leadership. Measures were taken to urge the implementation of responsibilities at every level through the practice of "the manager shall be held accountable for the problems". It standardized the behavior by applying rules and business procedures, promoted the demonstration work of the managers, strictly carried out the "Three Majors and one Large" [Note 1] planning system, and continued to improve the internal control level.

According to the requirements of the Group, the Company continued to deepen the efficiency supervision by reviewing the risk points and weakness discovered from the recognition and analysis of business procedure and probity risks, and by focusing on such areas as cost improvement, environmental management, and asset disposal. As for the engineering construction, special treatment was given in response to major problems from within. Special supervision on "special treatment for small treasuries" was carried out, to examine potential risks in production and business management and financial and asset management. It endeavored to perfect the internal control system by standardizing the legal representative governance structure, and examining the business procedures.

Emphases were laid on the investigation of certain reports. It conducted serious prosecution for low breaching activities, and built up the linkage between reporting and investigation. It adheres to the 24-word guidance of "clear fact, authentic proof, accurate gualification, appropriate treatment, complete procedure, and full legal process" in treating the people involved. It exercises a quick response and strict disciplining. In 2011, the Company also carried out the tendency analysis of the reported issues, and endeavored to enhance the ability of discovering problems in a timely manner. Through indepth analysis, the Company pays more attention to treating the corruption sources, risk prevention, and to the system construction, aiming at fighting against the corruption from the source of corruption.

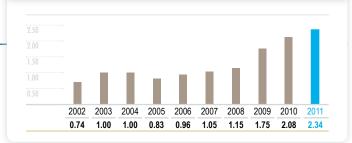
The Company promoted the transparent management under "Sunlight", intensified the monitoring of various fields including sales, procurement, and engineering project construction and enforced the online supervision for online transactions. Coupled with the activity of "Double Excellence" [Note 2] in the engineering projects, the Company furthered the project-based treatment and continued to construct projects under the "Sunlight". More efforts were made into supervising the public bidding and procurement, control commercial bribery via normalizing operation, and purifying the business environment. As for suppliers engaged in unfair competition activities in businesses with Baosteel, the Company would release lists of no-entry individuals and no-trading companies inside the Company regularly.

Note 1 Three Majors and one Large-scale: Major decisions, major appointment and removal of personnel, major project arrangement and large-scale capital operation.

# 08

# Innovation Development

- Improving the Framework of the Technological Innovation System
- Furthering Technology Innovation to Sustain Environmental Management
- Furthering the Implementation of Intellectual Property (IP) Strategy Þ b
- Building a Knowledge-Based Enterprise b
- Continuously Promoting Technical Integration Þ
- Industry-Academy-Research Strategic Cooperation





In 2011, the R&D investment rate, the new product sales rate, and the environmentally-friendly new product rate reached 2.34%, 20.58% and 88.09% respectively. The patent applications reached 1,220, of which 40% are patents of invention. The increased business benefits directly generated by research totaled CNY 1.733 billion, the business benefits brought by technological promotion totaled CNY 199 million, and the contracted amount of technological trading totaled CNY 34.62 million. Furthermore, because of the years of accumulation of knowledge management and the systematic implementation of the technical sharing platform BKM, the Company won China's most Admired knowledge-based enterprise awards (CHINA MAKE)" and the individual prize of "Best Knowledge and Technology Application". The project of "R&D on process and complete set of equipment for high speed pickling and rolling of ultra-thin steel strip" was awarded the only special prize of the 2011 China Metallurgical Science and Technology Award. The project of "R&D on integrated technology and equipment of super high strength steel strip" won the first prize of the Shanghai Technology Progress.

#### Improving the Framework of the Technological Innovation System

Focusing on the demands from major industries such as auto, shipping and marine platforms, clean power generation, aviation and spaceflight, constructional machinery, and transportation, The Company conducted a systematic categorization of newly developed products, and formed 23 "product trees" encompassing such big categories as thin carbon steel, heavy carbon steel, stainless steel, special steel and special alloy, as well as tubes and long materials. Systematic planning and implementation of 62 research programs of user's technology were initiated. The "Early Intervention" service mode of auto plates was successful. The Company spread this user technology research experience to other major products and achieved primary results in such fields as silicon steel, tinplate, stainless steel, and special steel.

Following the "Twelfth Five-year" planning and the industry development planning, the Company realized a technical breakthrough and led in techniques in major areas. With the manager responsibility mechanism for large projects, the Company carried out 26 field-based research programs including tinning product technique, silicon steel product technique, environmental protection coating technique, sintering gas cycle technique, and laser material filling technique. As a result, the integrated technical development was strengthened.

#### Furthering Technology Innovation to Sustain Environmental Management

Attaching great importance to the concept of environmental management, the Company integrated technological innovation into environmental management and formed a clear idea of technology-driven environmental management. The digital platform and the appraisal system for the Life Cycle Assessment (LCA) of major products and production processes were primarily established in 2011. The product R&D has gradually changed from a traditional mode to an ecological mode, with a view to eventually realize green production featuring a low energy consumption, a low emission and low costs. The Company also took the lead in advocating the idea of green procurement and green utilization of steel products, and made breakthroughs in environmentally-friendly technologies. Guided by the technology-driven environmental management, the Company has formed 10 major capacities features LCA quantified evaluation and so on. The LCA database has collected accumulative LCA results in the last five years concerning 95 categories of iron and steel products and 14 resource products. The Company has formed the Baosteel LCA methodology and the LCA cost analysis methodology.

#### Furthering the Implementation of Intellectual Property (IP) Strategy

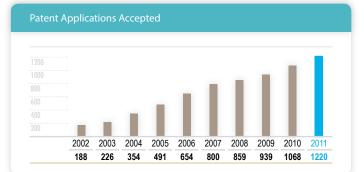
The Company enhanced the management of IP. In 2011, the Company explored the analysis work mechanism of key products and technology patents. It set up a virtual team to apply for patents for self-developed technical innovation results to protect its interests and forge a competitive power. It perfected the IP management system, made a thorough review of related management procedures and standards, and revised related items in accordance with the requirement of internal control and with the actual operation and department changes over the past two years.

The Company sped up the strategic planning of international intellectual property. While implementing the international business strategy, the Company paid more attention to intellectual property at the global stage. It commenced the international planning of IP management for electrical steel overseas investment and "golden apple" teams. In 2011, the Company filed 20 applications for international patents via PCT, which accounted for 69% of the total international patents over the previous years (ie. 29 pieces).

Planning for field-based technical property. It formed "Patent Cluster" property protection in the technologies of the central testing unit, silicon steel products, slag treatment, and suspending kiln. If also filed applications for trademark registration regarding the third generation of high strength steel technology with independent IP rights. It carried out an in-depth IP right planning mode of area integration knowledge, adopted the BeS platform to accelerate the module construction of "area integration technology", arranged the current patents and technical know-how, and formed 43 integrated techniques such as the Guide for Energy Saving in Hot Processing.

# 2011 One-sentence Story

- On the 11th World IP Rights Day, Baosteel invited Hong Yongqing, Deputy Dean of the Shanghai Knowledge Bureau and Hong delivered a theme speech on "IP Rights and Enterprise's Competitiveness''
- The Conpamy established a product business team of the polish-up sub-plant of the Cold Rolling Plant of Baosteel Co., Ltd and won the title of "2011 Shanghai Team Creation with Characteristics".
- Gao Yuqiang, an advanced examiner of the Equipment Management Office of Baosteel's Cold Rolling Plant, and Chu Bing, a technical expert from the Ironmaking Plant of the Stainless Steel Business Unit, were elected the 2008-2010 Shanghai Top, 10 Worker Inventors.



#### Building a Knowledge-Based Enterprise

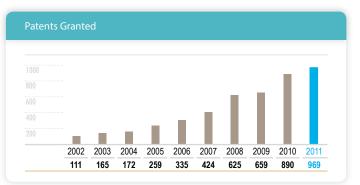
In 2011, based on the six-year's planning of knowledge management, and following the principle of "overall planning, implementation by steps, focusing on common features, and starting pilot projects", the Company focused on knowledge application, and tried to build Baosteel as one of the most respected knowledge-based enterprises via the benchmarking international MAKE award.

The Company actively explored the range of application of the technical sharing platform. The technical sharing platform was put to use for the whole carbon steel system. The Company established a multi-knowledge database containing 210 technical categories and 34 document properties, a benchmarking database of 144 indicators, and an expert base consisting of 652 experts, and created 419 communities. The annual entries in the knowledge base amounted to more than 130,000. It also complied and revised the "norm of issuance, and quality standard for technical sharing platform knowledge (Trial version2.0)," aiming at standardizing knowledge accumulation and sharing.

Building the community team as the starting point, the Company integrated knowledge management to routine work procedures, for the purpose of promoting the interaction between knowledge management and business procedures, and let the knowledge management serve for the long-term profit of the enterprise. It also aimed at raising the employees' interest and attention on knowledge management, and providing a convenient platform for knowledge exchange and sharing.

#### **Continuously Promoting Technical Integration**

It completed the technical integration of 13 categories of products such as the beltline technology for hot continuous rolled steel plates and strips for welding gas bottle, the beltline technology for the 60-kg high strength steel, the beltline manufacturing technology for concealed steel strips, and the technology of 300 series of stainless steel coils. Centering on the core technical chain, it laid emphasis on the key technical integration of hot rolling and cold rolling. It completed 12 projects of technical integration by focusing on the product property control, including the surface quality control of the steel strip, control of the shape, thickness, and width of the steel strip, and the product property control in steel strip temperature, and steel strip continuous anneal technique. Based on the energy control center; it integrated 6 projects of major energy and environmental techniques, including technical control of the integration of cycled water control of the steel-making system, large-scale blast furnace fan control system renovation self-integration, and nationalized technical integration, and large-scale integration and operational technique integration.



#### Industry-Academy-Research Strategic Cooperation

In recent years, Baosteel has strengthened the cooperation with domestic universities such as University of Science & Technology Beijing and Shanghai Jiao Tong University. This has produced a positive effect on the technological innovation of Baosteel. In 2011, based on the experience of the major cooperation in the previous round, the Company further focused on the cooperation fields, compiled a guide to cooperation, and conducted dynamic management of the cooperation projects. By giving a full play to the strength of each university, motivating the use of key national labs, national technological centers, and the research platforms of various universities, the Company endeavored to make major technological innovation and breakthroughs, and also enhance its competitiveness.

In order to meet the demand of technical innovation, continuously perfect the mechanism of international cooperation, and establish efficient international scientific cooperation platforms, The Company optimized the management of international scientific cooperation projects. By enforcing the project mechanism of "driven by needs, making collective planning and linking projects", the Company focused on the technical innovation demand of new products, new procedures, new technologies and new equipment, and conducted standardized and systematic management. In 2011, the Company initiated the international scientific cooperation with the University of Leeds -(UK), University of Illinois (USA), and the Welding Institute (UK) in the following areas: energy and environment protection, material development, surface technology and metallurgic techniques. Such cooperation has expanded the source of technology and knowledge for Company's technological innovation, and formed a wide knowledge exchange network both within and outside of the Company.

MAKE Award: The MAKE (The Most Admired Knowledge Enterprise) Award, founded in 1998, aims to recognize excellency in knowledge management of knowledge-based organizations. It was first conducted in Europe, North America and Asia. The accrediting body organizes expert review groups which are composed of managers of Fortune 500 companies and 300 famous knowledge management experts, who carry out rigorous assessment on selected enterprises. The enterprises achieving success via systematic use of knowledge are selected as pioneering representatives of the knowledge-based economy era.

There are eight major subject fields in the evaluation of the MAKE Award: cultivating a knowledgedriven corporate culture, training of knowledge-based employees at the high managerial level, exploring and selling of knowledge-based products/services, optimization of corporate intellectual capital, creating a cooperative knowledge-sharing environment, building a knowledge-based organization structure, value delivery based on the knowledge of clients and other interested parties, and transferring the corporate knowledge to value of shareholders or related interested parties.

- → In the 5th Representatives Meeting of the Shanghai Technicians Association, Kong Liming, a Baosteel construction worker, national labor model and the Shanghai People's Congress Representative was elected Deputy President of the association. Han Mingming, a Baosteel employee, was elected a member of the Council.
- → Ji Yilong, an employee of Meisteel, won the title of first Nanjing Top 10 "Employee Invention Star", and "May 1st Labor Award".
- → Zhang Zhonghua, the chief researcher of Baosteel Research Institute was honored as "Shanghai Young Science and Technology Talent".
- ightarrow Five Baosteel projects won the 2010 Shanghai Science and Technology Award.

- → Five of Baosteel's achievements won the 2011 China Metallurgy Science and Technology Award, and recived the only special prize.
- → 98 of Baosteel's projects won golden, silver, and bronze prizes respectively on the Twelfth National Invention Exhibition.
- → Four foreign experts won the 2011 Baosteel Cooperation Contribution Award: "Best cooperation Award" to Hosokai Seiji, Deputy General Manager of BNA dispatched by Nippon Steel Corporation, and Yoshinaga Masaru, Deputy Manager of the designing department of Bao-Ling Electric Company dispatched by Toshiba Mitsubishi Electric Corporation. "Best SV Award" to Bertrand Briche, Project Manager of Fives Engineering, and "Outstanding Contribution Award" to Johann Werner Schönen, site representative of the Yanbao Project from SMS Meer GmbH.

- Wide Exchange with its Counterparts
- Support to the World Steel Association



The economic commission delegation of the World Steel Association visited Baostee

#### Wide Exchange with its Counterparts

In 2011, Baosteel attended the technical exchange activities organized by the World Steel Association, the German Steel Association, the Japanese Steel Association, the Nippon Steel Corporation and JFE Steel Corporation, Kobe University, POSCO Steel Corporation, Taiwan Chinasteel, and domestic steel enterprises, academic organizations and universities.

Baosteel has formed regular technical exchanges and cooperation with Taiwan Chinasteel, POSCO Steel Corporation, and the Japanese Steel Association. In February, Baosteel's technical exchange group visited Taiwan Chinasteel. The two parties had an open and in-depth exchange in such areas as energy and environmental protection and benchmarking, and achieved a lot from the communication. In September, Baosteel's technical exchange group visited POSCO, Nippon Steel Corporation, and JFE, conducting exchanges over areas including techniques and management regarding energy saving and emission reduction, and CO2 emission reduction technology R&D and future development.

In 2011, Baosteel also carried out technical exchanges with many domestic steel enterprises and related research institutes.



Baosteel technical exchange group visited Taiwan Chinasteel



Baosteel's technical exchange group and POSCO's technical personnel and administrative staff exchanged



Baosteel's technical exchange group and NSC's technical personnel and administrative staff exchanged

#### Support to the World Steel Association

In 2011, the Company strengthened the virtual team of "worldsteel/ISSF-Baosteel professional committees", adjusted and optimized the directors of various professional committees, liaison representatives and sponsoring unit of the committees.

As a member unit of the World Steel Association, Baosteel has been actively taking part in the activities organized by its environmental technology committee, environmental policy committee, and sustainability committee. Through the exchange with the World Steel Association, Baosteel follows closely the industry policy change and dynamics of various international environmental organizations, and works together with other parties to find solutions for current and potential environmental problems.

In 2011, Baosteel became the chair-unit of the "Clean Atmosphere Project" of the World Steel Association. This project focused on the technical exchange on powder dust pollution monitoring and control, application results, laws and policies, and management practices. In March 2011, Baosteel chaired the Clean Atmosphere Project Launching Meeting in Shanghai. A core professional team consisting of over 20 experts was formed. The experts were from these renowned steel enterprises at home and abroad: Arcelor Mittal, ThyssenKrupp, POSCO, Tata Steel, Hyundai Steel, Rautaruukki, Angang Steel, Wuhan Steel, and Shougang Group. The project invited experts to provide guidance on the powder dust pollution control technology and industry environment improvement. Currently, 24 famous steel enterprises from 15 countries have taken part in this project, and 49 cases of powder dust monitoring and control in the steel plants have been collected over the world.

The Word Steel Association has invited Baosteel to be the chair-unit of "the China 2020 Project", which aims at understanding the prospect of China's steel industry in the next ten years. The project focuses on the influence of China's steel industry on the world's steel industry, the dynamics and development of China's steel industry, analyzes the important factors affecting China's steel industry, and establishes close relations and in-depth exchanges with China's steel industry.

In 2011, Baosteel presided at the annual work conference of SUSCO. The parties that attended the conference included steel enterprises from Germany, UK, Brazil, Japan, South Korea, and India. Chinese steel enterprises including Taiwan Chinasteel, Angang Steel, Wuhan Steel, and Baosteel. Over 20 experts from the World Steel Association, the China Steel Association, and the Chinese Society for Metals also attended the meeting. Participants held theme discussions on the sustainable development of the steel industry, conducted investigation into the current projects organized by SUSCO, including the product LCA project, steel for wind power, index and action plan for sustainable development. A Baosteel technique exchange special session was also held. During the meeting, participants paid a visit to Baosteel production sites, and they were deeply impressed with Baosteel's achievement in sustainable management.

# Harmonious Development

Profile of Employees
 Employees' Rights and Benefits
 Growth of Employees
 Employee Benefit and Social Security
 Occupational Health and Safety

#### **Profile of Employees**

At the end of 2011, the Company had 43,041 employees in total, of which 26,341 are operational and maintenance staff members, 12,671 are technical staff members, and 4,029 are managing staff members.

There are 28,493 persons, or 66.2% of the employees, with an academic degree above associate degree.

7,693 persons, or 46.1% of the total of technical staff members and managing staff members have a title of above mid-level technical certification.

15,703 persons, or 59.6% of the operational and maintenance staff members, have a work certificate above advanced-worker level.

The employees of the Company are mainly from Shanghai, Jiangsu, Zhejiang, Shandong, Hubei and nearby regions. There are also foreign nationals employed by the Company.

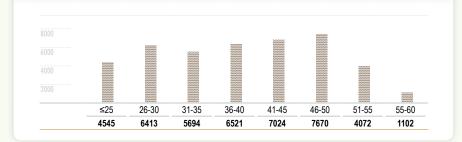
The Company provides equal job opportunities to people disregarding their gender and age. Due to the characteristics of the steel industry, the proportion of male and female employees was 7.1:1. The female employees mainly hold managing and technical business posts.

Our workforce is young and vigorous. The age structure is rational, with the majority (ie. 70.2% of all employees) under the age of 45.





#### Employees Age Structure Distribution (Persons)



In 2011, 535 employees, or 1.24% of all employees, resigned from the Company. The Company fully respects the personal choice of its employees. Each resigning employee was interviewed individually to identify reasons for resignation, and resignation formalities were handled without any delay for them.

# Employees' Rights and Benefits

Employees' Rights and Benefits

The Company has set a good and consistent example of abiding by the *Employment Law*, the *Labor Contract Law*, the *Trade Union Law*, the *Social Insurance Law*, as well as other laws and regulations. The Company is also self-disciplined. It cares for the workers and their occupation, respects their rights and protects their benefits.

The Company implemented an employee labor contract system, a collective agreement system and an employee congress system in earnest. Through improving the labor's union, a labor dispute mediation system, supervision on labor laws and supervision and inspection of labor protection, the Company has brought the Employee Congress System to its full play, which in turn helps to maintain a stable and harmonious environment for the enterprise.

# Adhering to the Principle of Equal Opportunity

The Company always adheres to the principle of "equal opportunity", offers equal pay to men and women for equal work, and promotes equal treatment in all policies and planning without any discrimination in respect of gender; age, race, religion and political orientation. In the meantime, people returning from overseas studies are encouraged to join Baosteel. Their information has been collected and specific attractive packages for highlevel talents have been developed.

#### Care for Special Groups

The Company pays particular attention to employees from ethnic minorities, who are granted additional allowances and, in some cases, appointed to important posts.

The Company pays due attention to special groups. For example, the Company gives consideration to the health needs of female employees by implementing policies on leave entitlements of female employees in pregnancy and lactation. Special subsidies are given to employees with difficulties.



# 10 Harmonious Development

Profile of Employees Employees' Rights and Benefits Growth of Employees

- Employee Benefit and Social Security
- Occupational Health and Safety

#### **Growth of Employees**

#### Continuous Improvement in Employee Skills

The Company offers employees training opportunities to hone their skills and enhance their career development. In 2011, 143,823 persons were trained in 3,229 programs. 85 hours of training was provided per capita. Years of education received by employees increased over years. By the end of the reporting period, employees received 14.9 years of education on average.

#### Enhancing the "Technical Power" of technical staff

The Company laid great emphasis on training programs for high-level technical staff, including the "Gold Apple Team Study," and "Close to academics, close to users", to cultivate technical staff who excel in technical innovation, R&D and challenging technical solutions. For the top-level technical talents, the Company provided them with the Top 10 thematic learning programs, and cross-region, cross-unit training programs to sharpen their skills and enhance their ability of solving problems. New technical staff received training programs to grasp basic knowledge and basic methods and solidify their knowledge foundation. In the meantime, it continued to push forward the "whole-process engineer training program," and the "technical power training camp program" to realize an overall upgrading of technical solution and innovation capacity.

#### Focusing on operational ability of the position to promote the cultivation of talents with skills

Focusing on enhancing the practical skills, the Company furthered the "Skill Training Plan"<sup>[Note 1]</sup>. Based on the equipment examiners" quality, the Company carried out skill training for equipment examiners through the following five modules: "professional quality, professional examining skills, equipment management theory, real experience of maintenance, and position expansion". Training camps were offered to advanced talents through the following four modules: "professional accomplishment and cultivation, TRIZ<sup>[Note 2]</sup> basic and application, teaching by famous experts and practice, and ability exploration and exchange".

#### Upgrading the professional quality by focusing on professionalization and internationalization

The Company made efforts to enhance the overall "professional level" of functional staff from the following three aspects: professional behavior, professional skills, and professional accomplishment.

English saloons themed on business English and professional English were carried out as well. The Company planned and implemented the internal communication ability upgrading program to enhance the employees' ability of internationalization.

# Employee Benefit and Social Security

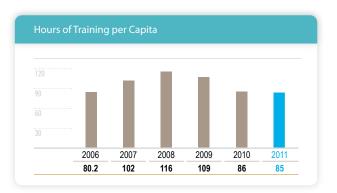
#### Providing Competitive Wages and Benefits

Oriented toward the position value, the Company constructed a wage and benefit system that is "externally competitive and internally fair". The Company ensures that wages of employees are competitive in the industry and in the local area, and provides fair wages and benefits based on performance and competency of employees, thereby rewarding employees for their contributions to the Company, attracting and retaining competent people needed by the strategic development of the Company, creating a link between income and performance and achieving a harmonious development of both the employees and the Company.

#### Putting into practice the performance-oriented payment-incentive policy

Based on its trial operation in the headquarters, the Company perfected the "Implementation Rules of Employee Position Accumulative System" in 2011. In view of the implementation of the accumulative system among young employees, it drew out "Analytical Report on the Employee Position Accumulative System's Impact on the Development of Young Employees". 7 units apart from the Headquarters have approved through the Meeting of Employee Representatives and officially implemented the Rules of Employee Position Accumulative System. Another 3 units are making optimized plan by referring to the series of documents, materials, and practice on employee position accumulative system of the Headquarters.

- Note 1. "Skill Training Plan": Based on the practical skills desired for the operation and maintenance posts, the Company set the examination items and criteria in terms of the four aspects including basic quality, skill extension, post knowledge, and post operation. It transferred the employee's operational skills into quantified indicators and carried out continuous training to raise the operation accuracy by the maintenance employees.
- Note 2. TRIZ (Russia: теории решения изобретательских задач), which derives from the English transliteration (Teoriya Resheniya Izobreatatelskikh Zadatc), means Theory of the Solution of Inventive Problems. It is a knowledge-based and human-oriented systematic methodology of inventive problems.



2009

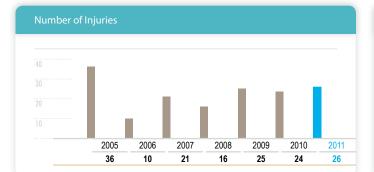
0.33

2011

0.29

2010

0.29



# Frequency of Injuries (number of injured persons per million working hours)

2007

0.25

2008

0.18

# Well-Developed Insurance and Benefits System

The Company carries out its corporate social responsibilities and protects legitimate rights and benefits of employees according to the laws, pays social contributions at required times and in required amounts, including basic pension insurance, medical insurance, unemployment insurance, work-related injury insurance, maternity insurance and housing provident fund. These address employees' concerns of retirement and accidents. In addition, Baosteel provides physical checkups, corporate pension and other benefits.

In 2011, all units of Baosteel Co., Ltd. in Shanghai established a supplementary housing reserve system, with differentiated payment rates, giving more support to employees under 35 years old. The units under the Company outside of Shanghai carried out equivalent management in accordance with their local policies.

To further reflect the fairness of payment distribution and continuously motivate the frontline shift workers, the Company issued "Guiding Opinion Regarding the Allowance Adjustment for Employees Taking Middle and Night Shifts". The Company increased the allowance for employees taking middle and night shifts in the headquarters. Other business units and subsidiaries, in response to the "Opinion", also increased equivalent allowance for employees.

Employees are entitled to take leaves as regulated by the state law and the Company's rules. They also have the legal right for public holidays, paid annual leave, family visit vacation, and other holidays. When employees work overtime and are on holiday, the payment would be made in accordance with the national and corporate rules.



In 2011, the Company perfected the safety and experience training center and enhanced the full range of safety training. By pushing forward the establishment of workplace safety standards, it tested the effectiveness of the operation of the occupational health and safety system. It carried out joint inspection to give emphasis to the special treatment of safety in major areas. Systematic check was accomplished to ensure safety conformity of various construction projects. It continued to be creative in occupational health management modes, stepped up the backup of hazardous chemical management and hazardous sources and improved the emergency management system to ensure a quick and effective response to accidents. In-depth check and renovation were completed to mitigate or reduce risks and hazards and enhance the safety guarantee. It also promoted the quality enhancement of the human resources in the safety system, and enforced the firefighting safety management. By urging the subsidiaries to fulfill major responsibilities for implementing workplace safety policies and practices, the Company improved its overall management level of workplace safety.

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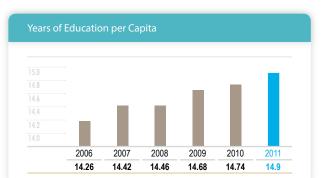
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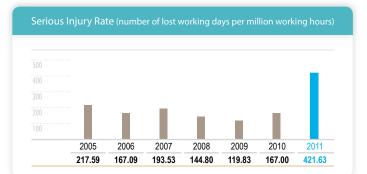
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#### Effectiveness of the safety training

For new employees, the Company offered safety and experience training; for managerial staff, it offered enhancement seminars; for team leaders, it provided interactive partnered training; and for front-line employees, it carried out team training featuring independent self-management.

- (1) In 2011, Baosteel led the domestic metallurgy industry to build the first safety training center Baosteel Workplace Safetyand Experience Training Center, which provided a training manual of Safety and Experience Training. In the center, trainees can observe, participate in, and experience various accidents such as injuries caused by machinery, falls from high points, and electrocution. After the training, employees would gain a deeper understanding of the danger and subsequences of various accidents. Through activities in a simulated environment, the trainees gained real experience. They would also carry out discussions among themselves regarding lessons learned. The trainer will then explain the correct operation and the safe technology. Finally, the trainees will reflect and learn the correct operation and gain knowledge of workplace safety. The center has 5 real-experience training rooms and offers 30 training programs, with a training capacity of 50 person per day and 250 persons per week.
- (2) To achieve best results of the safety training, the Company collected and sorted out previous accidents in Baosteel and established a media center for accident analysis on the intranet themed on "building a firewall in our minds to ensure a safe net for life". This media center was launched on the e-Learning platform (http://learn.edu.baosteel.com/). All employees have access to this platform, which is very convenient for all teams at the grass-root level to gain knowledge of safety. The media center has ten exhibition areas, including electrocution, injury by machinery, injury by vehicle, fire, drowning, burning, scalding, hit by objects, falls from high points, injury by crane, poisoning, and choking. All accidents consist of three study steps including case replay, cause analysis and solution. The animated cartoons help employees better understand the case, causes and the solutions.





# 10 Harmonious Development

Profile of Employees Employees' Rights and Benefits Growth of Employees Employee Benefit and Social Security

Occupational Health and Safety

#### Pushing forward the standardization of a safe production

The State Administration of Workplace Safety has listed Baosteel as one of the 22 pioneering model enterprises for standardizing workplace safety. All units should carry out self-examination and improvement by following the Basic Norm for Standardization of Enterprise Workplace Safety and by carrying out benchmark of the six standards of iron-making, coking, sintering, steel-making, steel rolling and coal gas. This also helps check the effectiveness of the occupational health and safety management system operation, and enhance the management level. Baosteel, as a whole, is now qualified for the appraisal of A-level enterprise with standardized workplace safety.

#### Constructing the joined inspection system

On the first Thursday of every month, the leaders for workplace safety of various units would lead their functional department to carry out joint safety inspections on the production site, and the safety performance of various units are listed in the safety performance of the accountable persons. During the inspection, they stick to PDCA+Earnest, carry out confirmation, pausing, observation, discussion, recording and feedback conversation with the site managers and staff. Emphases were laid on the safety management service at the grass-root level, and to the capacity of solving problems on site. These efforts have achieved good results.

#### Promoting the three-year improvement plan for human resources of the workplace safety system

The Company has been improving the capacity of professionalization of workplace safety management. The Company issued a guiding opinion for the enhancement of the human resources of the workplace safety system. By collective training and awarding, the Company offers training to staff of the safety system, and encourages the front-line managers to obtain the qualification of Health and Safety Engineering. It facilitates internal transfers and position shifts of the employees. Such transfers and position shifts can help improve the capabilities of the safety system employees while promoting knowledge sharing and exchange.

# Setting up a public mailbox for safety management

To further promote the workplace safety management, and give a full play to employees' passion and wisdom, the Company set up a public mailbox: anquan@baosteel.com. Through the mailbox, employees can contact the leadership of the Company directly to express their views, make suggestion, raise complaints, and report cases. In the meantime, to encourage employee's participation in the workplace safety management and avoid accidents proactively, the Company provides special awards to those employees who take an active part in the workplace safety management and provide valuable opinions and suggestions.

# Creative occupational health and management mode

The Company supervises all units to standardize the occupational health management, optimizes the procedure of employee physical health examination, and enhances the efficiency of the examination; and promotes the area-based management for the occupational hazard in the plant area under the direct leadership of the Company.

Baosteel pays great attention to preventing occupational illnesses. It has long been devoted to reducing and eliminating occupational hazards by enforcing occupational health management and adopting various measures. In 2011, the Shanghai Municipal Health Bureau issued to Baosteel "Shanghai Occupational Health Service Certification", and Baosteel established the Center for Occupational Health Inspection and Evaluation.

Baosteel in 2006 initiated an "Employee Health Plan". All employees with Health IC card can join over 10 designated gyms. In 2011, an Internet service platform for Baosteel employees' health plans featuring the integration of service, settlement, and management was launched (http:// www.51hlife.com/ or http://10.66.9.223/). Baosteel employees in Shanghai can log onto the website(s) to check their Health IC card status freely.



- Delegation of the Safety and Health Committee of the Labor Union of Taiwan Chinasteel visited Baosteel.
- Meisteel and Meishan Company won the title of "Safe Enterprise" in Jiangsu.
- Baosteel veteran activity room in the east district was put into use.
- → Meisteel built a gym for employees, and the Meishan Gym was officially open.
- → Caring for employees: In the iron-making plant, the employees who operate the material filling machine in the raw material sub-plant have to be seated for a long time and are easy to have fatigue in their lower back. To address this problem, a cushion was placed to the large vehicle seat, which was welcomed by the employees.
- On the 2 I st national fire-fighting day, the transportation department of the company and the Public Security Bureau Baoshan Branch jointly carried out the fire-fighting and rescue drill.



The iron-making plant directly under the Company uses the cartoon "Tietie" to tell stories about people. Other media such as the intranet, bulletin boards, printed materials were used to cultivate a good habit among the employees and promote the concept of pursuing for truth, virtue and beauty.



2011 National Work Safety Training and Talent Work Meeting was held in Baosteel.



# Relying on Employees, Promoting Employees' Development and Caring for Employees

- Perfecting the Foundamental System
- Solving the "Three Most" Problems for Employees
- Employee Quality Development



The Company's Labor Union uses the system of Work Representative Conference as an important carrier for making public corporate information and development. It established and perfected the multi-level work representative conference system, improved the rights-safeguarding system, gave a full play to employees' participation in the democratic management, and guaranteed the following rights of the employees: the right to know, the right to participate, the right of examination and approval, and the right to evaluate and supervise. Centering on the Company's major task, it takes advantage of the service of the labor union to continue carrying out various labor competition, economic technological innovation and independent employee team-building. Through different channels, the Company learns about employees' requirements, and makes its annual practical project plan accordingly. The annual work plan is implemented through concerted efforts - the Party Committee leads, the Labor Union takes responsibility, and relevant functional departments carry out the work. In the past ten years, the Company has fulfilled over 100 practical projects, with its investment near CNY 100 million. This has become a brand name of the Company.

In 2011, the Company won the title of "Advanced Unit of Trade Union Work in China" and gained the "National May I Labor Award".

# Perfecting the Foundamental System

In 2011, the Labor Union of the Company perfected the multi-level worker representative conference system to reinforce the democratic management. All motions concerning the benefit of employees can only be put into practice after approval of the conference system. In the year, the conference granted approvals to the following proposals: "raising allowances to employees working on the middle and night shifts" and "implementation procedures of expenses on team-building activities". In the year, the conference system drafted a contract, in which employees requested that for those items regarding the benefits of employees such as work compensation, supplementary insurance and benefits, occupational skill training, workplace health and safety, the benefits should be clearly quantified wherever possible.

#### Care for Employee's needs

Via the Internet forum, leaders of Baosteel Chemical carry out interactive communications with employees, replying to the "Three Most" questions in youth development, human resources, technical research, production and living facilities. Specific solution and time limit were given to solving these problems. Both the leaders and employees had discussions about the enterprise's future development. This activity will be carried out as a long-term activity of Baosteel Chemical.

2. To address the problem that the skill level of quality inspectors of the steel scrap cannot be verified, Baosteel established the first skill level verification program. In 2011, the steel scrap quality inspectors of the raw material procurement center of Baosteel Co., Ltd. all obtained certificates. The steel scrap industry in China has been faced with the problem of lack of industry standard and low skill levels for many years. Baosteel's exploration has provided a good model for the steel scrap to intensify professional construction and certification, and enhance employee skills and qualities.

#### Solving the "Three Most" Problems for Employees

In 2011, with an emphasis on improving employees' work and living conditions, the Company pushed forward the implementation of the "Practical Projects" to solve the "Three Most" problems for employees following the principle of "be necessary, feasible, and reasonable".

The Company enhanced the investment and progress of practical projects, which brought about tangible results, including employee satisfaction. Through talks with management on employees, opinion surveys and questionnaires, the "Bridge" forum of the Company and enforcement of site investigation, the Company carried out special supervision on hot-spot issues and difficult problems raised by its employees. The Company excelled in helping solving difficulties in its employees' daily life.

The Company has been concerned with the employees experiencing difficulties and has taken active measures to render help and send warmth to them. In 2011, the Headquarters revised the procedures of care and warmth work management to make moderate adjustments to the subsidy standard. The "Procedures of Special Subsidies" was issued and efforts were made to coordinate in solving some difficulties remaining from the past. The special help to those employees with severe illness was standardized, and all business units and subsidiaries also established a special help system for those employees with severe illness.

The Company played an active role in helping its employees with difficulties. In 2011, 11,953 person times received help from the Company, totaling CNY 9.7668 million.

The Company continued to carry out the "One-day Donation" activity, and collected CNY 2.67 million from employees, and the donation would be used for study assistance and helping those employees with difficulties.

#### **Employee Quality Development**

The Labor Unions at various levels of the Company actively organized the ninth Employee Arts Festival for employees to participate in. The festival greatly enriched the employees' cultural life. The Headquarters and Meisteel were honored as the Excellent Organizers of the Ninth Employee Arts Festival.

The Company continued to vigorously carry out work concerning female employees. It organized the "March 8th Arts Performance" for female employees to participate in, offered the "weekend school for female employees, and formed a singing chorus. The weekend school for female employees won the title of "Model Weekend School for Female Employees' in Shanghai.



Baosteel employees in the Shanghai staff sports fitness four seasons championship



#### Staff Book House

Majishan Port, located on the Majishan Island, Shengsi of Zhejiang Zhoushan, is one of Baosteel's transfer docks for large-scaled iron ores out of Shanghai. Employees working on the island live in a separate dormitory in the port. To enrich their daily life and motivate their interest in learning, the Company established a Staff Book House in the port, negotiated with the local library to set up a circulation point inside the Book House to add to the types and number of books. This measure was highly acclaimed by the employees, and it created a good environment for reading. In 2011, the Majishan Port was honored as the "Unit Reaching the Standard of the Demonstration Spot of Staff Book House" by All China Federation of Trade Unions.

# Investor Relation

- Comprehensive Information Exchange
- Active and Varied Services
- Continuously Increasing Informationized Services
- Reasonable and Sustainable Investment Return

#### **Comprehensive Information Exchange**

The Company has always placed its investors at an important position and has been providing multi-channel and comprehensive services to investors. Over 2011, the Company had received a total of 437 domestic fund managers and securities analysts in 104 batches who came to the Company for investigation and research; the Company had also arranged for 27 batches of investors to visit the factory areas, hosted 28 teleconferences. Meanwhile, upon invitation, the Company had attended 11 large-scaled investor exchange meetings at home and abroad hosted by such international investment banks as UBS AG, Morgan Stanley and Merrill Lynch. Through keynote speeches, penal meetings and one-on-one communications, the Company had in-depth exchange with domestic and foreign investors on such areas as the industry prospect, economic trend, raw material market, and corporate planning.

#### Active and Varied Services

For the many medium to small investors, the Company published a performance report on the internet after the publication of regular reports. For institution investors, the Company held meetings, providing annual and semiannual performance analyses. Chairperson, president, vice president of financial affairs, and secretary to the Board took part in the above-mentioned activities, having real-time communications with the investors, acquiring the investors" ideas, and answering urgent enquiries from the investors. The Company also conducted surveys about IR service and collecting opinions from investors through questionnaires. The Company endeavors to improve and optimize its IR service.

In the internet roadshow, the Company's IR work won compliments from shareholders. One shareholder wrote: "The securities staff of Baosteel were very patient in answering questions put forward by minor shareholders. Baosteel provided an example for all central and state-owned enterprises."

# Continuously Increasing Informationized Services

In 2011, the IR team made adjustments to the web structure: added the FrontPage with an IR column, the webpage of "Notice of Significant Matters" to facilitate users and the analysts" report in addition to the special column of analysts. These additions further enriched the Company's website. In the meantime, the Company had uploaded videos of performance briefing for analysts and materials for conferences onto the company's website. During the period, the Company videotaped the analysts" meeting, uploaded the video with slides onto the IR column of the Company's website. This facilitated fair information disclosure - those who were unable to make onsite investigation due to various reasons, such as time and place limit and the limited reception capacity of the Company, could watch the video and download reports.

#### Reasonable and Sustainable Investment Return

The company is always trying its best to create values for investors. Since it was listed, its annual cash dividends have been taking up at least 40% of the net profit of each year and have maintained a steady tendency of increase. The Company never forgets to return its proceeds to investors while developing its main business. Baosteel's 2004 annual general meeting of shareholders reviewed and approved the proposal for cash dividend policy, which clearly specified that the cash dividend of each future year should take up at least 40% of the net profit of that year. By promising the minimum proportion of cash dividend, the Company has stabilized the expectation of investors, and guaranteed sound returns for investors. From December 2000 when the company was listed to 31 December 2011, the Company had distributed a total dividend of CNY 43.194 billion.

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# 13 Bulk Raw Material Procurement

- Pursuing Mutual Development Based on an Honest Operation
- Authentication of the Suppliers" Environmental Management System
- Green Procurement
- Sunshine Procurement

In 2011, prices for bulk fuel and raw materials showed the trend of rising in the beginning and falling later as a whole. In 2011, faced with an increasingly fluctuated raw material market, the Company chose to stabilize the raw material supply by establishing a long-term supply relationship, and propelling the win-win cooperation with suppliers. Under this cooperative mode, Baosteel and the long-term suppliers share the benefits and risks and pursue a united development.



#### Pursuing Mutual Development Based on an Honest Operation

Holding fast to the Company's core concept of "an Honest Operation", the Company further improved its supplier selection rules and established a scientific quantifiable appraisal system; as a result, the Company strengthened the cooperative ties with its suppliers. In evaluating its supplier, major considerations are given to these capabilities: delivery, cost, manufacturing, quality control, service, and cooperation. In 2011, the business environment was complicated and changeable, and the supply of some raw materials was under pressure. Other impacts on supply were caused by seasonal factors such as the flood season, and typhoon and contingent factors. The Company responded to these changes by sticking to the principles of "reinforcing coordination, ensuring supply, meeting the site demand; optimizing structure, following the market, lowering the procurement cost; solidifying the foundation, enhancing the capacity and promoting lean management." The Company strengthened its cooperation with strategic suppliers by enhancing the capacity of the raw material procurement system and promoting the digital purchase. In the meantime, it actively explored new products and suppliers, strengthened the cooperation and communications with suppliers, managed to find a balance between the wharf reception, material sites, and the shipping power, and set a clear goal for bulk fuel and raw material procurement that is to ensure supply, reduce cost, and optimize services.

#### Authentication of the Suppliers' Environmental Management System

Suppliers were further encouraged to attain the certification of ISO14001 for environmental management. When looking for new suppliers, priority was given to those certified for environmental management. In 2010, 9% of the suppliers held the certification of ISO14001. As for the carriers, the Company chooses to work with those who have passed the ISM/NSM certification. In 2011, 100% of the carriers used by the Company obtained the ISM/NSM certification.

#### **Green Procurement**

Green procurement is an important part of Baosteel's environmental management. It plays an important role in Baosteel's sustainable development. In the meantime, it will also promote the upgrading of suppliers" comprehensive ability, and hence, cultivate green partners, reflecting Baosteel's social responsibilities. In order to implement the environmental management strategy and meet the requirement for green procurement put forward by the management of the Company, It added to the raw material purchase contract the Company's management guideline (building the internationally competitive steel enterprise via customer-centered management, pollutant reduction and hazard control, energy saving and emission reduction, risk management, improvement and innovation, efficient lean operation, and harmonious development),

and put forward clear requirements of environmental protection on suppliers ("Baosteel is concerned with the supplier's performance in such areas as environmental management, clean production, and social responsibilities. It endeavors to enforce the communication and information exchange with suppliers to build a green supply chain together with supplies.")

#### **Sunshine Procurement**

In 2011, the Company further improved its internal management flow and the authorization system to facilitate the further development of "sunshine procurement", according to the standardized and transparent procurement and supply flow. Efforts were made to the probity risk identification and prevention regarding sensitive positions to promote a team of integrity. The digital platform for raw material procurement was further improved, and suppliers were encouraged to enhance their on-line coordination. The e-commerce business platform added a new function of self-help invoice recording on-line by the suppliers. These measures have effectively enhanced the productivity.

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# Procurement of Materials and Spare Parts

- Supplier Management
- Electronic Business
- Green Procurement
- Management of Idle and Waste Assets

#### Supplier Management

#### Communication and cooperation with suppliers

In April 2011, the Company held the 19th Council Meeting of the Center for Baosteel Equipment and Spare Parts and Joined R&D Supply. 180 representatives from 85 council member units and related individuals attended the meeting. Themed on "holding hands and finding opportunities among challenges," the meeting reached consensus of meeting the competition with changes. The suppliers and buyers will continue to reinforce the integration and innovation of independent IP technology and products, so as to construct a stable and long-term supply chain of mutual trust.

In November 2011, the Company held a promotion meeting of production-supply-research of refractory materials for steel-making. Focusing on site production, the meeting addressed the new demands in product exploration of refractory material types, progress of smelting techniques, consumption reduction, as well as environmental protection and energy saving. The meeting finalized 19 production-supply-research cooperation programs, including the program of lengthening the lifespan and reducing energy consumption of the ladle furnace, RH chrome-free technique development. In the meeting, the Company signed a key project agreement with related suppliers concerning the refractory materials, and put forward goals such as reducing the energy consumption per ton of refractory material to 2-5%.

In 2011, the annual seminar of Baosteel roll management was held. Themed on the "taping on the potential and jointly adjusting to market changes," representatives from the units of roll users and roll suppliers held talks and penal sessions and reached consensus on the following items: integration of roll utilization and roll manufacturing, perfecting the comprehensive appraisal system, green production, quality enhancement, technical cost reduction, inventory optimization, and value increase of the supply chain.

#### Procurement from medium-small enterprises and from local suppliers

According to the Criteria for Medium-Small Enterprise Categorization (MIITE [2011]300), enterprises with registration capital less than CNY10 million (foreign currency should be exchanged to CNY) are defined as medium-small suppliers. The following is the chart of material procurement from medium-small enterprises (excluding import) by the Headquarters of Baosteel Co., Ltd.

The production enterprises registered in Shanghai are local suppliers (excluding trading companies, agencies or foreign companies in China). The following is the chart of material procurement from local enterprises by the Headquarters of Baosteel Co., Ltd.

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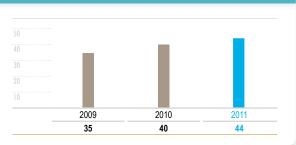
#### **Electronic Business**

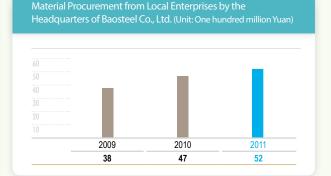
The Company has been committed itself to building an efficient supply chain together with suppliers. It has established an electronic procurement business platform with comprehensive functions, and a procurement hotline ensuring efficient and convenient coordination with suppliers and providing professional and smooth services. In 2011, the Company further promoted "paperless transactions" for material and spare part procurement, signing 57% of the contracts electronically. About 300 suppliers are available for electronic contracts. The electronic contract application has greatly enhanced the efficiency of coordination and reduced the use of paper.



Sinosteel Refractory Co., Ltd. is one of the long-term suppliers of Baosteel. Bo Jun, President of the company indicated that Baosteel, as one of the leading enterprises of the steel industry, has been playing a demonstrating role in the 'Green Transition'. All partners of this industry chain will follow Baosteel to build a green manufacturing chain.









#### **Green Procurement**

#### Compiled responsible procurement policy

On March 16, Baosteel Co., Ltd issued the Handbook for Green Procurement (1st version), which introduces the Company's green procurement policy: it gives priority to those products that can enhance lifespans, reduce consumption, save energy, reduce emission and can be recycled; and it encourages suppliers to use clean energy, raw materials, production processes and techniques. These measures will introduce the green standard, green certification, and green manufacturing into Baosteel's own production procedures, and urge the suppliers to enhance their management and fulfill the social responsibilities of energy saving and environment protection.

The Company will carry out its cooperative R&D plan with qualified suppliers to jointly explore green and low-cost steel products that meet the needs of the market.

#### Environmental management system certification for suppliers

In recent years, by issuing a series of green procurement policies and guidelines and organizing face-to-face training, Baosteel has been effective in promoting green production and environmental management certification for suppliers. More and more material and spare part suppliers have obtained the certification in the past three years, as indicated in the top-right chart.

#### Green object procurement

The Company has completed the green property recognition of more than 100,000 spare parts, or 30% of the total spare parts of Baosteel Co., Ltd.The lower right chart shows the green objects (already recognized) in the past three years.

#### Management of Idle and Waste Assets

To optimize the value of idle and waste equipment, the Company started from the basic management and conducted a systematic analysis of the disposal rules, system inventory and market situation for idle and waste assets.

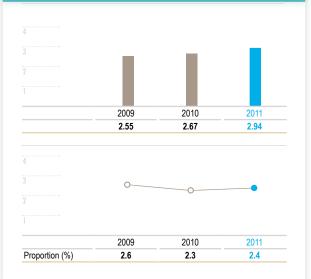
The Company recycled all idle and waste equipment, which totalled 10,297.58 tons and 4980 pieces of equipment. The idle and waste equipment was disposed by category, and all usable spare parts were collected for reuse. In 2011, the disposal of steel scraps, generic waste equipment, second-hand equipment, waste non-ferrous metal, and waste office equipment totalled 8,709.78 tons, 1,482.74 tons, 22 pieces, 105.06 tons and 4,958 pieces respectively. The disposal return was increased by 8.06% compared with that of last year.

The Company recollected 4,963 tons of zinc slag, 256 tons of tin sludge, and 4,703 tons of waste oil in 2011.

Environmental Management System Certification for Material and Spare Part Suppliers by the Headquarters of Baosteel Co., Ltd.



Green Object Procurement for Material and Spare Part by the <u>Headquarters of Baosteel Co., Ltd. (Unit:</u> One hundred million Yuan)



# 15 Product Marketing

Green Sales

Environmentally-Friendly Products

#### **Green Sales**

2011 was a landmark in the sense that Baosteel exclusively issued the *Green Manifesto* and *Product Environment Statement*, disclosing the ecological information of five types of carbon products, providing verifiable and quantifiable environmental performance data of various products. These two issuances were described by the media as "a landmark for the green development of the domestic steel industry".



# The Company held the "Green Manifesto" press conference

With the participation from users, suppliers, community representatives and governmental representatives. Baosteel held the conference in late May, publishing Baosteel's "Green Manifesto". This issuance has reflected Baosteel's corporate strategy of environmental management and its social responsibilities, presenting its confidence and resolution in achieving a high environmental performance. The environmental management will be integrated into Baosteel's development strategy, business procedures and daily operation. While continuing to enhance product properties, it endeavors to minimize negative effects on the environment, realizing a harmonious development between the enterprise and the environment. Baosteel will continue to explore opportunities of sustainable growth for the steel industry, shape its new social role and contribute to the establishment of a beautiful future.

#### The Company published its environmental statement for five types of products

In 2011, Baosteel made a breakthrough in its LCA research and applied the research results to the product environmental statement. Baosteel stipulated the Rules for Steel Product Categorization, and for the first time, issued the environmental statement of five types of products including hot-rolled, cold-rolled, hot galvanized, electro-tinplate, and tin plate products. All of these products have been certified by a third party and allowed to use the green tag. The statement addresses such aspects as production, transportation and safe use information, product ecological information, as well as product recycle and final disposal. Baosteel is the only enterprise that has issued an environmental statement among its domestic peers. The statement provides verifiable and quantifiable data of steel products" environmental performance, reflecting Baosteel's excellence in technical development and social responsibilities.



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#### The Company held the Auto Plate EVI (Early Vendor Involvement) Forum

In September 2011, the first Auto Plate EVI (early intervention) Forum was held. Reports made at the forum gave a comprehensive insight into Baosteel's technological power in the auto plate production, the EVI work mode and concept, and the trend of the auto-used steel, auto design and mold manufacturing. This forum has helped users gain a better understanding of the concept and service mode of Baosteel's auto plates, and help them become more confident in the service capacity of Baosteel and in the cooperation with Baosteel. The Company will step up R&D facilities on auto sheets and auto-used steel, aiming to maintain its leading position in technology and enhance its core competitiveness. It will continue to strengthen the strategic cooperation with users, optimize the service mode and secure the win-win relationship with users. In addition, it will continue to improve its client service, elevate the level and capacity of service, and endeavor to meet users" demands where possible.



The first Auto Plate EVI Forum



#### Fervently produce high strength and thin steel for various industries

Auto-used super high strength steel. Baosteel's cold-rolled super high strength steel for automobiles ( $Ts \ge 780$ MPa) successfully entered the market of domestic passenger vehicles and revised vehicles. It has provided favorable conditions for the thinning and weight reducing of the whole car. It has also realized batch supplies to well-known foregin auto plants.

High strength, super high strength structural steel. The high strength, super high strength structural steel used for engineering machinery is easy to be welded and has good cold forming property. It is widely used in engineering machinery, automobile structure, and containers. Among them, the super high strength steel BS960QC has already been used in large tonnage gantry cranes and concrete pump truck booms, having realized stable a mass supply.

#### Reducing impacts on the environment by adopting environmental technology

Non-oriented chrome-free coated electrical steel. Baosteel has conducted active R&D on such steel. Through cooperation with relevant parties on the raw material procurement and the production use, the Company developed the whole process of environmentally-friendly chrome-free coating, including coating bath, coating bake and after treatment.

TMCP ship plates. The Normalizing Process was substituted by the TMCP (Thermo-mechanical control process), which saved energy consumption while guaranteeing the product quality. Currently, the TMCP ship plates have been used in large ship building enterprises including Hyundai Heavy Industries and Nantong COSCO KHI Ship Engineering Co., Ltd..

#### Increasing resource utilization and energy efficiency

Committed to the continuous thinning of tin plates. To reduce the thickness of the base plate is an important method of improving the resource utilization rate of steel cans. Baosteel has been committed to reducing the thickness of the tin plates used in the cans. Through a technical breakthrough, the base plate's thickness has been reduced for six times, with its thickness changing from 0.28mm to 0.225mm. The LCA evaluation shows that based on the material used for one can, the carbon emission from the tinplate production is reduced by 15%. Furthermore, Baosteel developed secondary cold-rolled tin plates with a thinner base plate and succeeded in using the plates for the super thick can manufacturing.



#### Environmentally-Friendly Products

Guided by the three substitutes (substitution of steel types, steel function and materials), Baosteel conducted product design, R&D and promotion of environmentally-friendly products. It has committed itself to sharing advanced environmental designd and technology with users and also carrying out new products in new field designs together with users. It promoted the new products and new steel types with a good environmental performance to users, and facilitated the transition of the design concept from "cost, and quality-based" design to "cost, quality and environment-based" design.



Simplifying the manufacturing technique of home appliance materials. The Company used the color-coated sheet as the exterior sheet for home appliances as a substitute for the traditional spray coating. This new method, while guaranteeing the product property, can greatly simplify the process of users. Currently, such color-coated sheets have been successfully used in the exterior of home appliances including fridges, freezers, washing machines, air conditioners, water heaters, flat TV, and DVD.

Developing wear-resistant steel to reduce steel wear. Steel wear has caused a large sum of energy and raw material consumption. To minimize the abrasion and wear is an important way of reducing energy consumption. The BHARDY series of wear-resistant steel developed by Baosteel has been widely used in the digging machine and the Chain-scraper Conveyors used in the coal mine machinery.

#### Extending the usable life of products

Hot-rolled high erosion-resistant railway steel. After nearly two years of research, the Company succeeded in developing a new generation of high erosion-resistant and weather proof steel S450EW for railway freight cars. The product has good low-temperature toughness, cold forming property and good welding property. Furthermore, its erosion-resistant property was enhanced by 30%-50%.

# Green Logistics

- Continuously Increasing Transportation by Water
- "Two-feature Based" Port Construction
- Logistic Transportation Dynamic Tracking Management
- Enforcing Traffic Safety Inside the Plant Perfecting the Logistic Management of the
- Perfecting the Logistic Management of the Secondary Resources



#### Continuously Increasing Transportation by Water

The collective transportation and green transportation has always been the guideline for Baosteel. By increasing the percentage of water transportation against the railway transportation, the Company reduced energy consumption and pollutant emission during the process of logistics, reduced the cost, and raised the efficiency.

For a long time, the Company has been engaged in the strategic cooperation agreement with renowned transporters both at home and abroad, which ensures safe, green and efficient logistics. In 2011, it signed an agreement with the Shanghai International Port Affairs (Group) on the delivery of bulk raw materials and auxiliary materials, enforcing the cooperation in the Luojing area concerning such fields as logistics, storage, transfer, loading, delivery, and service for raw materials and auxiliary materials.

In the meantime, the Company continued to strengthen the construction of internal docks and its water transportation team. On 29 April 2011, the super huge "Treasure Exploration" ship for imported iron ore with a loading capacity of 115,000 tons and a sea gauge of 13.5 meters docked at Baosteel raw material wharf, renewing the sea gauge record of ship in the deep-water way of the Yangtze River. This has set a solid foundation for effectively enhancing the Company's water transportation efficiency. In 2011. Meisteel's new raw material wharf was completed and put into operation, which will greatly enhance the raw material import capacity of Meisteel. Through giving a full play to the integrated management of the logistic system and the departmental coordination advantage, the Company will be able to further optimize the logistic route, enhance procedure cooperation, and further raise the water transportation capability of Meisteel.

#### "Two-feature Based" Port Construction

In the past years, Baosteel has been implementing a scientific outlook on development together with the "Green Baosteel" philosophy, laying a great emphasis on recourse conservation and environmental protection and reaching the consensus of "clean transportation service" among all of its employees. Inside Baosteel, various technological innovation activities were held, leading to many good results in efficiency enhancing emission reduction and energy saving. The Company actively sought support from outside of Baosteel. For example, its raw material wharf and the Yangtze River management station of Shanghai City Appearance established a four-year co-construction relationship, which has achieved remarkable results in wharf environmental protection through working together. The Company will make its action plan and implement the plan in accordance with the "Guide for Energy-saving and Environmentally-friendly Port Construction in Shanghai". It is determined to continue the "Twofeature-based" port construction innovatively and play a leading role in this regard.

In 2011, the transportation unit of Baosteel Co., Ltd. was honored as the model unit of "energy-saving and environmentally-friendly" port constructor of Shanghai port by the Shanghai Municipal Transport and Port Authority.

#### Logistic Transportation Dynamic Tracking Management

Logistics and transportation are an important part of the whole services provided by Baosteel to its customers. Having a leading edge in contacting customers, Baosteel International further optimized the operational standard of the transportation business and the dynamic tracking management of the transportation information. This has elevated the integrated management of logistics and raised the customers' satisfaction rate.

In 2011, Baosteel International, together with Baosight Software, designed the management system for storage, logistics, and transportation, realizing the standardization of logistic work and information tracking. The system ensured a smooth flow of the business from the issuance of command, work feedback, to expense settlement and dynamic logistic tracking. Meanwhile, the pilot work of The Internet of Things application in the logistic management was initiated. This includes the self-help printing of the electronic bill of lading in the storehouse, the visual monitoring of storage work, the application of RFID in delivery, and the visualized storage warning and monitoring. These measures effectively promoted the coordination of the logistic chain, enhanced the efficiency and level of Baosteel International's logistic management, and laid a solid foundation for the future work such as the informationization of the logistic work and the continuous elevating of the logistic service.

#### Enforcing Traffic Safety Inside the Plant

In 2011, after thoroughly reviewing the traffic situation of the production area of the Headquarters, the direct unit under Baosteel stipulated related management document and management standard, forming a long-term management and control system for vehicle permission. This has greatly reduced the number and times of vehicle entrance. The daily vehicle entrance was reduced by 43% compared to that before the adjustment. This has effectively relieved the pressure on the roads and remarkably improved the environment and traffic inside the plant.

Working together with the traffic police from the Baoshan Branch , the Company carried out the "5.25" traffic safety day activity "Cherish Life and Civil Traffic". The Traffic Police Branch of Baoshan was invited to deliver theme talks about causes and preventive measures of traffic accidents, which were well received.

In order to raise the drivers' awareness of traffic safety and cultivate good driving habits, the Company compiled study materials for traffic safety on a regular basis to provide practical guidance.

#### Perfecting the Logistic Management of the Secondary Resources

To change the situation that the secondary resource logistic management was divided among various departments, and the layers of sub-contracting by the carriers, the Company adjusted and optimized the functions of the secondary resource logistics, clearly designating the transportation department as the professional management department for the logistics and transportation of the Company's secondary resources. This helps promote the integration of the secondary resource transportation and raise the disposal efficiency of the secondary resource.

It has constructed a dynamic monitoring platform for vehicles transporting the solid secondary resource. The GPS were installed in such vehicles to realize whole-process tracking. This helps improve the work efficiency of such vehicles, facilitate the backward tracking analysis for the road spill, and reduce the pollution caused by such road spills

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# Social Responsibility

Poverty Alleviation, Care for Employees Experiencing Hardships
 Donations and Sponsorships

Inspiration and Contribution



At the Baosteel Education Award ceremony

The social work of Baosteel Group, including donations and sponsorships, is coordinated by the department of public relations of the Group. The social work of Baosteel Co., Ltd. can't be separated from the related work of Baosteel Group. The following introduction contains major social work participated by Baosteel Co., Ltd.

#### Poverty Alleviation, Care for Employees Experiencing Hardships

The Company has been concerned with the employees experiencing difficulties and has taken active measures to render help and send warmth to them. In 2011, the Headquarters revised it rules for care and warmth work management to give moderate adjustments to the subsidy standard. The special help for employees with severe illness was standardized, and all business units and subsidiaries also implemented the special help system for employees with severe illness. The Procedures for Special Subsidies was issued and the efforts were made to coordinate in solving some difficulties left from previous years.

The Company played an active role in helping the employees with difficulties. In 2011, 11,953 person times received help from the Company, totaling CNY 9.7668 million. The Company continued to carry out the "One-day Donation" activity, and collected CNY 2.67 million from employees, and the money would be used for study assistance and for helping the employees with difficulties.



The represents of the Baosteel Education Award in 2011 received teachers and students planted trees in the shelterbelt green space Directly under Baosteel Co., Ltd.



The represents of the Baosteel Education Award in 2011 the first received students visited in Baosteel.

#### **Donations and Sponsorships**

In 2011, to meet the requirements of the Company's risk management, it revised its donation management. The annual donation, approved by the Company as per the corresponding approval rights, amounted to CNY 14.7408 million. The details are as follows:

Donation in 2011	
Program	Amount (Ten Thousand Yuan)
Shanghai Charity Foundation (2010 pair-up assistance to Bao"an Village and Mengxi Village of Chongming)	75.54
Shanghai Charity Foundation (2010 pair-up assistance to Mengdong Village, Mingmiao Town, Chongming)	11.50
Shanghai Charity Foundation (2010 pair-up assistance to Yongle Village, Mingmiao Town, Chongming)	12.00
China Welfare Fund for the handicapped (Yunnan Qiming Program)	30.00
Poverty Alleviation and Development Office of Yunnan People"s Government (Poverty-relief donation for Yunnan)	900.00
Red Cross of Shensi County (Equipment updating of the new building of the people"s hospital of the county)	100.00
Shanghai Charity Foundation (2011 pair-up assistance to Bao"an Village and Mengxi Village of Chongming)	76.54
Shanghai Charity Foundation (2011 pair-up assistance to Mengdong Village, Mingmiao Town, Chongming)	26.50
Shanghai Charity Foundation (2011 pair-up assistance to Yongle Village, Mingmiao Town, Chongming)	21.00
Countryside Accounting Service Center of Dawang Town, Yangxin County (Donation for the new countryside construction)	10.00
Charity Federation Huangshi City (Sending warmth donation)	1.00
Meishan Office, the People"s Government of Yuhuatai District, Nanjing City (Beautification of Meishan living area square)	110.00
Zhejiang Green Carbon Foundation, China Green Carbon Foundation, Beilun Special Donation	100.00
Total	1474.08

#### **Baosteel Education Award**

In 2011, Baosteel presented its 22nd Education Award to 946 students and 266 teachers from 107 domestic colleges and 18 institutions. In the past 22 years, 17,602 teachers and students received the Baosteel Education Award, with the accumulated prize subsidies reaching CNY 150 million.

#### Love under the Blue Sky

Since 2007, the Company had donated CNY 2 million each year to the elders experiencing difficulties through the Shanghai Senor Citizen Fund. In 2011, Baosteel donated another CNY 2 million through the fund to sponsor the public welfare project of "Age-Friendly Housing Project", which is committed to improving housing conditions of about 100 households of the old in the community. This is also one of the series of programs of "Love under the Blue Sky".

# Social Responsibility

Poverty Alleviation, Care for Employees Experiencing Hardships Donations and Sponsorships

Inspiration and Contribution



The eligible young employees in Baosteel Co., Ltd., drafted into the Army

#### Inspiration and Contribution

#### **Red Cross of Baosteel**

In the past two years, Baosteel perfected the management systems such as "Baosteel Humanity Help Fund Management'' and "Employee Clinic Use of Blood". In the meantime, it organized a survey among the employees whose families were faced with difficulties, offered help to 642 families experiencing difficulties, with the total sum of CNY 460,000. In order to enhance the employees' ability in self-rescue and first aid, the Company organized on-site training of emergency rescue. It also carried out the medulla donation among youth volunteers. For more than 600 youth volunteers entered the activity for the medulla donation sampling. Two volunteers have successfully donated medulla. It promoted free blood donation and further perfected the work mechanism of blood donation, gaining a high praise from the Shanghai Municipal Health Bureau and the Shanghai Blood Administration Office.

#### Care for Yushu, Help to Orphans

On April 14, 2010, an earthquake of magnitude 7.1 occurred at Yushu, Qinghai. Baosteel was deeply grieved by the news, it then delivered relief supplies to disaster areas immediately; and in conjunction with the Ministry of Civil Affairs, it launched a series of "Baosteel's Assistance to Yushu" activities. Meanwhile, Baosteel employees in Shanghai acted quickly and expressed their love and wish that people in the disaster area could get out of difficulty and rebuild their homes by way of donations and they hoped that the donation would be used in the most needed places and things that disaster area people were most concerned with.

After communicating with the Chenduo County Party Committee and Government, it was ultimately decided that the donation of CNY 8.5 million from Baosteel's employees in Shanghai would be used for the construction of the Baosteel-Chenduo County Orphanage to give more care for earthquake-stricken orphans by building a warm home for them. With combined efforts, the construction project began only four months after the earthquake. After nearly one year's construction, the orphanage was completed and ready for usage in October 2011.

The Baosteel-Chenduo County Orphanage Reconstruction Project had a total investment of CNY 10 million, of which Baosteel's employees in Shanghai donated CNY 8.5 million and the Civil Affairs Department of Qinghai Province donated CNY 1.5 million.The project included a teaching facility, a canteen, dormitories, fences, gate, a plantation and medical facilities, covering a total construction area of 3,332 square meters.

# The "Bridge" forum added a special zone for volunteer public services

To spread the good deeds by Baosteel's youth volunteers and advocate the volunteer spirit of "devotion, friendship, mutual help and progress" among young employees, the Company's "Bridge" forum opened a special zone for "Volunteer Public Service" in 2011 to publish the volunteer public services and activities from time to time.

#### "Blue Birds Love Volunteers Activity"

Before the traditional Chinese festival for senior citizens, "Chong Yang Festival" in 2011, the news centers of Baosteel and BNA jointly organized the "Blue Birds Love Volunteers Activity". Over 30 Baosteel volunteers came to the Shanghai Baokang Apartments for the old, providing volunteer tutorship to those who were interested in calligraphy, painting and flower making. Some volunteers played chess and chatted with the old. Besides, they also delivered a brilliant performance for the old people to convey their sincere wishes.



#### "Baoshan Lake" helps the Chenhang Reservoir deal with salty tides

In view of the frequent lack of water for the citizens, Baosteel Co. Ltd. had been storing up water in advance and supplying water at the time of water shortage. For the past eight years, during the periods when the salty tide arrived, Baosteel had been supplying quality raw water, with the accumulative supply of over 37 million tons. From late February to mid-March of 2011, affected by the back pour of the sea water and the lasting influence of saltwater intrusion in the estuary of the Yangtze River, then Chenhang Reservoir of Baoshan District couldn't meet the residents'' demand for water due to the limited speed in raw water treatment. After learning about this situation, the Company swiftly launched its emergency plan, supplying the quality raw water from the "Baoshan Lake" to the Chenhang Reservoir, with a supply of 1.3 million tons of raw water within one week, which greatly eased the difficulty for the residents. During late October to December when the winter came, the salty tide arrived again, and Baosteel supplied another 540,000 tons of water to the Chenhang Reservoir.

#### Blood donation by couples

Shortly before the Spring Festival of 2011, 248 Meisteel employees took part in the volunteering blood donation activity carried out in Nanjing donating a total of 52,220 mL of blood. The picture shows husband Wang Yongbo (right, first) and wife Dai Bingjing (right, second), both of whom were employees of the steel-making plant of the Meisteel Company, were donating their blood.



#### Rescuing small children from fire

In 2011, Xu Xiaodong, a young employee of the steelmaking plant of Baosteel Co., Ltd., born after 1985, rushed into fire and rescued two small children. This touching story was widely circulated in the plant and among society. Xu Xiaodong established a positive image of Baosteel youth in the new era, featuring great courage and spirit of self-giving in helping others.



# 18 Green Production

Environmental Management Policy and Organizational Structure
 Management System

Environment and Energy Solution Cost of Environmental Protection Environmental Management Performance



#### **Environmental Management Policy and Organizational Structure**

The Company has set a clear management policy for energy saving and emission reduction, as well as environmental protection, and has set up corresponding functional departments in both the Headquarters and all levels of production enterprises. Specific personnel have been designated to work at both a full-time and a part-time basis to coordinate the Company's energy and environmental management in accordance with the ISO14001 system - "Requirements for Energy Management System" (GB/T23331-2009) and other related national rules and regulations.

To save the space, this report has not repeated such contents as the policies for energy and environmental management and related administrative organizational structure. Please refer to the same report in 2010 for reference as there is no change to these contents.

#### Management System

# Environmental management system

The Company believes that carrying out standard systems in environmental management is the foundation for successful management. Baosteel Co., Ltd. led to obtain the National Environmental Management System ISO 14001 certification.

At present, all steel enterprises under the Company have obtained Environmental Management system ISO14001 certification. I 3 of the 17 cutting delivery centers under Baosteel International and the nonsteel production unit of Baosteel Chemical have also gained the ISO14001 certification.

#### Lenergy management system

In 2010, Baosteel Co., Ltd. (Headquarters) led to obtain the National Energy Management System certification.

Based on the achievements made in 2010, the Company continued to perfect the basic energy management, promoted the implementation of the "three flows, one status" energy management system to production units, practised benchmarking management in the whole Company for energy management, enhanced the operation effectiveness of its overall energy management system, and promoted the energy management system certification work in an all-rounded way. Up to the end of 2011, the business units of Stainless Steel, Special Steel, Meisteel and Nantong Baosteel had all obtained the Energy Management System Certification.

#### lean production appraisal

In August, 2004, the then Bureau of National Environmental Protection issued "Temporary Method of Clean Production Appraisal", which encouraged enterprises to conduct voluntary clean production appraisals.

In 2005, Baosteel Co., Ltd. led to gain the title of "National Environmentally-friendly Enterprise" among domestic steel enterprises.

In 2007, Baosteel Co., Ltd. was among the first enterprises to have won the title of "Clean Production & Environmentally-friendly Enterprises". The Stainless Steel Company, subsidiary of Baosteel Co., Ltd. (currently, the Stainless Steel Business Unit) and the special steel company (currently, the special steel business units) passed the clean production appraisal organized by the Shanghai Municipal Govemment.

In 2008, Baosteel Group issued related management documents to urge various steel production units to carry out clean production appraisals. In 2011, it distributed the book of ''2012-2013 Action Plan for Meeting the Clean Production Requirements while Enhancing Performance'', and invited related experts from Shanghai to give theme talks to leaders of various units, technical staff working on energy saving and environmental protection, and key production staff to promote clean production in consistency.

In 2011, the enterprises based in Shanghai, including the Headquarters, BNA, and Baosteel Chemical had applied for and passed the clean production examination. The Stainless Steel Unit and Special Steel Unit also passed the clean production reexamination.

#### Education and training on environmental and energy saving

In 2011, the Company upgraded the training programs on the following subjects: energy management and its system, energy saving and emission reduction technology application, clean production and environmental management, and energy saving and emission reduction situation and policy, during the Twelfth Five-year period. It completed 24 training projects, opened 27 training classes, and about 1,058 person times received the training. The Company also initiated an innovation forum, an innovation saloon and theme research programs to address the green production of the steel industry and the sustainable development of the enterprise, including such contents as "route of low carbon development for the steel industry,""road of green industry and green energy," and "key techniques and solutions to energy saving and emission reduction in the steel industry". In 2011, the Company completed on-line courses on the following five topics: Baosteel Environmental Management and Energy Saving and Emission Reduction, Energy Management System, Basic Energy Management and its Evaluation, Energy Saving Technique Application and Case Study, and Energy Audit and Case Study. This has set a foundation for on-line training in related fields across the Baosteel Group.



The beautiful environment in the plant of the Stainless Steel Unit

# Green Production

Environmental Management Policy and Organizational Structure Management System

Environment and Energy Solution
 Cost of Environmental Protection
 Environmental Management Performance

#### **Environment and Energy Solution**

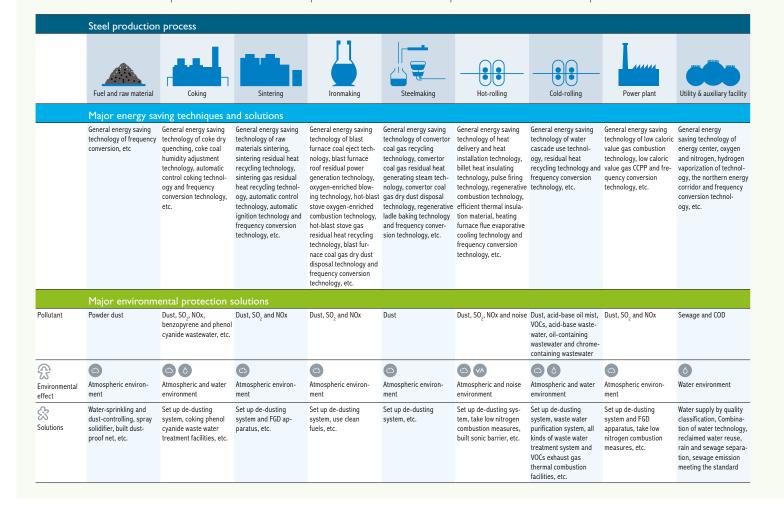
#### Application of energy saving and emission reduction technology

Since the establishment, Baosteel has set the world's first-class standard as the benchmark, adopted the world's advanced energy saving and emission reduction technology, and continued to exercise emission source control, enhance energy and resource utilization rate. Baosteel has been endeavoring to become a clean plant reaching the advanced international standard.

The Company adopted a series of key energy saving and emission reduction measures, including coke dry quenching, coke coal humidity adjustment technology, sintering exterior heat recycling technology, sintering gas residual heat recycling technology, blast furnace residual power generation technology, blast furnace oxygen-rich coal eject technology, convertor coal gas purification and recycling technology, and gas-steam combined cycling power generating technology. To control the pollution into the atmosphere, the following measures were taken to control the SO<sub>2</sub> emission: using high-efficiency dust catcher with fabric bag and electric dust catcher, using the effective dust control measures to reduce powder dust emission, controlling the sulphur rate in the raw material and fuel, and installing the gas desulphurization devices in the sintering machine and in the power plant to control SO<sub>2</sub> emission. Adopting the "Three Dry" technology (coke dry quenching convertor coal gas dry dust disposal, and blast furnace coal gas dry dust disposal), and the water saving techniques including water supply by quality classification, reclaimed water reuse, rain and sewage separation, plant surrounding water recycle, and sewage emission meeting the standard, the Company reduced the clean water consumption and the sewage emission. Through technological innovation and management optimization, the Company continued to reinforce the recycling of solid secondary resources, expand the channel of social comprehensive utilization, enhance the added value and raise the comprehensive utilization rate of solid secondary resources.



Baosteel actively explores the non-blast-furnace iron-making technique. In 2007 and 2010, it built two the world's largest COREX3000 iron-making devices. Baosteel has also developed green and low carbon techniques with independent IP rights in continuous rolling of thin strips, recycling and emission reduction of the sintering gas, and tumbling treatment of the steel slag.

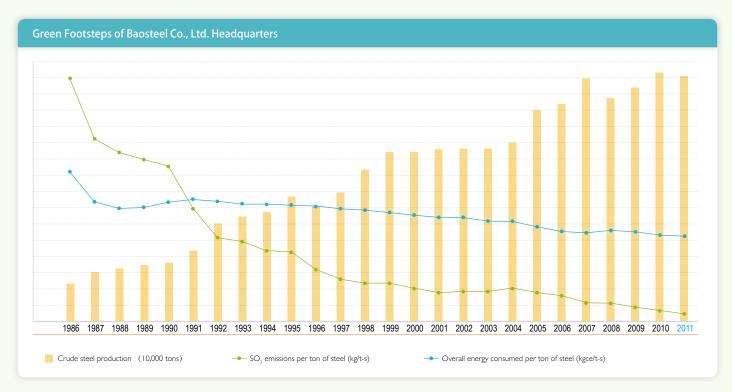


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#### Concern for global climate change

Baosteel pays great attention to the global climate and endeavors to reduce the warm-house gas emission. In the long run, the Company takes a leading role in reducing the emission of carbon and other major pollutants by implementing internal energy-saving and emission reduction, which would bring about the overall progress of the industry. Baosteel's more than 30 years'' growth also marked its 30 years of energy efficiency improvement and pollutant reduction of the steel industry and even many other industries in China. In this sense, Baosteel has made a great contribution to environmental protection and solving problems of climate change.



Baosteel endeavors to reduce the use of natural resources via developing a cycle of economy and enhancing the recycling of secondary resources. Practices have proved that Baosteel's self-developed tumbling steel slag treatment is more effective than the regular treatment in energy and resource consumption as well as pollutant emission.

By creating more environmentally-friendly products, the Company enables the energy saving and pollutant reduction for end users. A demonstrative case is the bulk use of Baosteel's high strength auto plates, which remarkably reduces the auto CO, emission at the national level.

Baosteel also exerted itself to be a pioneer of green industry construction, with the goal of leading the whole industry chain to take action to achieve a green production. In recent years, Baosteel has been continuously putting forward such policies as green procurement and green sales, which has established a good model for the steel industry and other related industries.

To pursue a low-carbon development, one needs to be the first to be clear of its own carbon footprint. In 2011, the Company conducted literature review, analysis and comparative studies of the international standard or industry standard regarding the enterprise  $CO_2$  emission check, including the standards issued by IPCC, ISO 14064-1, ISO 14064-2, ISO 14064-3, ISO 14065, ISO 14067, BSI PAS 2050, WBCSD & WRI GHG Protocol and Worldsteel. Analysis was made regarding the subjects, applicability and major contents of these standards. Based on these studies and adopting the LCA theory and computing model, the Company made trial calculation of its carbon emission data, and compared the results with those of its international counterparts.



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## Green Production

Environmental Management Policy and Organizational Structure Management System

Environment and Energy Solution Cost of Environmental Protection Environmental Management Performance

#### 🚽 2011 Major Tasks

2011 marked the beginning of the "Twelfth Five-year". Faced with the increasingly tense resource and environment situation, and the stricter governmental and social requirements for environmental protection, energy saving and emission reduction, the Company stepped up the exploration, extending the application of energy-saving and environmental-protection techniques, and earnestly implemented related management measures. As a result, the energy environmental protection management system control level was lifted quickly, the technical applications brought about remarkable effects, and the Company achieved good results in energy saving and emission reduction.

#### Stepping up the energy system control

After the Headquarters obtained the energy management system certification, the Company, with a view to develop this system of the Company into an integrated and standardized system, extended the operation of this system to the whole company according to the national energy management system's requirement. In 2011, the business units of Stainless Steel and Special Steel, Meisteel, and Baotong Steel gained the said certification, resulting in an effective upgrading of the Company's overall energy management level.

- (1) Integrating the energy management system into the Company's comprehensive management system. The internal audit team for the energy system was set up to offer training to internal auditors and leaders regarding the practical energy management, as well as the criteria and audit of the energy management system. The training aims at improving the qualities of the managerial staff at the base level and the essential employees. A self-checking and evaluation mechanism has been formed gradually through systematic planning, implementation, inspection and improvement.
- (2) Taking the "key energy efficiency factor (EEF)" and the "energy consumption source" as the breakthrough, the Company reinforced the basic energy management. All units can recognize the key EEF and the energy consumption source by the four dimensions of "three flows and one status", take these two elements as the breakthrough to pin down the plan and the objectives of energy management, assign the corresponding tasks to each position, and track the progress of the said tasks.
- (3) Perfecting the supervision, evaluation, and continuous improvement of energy-saving and environmental-protection equipment. With a goal to enhance the effective operation and the equipment efficiency of the energy-saving and environmental-protection facilities, the Company compiled the requirements of ener-

gy-saving and environmental-protection equipment management, carried out the equipment management by category, and realized a good control over the functioning precision and operational efficiency of the said facilities. The energy utilization efficiency and environmentalprotection operational efficiency were also enhanced. The residual energy recycled from the facilities in 2011 reached 2.607 million tons of standard coal.

## Strengthening the ability to secure energy supply for production

On August 16, the Sinopec direct gas supply pipes were completed and put into use. The pipeline extends from Luzhi of Jiangsu province to the Baosteel Branch, and has a length of 83.3 km. It was divided into two sections, the Jiangsu section (70 km), and the Shanghai section. The project was initiated in 2006, kicked off in April 2008, and completed the construction of Shanghai section in November 2008, and Jiangsu section in August 2011, with the concerted efforts of Baosteel and Sinopec. This Baosteel special line has effectively relieved the Company's pressure, such as production restriction, caused by the lack of gas supply in Shanghai.

### Improving the energy management informationization

In 2011, the Company compiled the planning and setting criteria for the on-line platform of environmental protection management, and it perfected the system framework. The measures are to be implemented step by step, with an objective of establishing a 24-hour environment control center, and further build an integrated, efficient and perfect on-line management platform for environmental protection.

The environment control center was put into operation by the end of 2011. The center collects visualized on-line monitoring signals, integrates the non-stop monitoring data including the air quality, mist and gas emission, water and noise, and generates the geological information on site pollution and major technical procedural information. The center is effective in facilitating the on-line monitoring and process control regarding the mist and gas emission sources of mist and powder dust,  $SO_2$ , and  $NO_x$  wastewater emission, air quality in areas and especially noise-polluted areas.

#### Speeding up the implementation of energy saving and emission reduction projects

To speed up the implementation of energy-saving and emission reduction projects, the Company continuously explores and creates new advanced modes for projects. A series of energy-saving and emission reduction projects have shown tangible results.

The Company exercised project-based planning for energy saving" to review the energy-saving projects of all units and categorize similar ones for integrated planning and implementation. The category-based implementation reduces the purchasing cost and the project investment on one hand, and enables the analysis of varied technical solutions on the same platform for best solution on the other hand. It has also simplified the procedure since the "small and scattered" projects don"t have to be initiated one by one but by category. Based on the experience of successful promotion of the two project-based "Energy-efficiency Power Plant" and "High-efficiency Kiln Furnace", the Company designed another four projects with the same planning in 2011, which included "High-efficiency Electrical Machine Upgrading and Substitution", "Energy Saving for the Air Compressing System", Recycling Residual Heat", and "Integrated Solution for Cycled Water System Energy Saving.

The Company brought the energy management contract (EMC) to a full swing by completely taking advantage of national policies. Based on its thorough investigation and flow rebuilding the Company issued the "Method for EMC Project Management" and sped up the implementation of the EMC project. The Headquarters of Baosteel Co., Ltd. signed off 13 EMC projects in 2011, seven of which passed the examination and started to generate benefits. After the implementation of the 13 projects, the annual energy saving is expected to reach 33,400 tons of standard coal.

In 2011, the Company set up 25 research projects for energy saving, 14 of which were completed, bringing about financial benefits worth of CNY 35.58 million via energy saving. It completed 64 energy-saving technical innovation projects with an investment of CNY 260 million, and also completed 18 energy-saving maintenance projects.

In 2011, the Company implemented 70 environmental protection projects, among which, 56 were technical innovation ones and 14 were maintenance ones. It completed the following major projects: the addition of a sintering desulphurization system at Baotong Steel, the addition of the No. 5 sintering gas desulfurization construction at Meisteel, desaltpeter renovation of 1/2 units of the power plant (the renovation of No. 1 unit was finished in the 2011 annual maintenance activities), the electric dust removing device renovation of 1/2 units of the power plant, and the technical renovation for stainless steel cold rolling wastewater treatment station. It also commenced the following projects: the technical renovation of the stainless steel sintering desulphurization, the comprehensive renovation of the steel slag treatment (Phase II), the renovation of the 2BF cast house de-dusting system at the ironmaking plant, and the treatment for wastewater containing cyanogen, fluorin, ammonia and nitrogen at the Luojing Plant.

## Perfecting the whole process management of secondary resources

The Company systematically carried out the optimization of the comprehensive treatment for secondary resources. Firstly, the Company promoted the industrialization of secondary resources by providing technical support and making coordinated progress. This included the industrialization of the slag and micro dust, magnetic materials, waste refractory materials, and waste oil; the steel slag and micro dust trial line, and the further usage of steel slag products such as the water permeable brick and the shot blasting material. Secondly, the Company continued to carry out the environmental renovation on the Baoshan District secondary resource storage fields: 27 of the 42 steel slag storage fields were cleared and the goal was to keep only three storage fields. Thirdly, the Company promoted the research and application of secondary resource reproduction. These secondary resources were well recycled at the Company: iron and steel slag, and steel slag only were reclaimed for sintering and steel making; low-Zn sludge containing iron was directly used; high-Zn sludge containing iron was used for pig iron production; and limestone sludge was recycled at the power plant and sintering desulphurization. The comprehensive utilization rate of such resources at the Headquarters reached 98.81%, and the reproduction rate of such resources reached 27.26%, which was a new record.

Baosteel Co., Ltd. has been actively contributing to the energy-saving and emission reduction industry development and the construction of "resourcesaving and environmentally-friendly" enterprises through comprehensive resource utilization, regeneration and recycling. Therefore, it had been awarded the title of Top Ten Shanghai Enterprises in comprehensive resource utilization in 2010 by the Shanghai Association of Resource Utilization.

#### Further improving the environment

To enhance the Company's image of environmental protection and reduce the side effects on the environment caused by large-scaled constructions, increased production scales and aging equipment, the Company initiated a series of environmental improvement activities, based on urgency. In the meantime, the Party and government working groups have joined hands in environmental improvement by further advocating the necessity and importance of environmental improvement and encouraging employees to cultivate good habits and contribute to environmental improvement. The Company compiled the "2011-2015 Plan for Green Landscaping Systematic Renovation and Upgrading at the Baosteel Co., Ltd. Headquarters''. In 2011, the Headquarters'' green landscaping renovation covered an area of 111,300 m<sup>2</sup>, 32,500 m<sup>2</sup> of which was newly added.

The Company also organized the "Three-year Action Plan for Environmental Renovation at Plants" and set up renovation projects to deal with emission sources. It planned to complete the comprehensive renovation of seven projects, including the dust control of the material field, permanent secondary resource field and torpedo car repair field. It aimed at thoroughly changing the environment of the plant by carrying out the planning in an orderly way.

Despite the fact that the stainless steel business unit is increasing at the production site, the Company endeavored to make good use of every patch of land for greenery and achieve appropriate landscaping. Currently, the landscaping of the plant area covers nearly 900,000 m<sup>2</sup>, with over a hundred kinds of bushes and trees, reaching a landscaping rate of nearly 30%.

Since 2007, the special steel business unit has carried out the "green project" every year to beautify the environment of the plant area. In the past four years, an accumulative area of  $160,000 \text{ m}^2$  of landscaping had been added. The plants chosen are the ones with strong ability in air purification, and highly adaptive. At present, there are over 40 kinds of plants, and the landscaping rate surpasses 30%.

#### Constructing harmonious communityenterprise relationship

In response to the concerns raised by a few people living in the Yuepu No. 2 Village over noise and dust pollution, Baosteel carried out professional treatment for the No. 3 Hot-rolling noise and the No. 2 Steel powder dust based on the national emission standard. The treatment was effective and the emission was control, reaching the industry's leading level.

In 2011, Baosteel further reduced the potential effects of the noise from machinery units on the areas outside the plant area by taking various technical measures to reduce noise in the areas of the heat furnace, , the main rolling plant, No. 4 Casting cycling water station and the coal gas pressure addition station. On the other hand, Baosteel and the Yuepu No. 2 Village started joint construction. Baosteel sponsored the Baosteel District Government to carry out the comprehensive renovating project of old house. Through such measures as changing the flat areas to slops, second-time water supply facilities renovation, road expansion and induration, drainage repair and cleaning, and green landscaping, the houses had achieved better performance in anti-leakage, heat insulation and warmth retaining. The environment was greatly improved too, bringing tangible benefits to the people living around. The Residents'' Committee of the Yuepu No. 2 Village sent two "thank-you" banners to Baosteel - one said "joined hands in building a harmonious society, and enjoy the fruits of renovation together," and the other said"Thank you for the great support, and build a low-carbon community together".

In order to reduce the environmental concerns from people living around Baosteel cold-rolled thin plates in the Wusong industrial area, Baosteel continued to increase its investment in environmental protection and reduce emission, on the basis of stable up-to-standard emission control. In 2011, in response to people's dislike of the smoke emission from the acid regeneration unit of the cold-rolled thin plate plant, technical renovation was made to reduce the water percentage in the gas and change the emission route. Tangible results were achieved. On the other hand, the Company deepened the joint construction on the environment with surrounding communities. For possible influences on the surrounding communities, the Company actively coordinated the renovation promotion work jointly conducted by the community and the representatives of the CCPC of the Baoshan District. Baosteel's work on environmental protection was widely recognized by local residents. At the end of December 2011, the representatives from the Baoshan District CCPC sent a letter to the leadership of Baosteel, saying t "thank you to Baosteel for your effort in internal control of environmental protection and for your great support of the environmental improvement in the surrounding area of the Fuhao community".

Baosteel maintains a regular exchange with the Yuepu Township Government, the Yuepu No. 2 Residents'' Committee, the Fuhao Residents'' Committee and some of the residents. The Company established a hotline to gain the knowledge of local residents'' understanding of Baosteel's environmental protection and convey related information on Baosteel's active measures in environmental protection to the residents and gain trust and support from them.

Under the guidance of governments at various levels, Baosteel will continue to track all environmental complaints and endeavor to pursue a harmonious development with local communities.

In 2011, the Company compiled the measures for environmental incident management, and comprehensively visualized environmental protection performance evaluation methods, which helped to construct the Company's environmental risk quantifiable appraisal mode by focusing on risk recognition, risk mitigation and risk assessement, and building an indicator system. It also organized the compilation of environmental risk cases, exercised monitoring on major risk sources and risk grade change, and perfected the risk warning mechanism. The Company issues a quarterly report on environmental risk control. Environmental Management Policy and Organizational Structure Management System

- Environment and Energy Solution
- Cost of Environmental Protection
- Environmental Management Performance

#### **Cost of Environmental Protection**

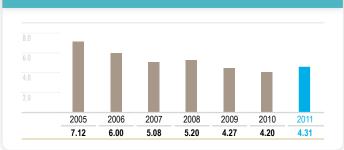
As shown in the following chart, the composition of the Company's cost of environmental protection in 2011 was categorized into expenses and capitalized expenditure that amounted to CNY 4.174 billion and CNY 1.764 billion respectively. In recent years, due to the large investment in the desulphurization facilities in the power plant and sintering, the operational expenses and depreciation of environmental equipment have taken up an increasing higher percentage in the compensation project costs, which reached 80.37% in 2011.

Cost structure of environmental protection

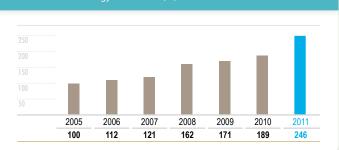
Cost of expenses	CNY 4.174 billion
Cost of Capitalized expenditure	CNY 1.764 billion

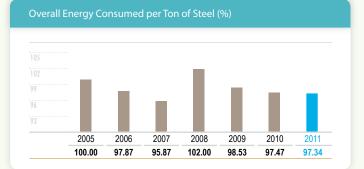
Category of Environmental Protection Cost	Item of Environmental Protection Cost
	Discharge fee
	System examination fee
	Environment monitoring fee
Expenses	Facility operation fee
	Facility depreciation charge
	Labor fee
	Hazardous substance transportation fee
	Landscaping fee
	Solid waste disposal fee
	Investment in new projects and updating and expanding existing projects
	R&D expenses
	Others
Capitalized expenditure	Investment in new projects and updating and expanding existing projects
	"Three Simultaneous" accompanying project investment

#### Fresh Water Consumed per Ton of Steel (t/t-s)



#### Total Residual Energy Recovered (%)





#### **Environmental Management Performance**

#### Energy management indicators

In 2011, the Company met all energy conservation targets, saving 270,000 tons of standard coal.

#### Consumables

2011 Company's major resource consumption

Type of Resource	Unit	Amount Consumed
Iron ore and finished ore	10,000 tons	3 44. 4
Steel scrap	10,000 tons	566.78
Coal	10,000 tons	1629.53
Natural gas	100 million m <sup>3</sup>	5.35
Purchased electricity	100 million kw/h	70.1
Raw water	100 million m <sup>3</sup>	1.15

#### 2011 One-sentence Story

- → Huangshi Company eliminated two coal-combustion boilers, becoming the first enterprise with a collective heat supply in Huangshi.
- → The first set of immersed ultrafiltration membrane pure water production project in China was put into operation at Baosteel.
- ightarrow 1580-unit heat delivery and heat installation reached the top level of the national clean production.

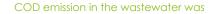
18

# **270,000** tons

Saving

The total SO<sub>2</sub> emission was

reduced by

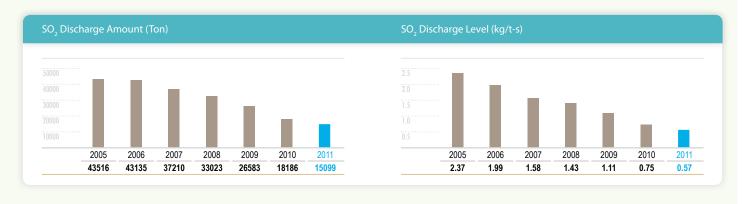


,1



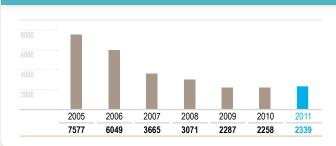
#### demonstration Emission control indicators

In 2011, apart from the enhanced technical support and the operation of environmental management, the Company carried out a number of environmental protection projects. As a result, all indicators were within the annual targets, with major ones continuing to be raised. Comparing to the performance in 2010, the total  $SO_2$  emission was reduced by 17%, and the COD emission in the wastewater was reduced by 5.1%.

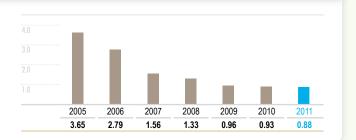


2005 2005 2010 2006 2008 2009 2010 2006 2007 2008 2009 2007 2011 2011 20931 19425 17626 13611 12417 12618 12306 1.14 0.90 0.75 0.59 0.52 0.52 0.46

#### Wastewater Discharge Amount (10,000 ton)



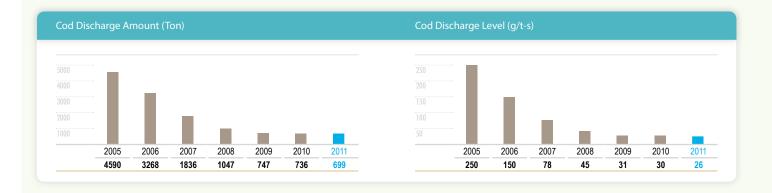
#### Wastewater Discharge Level (t/t-s)



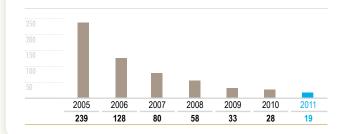
# **18** Green Production

Environmental Management Policy and Organizational Structure Management System Environment and Energy Solution Cost of Environmental Protection

Environmental Management Performance



Oil Discharge Amount (Ton)



 15
 12
 9

 6
 3
 2005
 2006
 2007
 2008
 2009
 2010
 2011

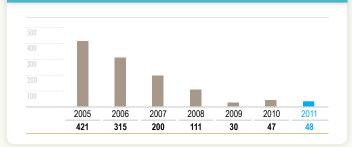
2.52

1.38

1.13

1.00

NH<sub>3</sub>-N Discharge Amount (Ton)

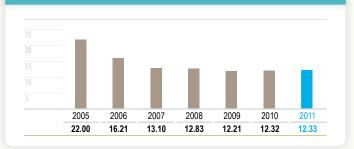


Atmospheric Dust Deposition in Plant Area (t/km<sup>2</sup>·month)

3.38

13.00

5.93





#### Secondary resource utilization management indicators

In 2011, the Company's secondary resource utilization rate reached 27.26%, which was at its best performance in records.

100

ltem s	Industrial olid wastes	Blast furnace slag		Furnace slag and fly ash	Iron-containing dust slime	Hazardous waste	
Amount	1732.53	638.25	445.6	46.86	218.48	5.40	310.9
Reuse of secondary resources							•
ltem	Unit	2006	2007	2008	2009	2010	201
Comprehensive reuse rate	%	98.32	98.48	98.33	98.26	98.58	98.8
Recycling production utilization ra	ate %	22.48	22.67	23.47	25.38	26.04	27.2

100

#### Safe disposal of hazardous waste

Rate of safe disposal of hazardous

waste

Major hazardous wastes from production in Baosteel include waste oil (barrels), oil-containing wastes, oil-containing wastewater, chrome-containing wastes, chrome-containing sludge, phosphide sludge, organic wastes, waste desulfurization substance, water-containing naphthaline slag, tin-containing waste liquid, waste acid and alkali liquid, waste emulsification liquid, waste light tubes, waste fixative liquid, and catalyzer. In 2011, Baosteel Co., Ltd. disposed 55,301.92 tons of various hazardous wastes, and all the disposal work was entrusted on those companies with qualifications for hazardous waste treatment.

%

To reduce the secondary pollution of the hazardous wastes in the process of transportation and raise the timeliness in hazardous waste treatment, the Company adopted the localized management of all hazardous wastes. In recent years, the Company has been stepping up the management of the hazardous wastes. The disposal of all hazardous wastes disposal was entrusted on qualified companies and were reported back to the local government for backup. All safe treatment for the hazardous wastes was recorded for reference.

#### Pollutant emission falling behind the standard

100

100

100

100

In 2011, Nanjing Meishan Energy Co., Ltd. under Meishan Steel was fined CNY 60,000 by the Administrative Department of the Nanjing Environment Bureau because its  $SO_2$  emission concentration from the boiler exceeded the national standard. Nanjing Meishan Energy Co., Ltd. has since taken active measures to improve the situation. It carried out the No. I and No.3 coal furnaces desulphurization project to provide a thorough solution to the issue of  $SO_2$  off-roof emission.

## Operating Results

Economic Value Created and Distributed Indirect Economic Impacts

#### **Economic Value Created and Distributed**

#### Operating income and cost

In 2011, faced with the rising price of fuel and raw materials, and the fluctuated market, the Company maintained a stable production in all procedures and a good balance between production and sales, optimized the internal resource flow and enhanced the cost improvement. As a result, the Company succeeded in completing various operating tasks. In the same year, 25.803 million tons of finished products and billets were sold and CNY 222.86 billion of total operating income was generated, which was a 10% growth from that of the previous year.

#### Profit

In 2011, the international and domestic economic situation and the market of up-and-down streams remained complicated and changeable. The Company took great efforts to overcome the pressure from both purchase and sales. The Company focused on its internal improvement, tapped on its potential, optimized the product structure, made a benchmark in cost reduction of all production procedures, and solidified the cost improvement results of sales and administrative expenses. The Company achieved a positive operating result, maintained its best performance in the industry, and realized an annual profit of CNY 9.26 billion.

#### Employee compensation

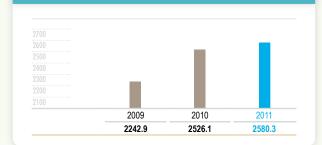
In 2011, the Company paid CNY 9.1 billion in cash to and for its employees.

#### Retained earnings and dividend distribution

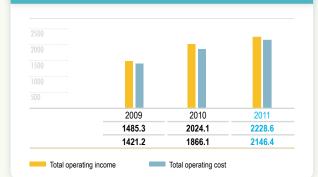
According to the Articles of the Association of the Company, the allocation order of the after-tax profit is as follows: recovery of losses, statutory reserve, discretionary reserve and common share dividend. The statutory reserve equals to 10% of the Company's after-tax profit, subject to a maximum accumulated amount equal to 50% of the Company's registered capital. In accordance with the national laws, administrative regulations and the Company's operating results and development needs, the plan for allocation of discretionary reserve and distribution of common share dividend will be developed and submitted to the Shareholders' General Meeting for approval. The Company shall not distribute any dividend before the loss is recovered and the statutory reserve is set aside.

In 2011, the Company produced CNY 73.6 billion in consolidated net profit attributable to its parent company. To meet the goal of achieving a sustainable long-term development and demonstrating the business philosophy of "creating maximum value for Shareholders', the Company proposed a cash dividend of CNY 0.20 (pre-tax) per share for 2011 in accordance with the *Company Law* and the *Articles of the Association of Baoshan Iron & Steel Co., Ltd.* 

Sales Volume of Finished Products and Billets (10,000 ton)

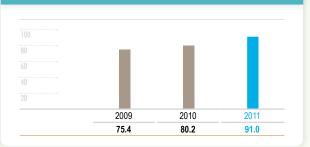


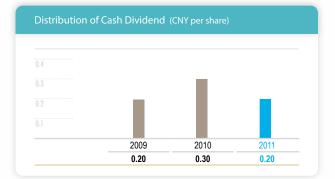
Total Operating Income and Operating Cost (CNY 100 million)





Cash Paid to and for the Employees (CNY 100 million)





#### Capital suppliers

The Company continued to optimize its debt structure in a proactive response to changes in the financial environment and changes of exchange rate.

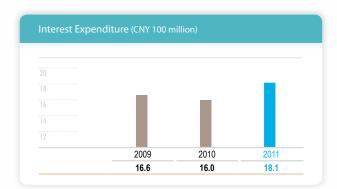
In 2011, the Company adopted the US-dollar financing strategy, reducing financial expenses. It carried out active plans to expand the scale of US dollar financing, which included 1) through changing the agent mode of imported raw material and active application for foreign debt quota, the Company exercised low-cost US-dollar financing outside of China; 2) through more negotiations with banks to actively take advantage of the policy-based low-cost US-dollar financing, the Company further optimized the US dollar debt structure; 3) the Company took advantage of the bank payment system abroad to realize short-term low-cost US dollar financing; and 4) the Company steadily increased the settlement by CNY in export to enlarge the US dollar available for financing.

In terms of exchange rate risk control, the Company closely followed the rate tendency, moderately increased the proportion of long-term US dollar borrowings, and performed interest rate swap at appropriate time to obtain stable low-cost financing.

Through these measures mentioned above, the Company managed to maintain a low cash financing cost rate of 2.1%.

Partnering financial institutions were selected based on their credit standing, business strengths and market reputation. Relations with financial institutions were coordinated at an overall level. In addition, the Company values relationship with banks. The Company entered cooperation agreements with major commercial banks, overall facility agreements and easy loan agreements, thereby assuring the financing channels and amount of the Company.

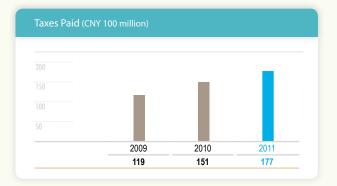


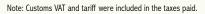


#### 🚽 Taxes

#### Taxes paid in 2011

Repaying the society with integrity and good operating results, the consolidated amount of taxes in 2011 for the Company is CNY 17.7 billion. The good tax-paying performance won the Company the "Shanghai Class "A"Taxpayers" for consecutive years.





#### Tax deductions and exemptions

The Company strictly observed tax laws and regulations of the State and reasonably utilized preferential policies. The tax reduction and exemption of the Company in 2011 were as follows:

- Covered by the preferential policy on corporate income tax of comprehensive resource utilization projects, CNY 22 million of corporate income tax was exempted in 2011.
- Covered by the R&D cost deduction policy, CNY 475 million of corporate income tax was deducted in 2011.
- Covered by the policy on deduction of special equipment investment from corporate income tax, CNY 25 million of corporate income tax was deducted in 2011.
- Covered by the deduction of tax for payment for handicapped employees, CNY 1 million of corporate income tax was deducted in 2011.
- Covered by the tax refund policy for high-tech achievement commercialization project CNY 79 million of taxes were refunded in 2011.

## **Operating Results**

Economic Value Created and Distributed Indirect Economic Impacts

#### Indirect Economic Impacts

In 2011, the Company had no indirect economic impacts including major actions, arbitrations, asset acquisition or sale or merger by absorption.

Faced with the continued slump of the global economy and stricter demands for green production, the indirect impacts and business risks from resources, energy, environmental protection and the market are becoming more and more severe.

As one of the high energy consumption and high pollution industries, the steel industry has been receiving great attention from society and has been listed as one of the major industries of "energy saving and emission reduction" under the control of the Government. Furthermore, the continuous completion and operation of new projects will increase energy consumption. The in-depth processing of silicon steel will add burdens to the Company's energy consumption per ton of steel. On top of that, Baosteel's energy consumption system is already at a high level, meaning more difficulties for further improvement. The high starting point of energy saving and consumption reduction means a very challenging future in fulfilling the goal of the "Twelfth Five-year".

The country has clearly set Shanghai as one of the pilot provinces and cities for carbon transaction. During the Twelfth Five-year, Shanghai will carry out the testing of carbon quota exchange. As one of the largest carbon emission enterprises, Baosteel is sure to be under pressure from all lines of society. In the meantime, China will gradually implement the environmental tax and carbon tax during the "Twelfth Five-year", which will further push up the Company's operating cost.

However, as all things have two sides, regardless the carbon transaction or the carbon tax and environmental tax, when appropriately dealt with, will be equally carried out among the enterprises. This means, with its existing advantages in energy saving and emission reduction, clean production, and continued investment in science and technology, Baosteel will maintain its high competitiveness in the steel industry in China and even in the world.



## Appendix

Profile of the Company and Main Affiliates

#### Profile of the Company and Main Affiliates

#### 🚽 Baosteel Co., Ltd.

Baoshan Iron & Steel Co., Ltd. (shortened as "Baosteel Co., Ltd.,""Baosteel" or "the Company" in this report) specializes in producing high-tech and high-value added steel products. Baosteel is a major supplier in the Chinese market of automobile steel, shipbuilding steel, steel for oil/gas mining and transmission, household appliance steel, electrical appliance steel, boiler and pressure vessel steel, steel for food and beverage packaging, metalwork steel, steel for special-purpose materials and high-grade steel for construction use. Baosteel also exports its products to over 40 countries and regions, including Japan, South Korea, Europe and the USA.

Main products of the Company are recognized by the international authoritative institutions. They received attestation and re-exmination by BSI IS9001 and ISO/TS16949, obtained the US API logo and Japanese JIS certificate. Baosteel's products have also been recognized by ship classification societies in China, France, the USA, the UK, Germany, Norway and Italy.

The Company has considerable strengths in R&D and endeavors to develop new technologies, new products, new processes and new equipment, which serve as an everlasting powerhouse for growth of the Company.

The Company attaches much importance to environmental protection, pursues a sustainable development and is the first in the Chinese metallurgy to have passed the GB/T23331-2009, the national energy management system authentification. It is also one of the first "National Environmentally-friendly Enterprises", "Clean Production and Environmentally-Friendly Enterprises" in the Chinese steel industry, and the "Chinese Green Companies".

#### Companies with Controlling or Minority Interests

## Shanghai Meishan Iron & Steel Co., Ltd.

Shortened as Meisteel in this report.

Registered capital and interest held: As of 31 December 2011, Meisteel had a registered capital of CNY 7.081 billion, and the Company had a 77.04% interest in Meisteel.

Assets and profit: As of 31 December 2011, Meisteel had total assets of CNY 30.73 billion and net assets of CNY 12.36 billion, and generated a net profit of CNY 0.26 billion this year.

Scope of business: Ferrous metal smelting and calendaring and sale.

#### 2 Ningbo Baoxin Stainless Steel Co., Ltd.

Shortened as Ningbo Baoxin in this report.

Registered capital and interest held: As of the end of 2011, the Company had a 54% shareholding of Ningbo Baoxin Stainless Steel Co., Ltd., which had a registered capital of CNY 3.19 billion.

Assets and profit: As of 31 December 2011, Ningbo Baoxin had a total asset size of CNY 5.90 billion and a net asset of CNY 2.93 billion and reported a net profit of CNY 0.18 billion in 2011.

Scope of business: Stainless steel plate making, processing and technical guidance and consultation.

#### Baosteel-NSC/Arcelor Automotive Steel Sheets Co., Ltd.

Shortened as BNA in this report.

Registered capital and interest held: As of 31 December 2011, the Company had a 50% interest in Baosteel Nippon, and Baosteel Nippon had a registered capital of CNY 3 billion.

Assets and profit: As of 31 December 2011, Baosteel Nippon had total assets of CNY 4.97 billion and net assets of CNY 3.41 billion, and generated a net profit of CNY 270 million this year.

Scope of business: Production and sale of cold-rolled steel plates, hot-dip galvanized steel plates and electro-galvanized steel plates used for automobiles and auto parts, and auxiliary businesses in relation to the foregoing activities.

#### 4 Yantai Lubao Steel Tube Co., Ltd.

Shortened as Lubao Steel Tube in this report.

Registered capital and interest held: As of 31 December 2011, the Company had a 79.82% interest in Lubao Steel Tube, and Lubao Steel Tube had a registered capital of CNY 100 million.

Assets and profit: As of 31 December 2011, Lubao Steel Tube had total assets of CNY 1.03 billion and net assets of CNY 0.80 billion, and generated a net profit of CNY 4000 this year.

Scope of business: Processing and sale of seamless steel tubes, mainly seamless steel tubes for structures, low and medium pressure boilers, fluid transmission, hydraulic supports, highpressure boilers, petroleum equipment, geological drilling, petroleum raw pipes and oxygen bottles.

## Appendix

Profile of the Company and Main Affiliates

#### 5 Baosteel Huangshi Coated & Galvanized Sheet Co., Ltd.

Shortened as Huangshi Coated & Galvanized in this report.

Registered capital and interest: As of 31 December 2011, the Company had a 58.45% interest in Huangshi Coating, and Huangshi Coating had a registered capital of CNY 145 million.

Assets and profit: As of 31 December 2011, Huangshi Coated & Galvanized had total assets of CNY 600 million and net assets of CNY 330 million, and generated a net profit of CNY 20 million this year:

Scope of business: Production and sale of pickled sheets, cold-rolled coils, aluminum galvanized steel plates, color-coated steel plates and related galvanized steel products.

#### 6 Shanghai Baosteel International Economic & Trading Co., Ltd.

Shortened as Baosteel International in this report. Registered capital and interest held: As of 31 December 2011, the Company had a 100% interest in Baosteel International, and Baosteel International had

a registered capital of CNY 2.25 billion.

Assets and profit: As of 31 December 2011, Baosteel International had total assets of CNY 36.42 billion and net assets of CNY 11.48 billion, and generated a net profit of CNY 1.64 billion this year.

Scope of business: Import and export of commodities and technologies approved by the state for own account and for customers" account; import of steels and scraps, processing with imported materials and three types of processing plus compensation trades.

#### 7 Shanghai Baosight Software Co., Ltd.

Shortened as Baosight Software in this report.

Registered capital and interest held: Baosight Software had a registered capital of CNY 0.34 billion. In 2011, Shanghai Baosight Software ("Shanghai Baosight") gave three complimentary shares for each ten shares to all shareholders. After the dividend distribution, the stock capital of Shanghai Baosight increased CNY 80 million, including CNY 43.67 million from the Company. As at the end of 2011, the Company had a 55.5% shareholding of Shanghai Baosight.

Assets and profit: As of 31 December 2011, Shanghai Baosight had a total asset size of CNY 2.83 billion, with a net asset of CNY 1.31 billion, and reporting a net profit of CNY 0.25 billion.

Scope of business: Research, design, development, manufacturing and assembling of computers, automation, network communication system and software and hardware products.

#### 8 Shanghai Baosteel Chemical Co., Ltd.

Shortened as Baosteel Chemical in this report.

Registered capital and interest held: As of 31 December 2011, the Company had a 100% interest in Baosteel Chemical, and Baosteel Chemical had a registered capital of CNY 2.1 billion.

Assets and profit As of 31 December 2011, Baosteel Chemical had total assets of CNY 5.23 billion and net assets of CNY 4.01 billion, and generated a net profit of CNY 0.61 billion this year.

Scope of business: Production and sale of chemical raw materials and products; technical development, technical transfer, technical consultation and technical services in chemical industry; export of self-made products.

#### 9 Nantong Baosteel Iron & steel Co., Ltd.

Shortened as Baotong Steel in this report.

Registered capital and interest held: As of 31 December 2011, the Company had 95.82% of shareholding of Nantong Baosteel Steel and Iron Co., Ltd., and Baotong Steel had a registered capital of CNY 621 million.

Assets and profit: As of 31 December 2011, Baotong Steel had total assets of CNY 2.62 billion and net assets of CNY 0.82 billion, and generated a net profit of CNY 217,000 this year.

Scope of business: Production and sale of deformed steel bars, round steel, structural sections, semi-finished steel products (including billets and ingots) and other iron/steel products and byproducts.

#### 10 Baosteel Group Finance Co., Ltd.

Shortened as Baosteel Finance Co. in this report.

Registered capital and interest held: In 2011, shareholders increased a CNY 0.6 billion capital investment in Baosteel Group Finance Co., Ltd., including CNY 0.3726 billion from the Company. As of the end of 2011, the Company had 62.1% of shareholding of Baosteel Group Finance Co., Ltd. and the Finance Co. had a registered capital of CNY 1.1 billion.

Assets and profit: As of 31 December 2011, Baosteel Finance Co. had total assets of CNY10.74 billion and net assets of CNY 1.49 billion, and generated a net profit of CNY 0.18 billion this year.

Scope of business: Taking deposits from members, granting loans to members, internal transfer settlement between members and relevant settlements, entrusted loans and investments between members, and inter-bank lending.

#### Yantai Baosteel Pipe Co., Ltd.

Shortened asYantai Pipe in this report.

Registered capital and interest held: As at the end of 2011, the Company owned 80% of Yantai Baosteel Steel Pipe Co., Ltd., with the rest owned by Lubao Steel Pipe.Yantai Pipe had a registered capital of CNY 2 billion.

Assets and profit Yantai Pipe is under construction. As of 31 December 2011, Yantai Pipe had total assets of CNY 4.36 billion and net assets of CNY 1.59 billion, and generated a net profit of CNY -0.17 billion this year.

Scope of business: Production, processing and sale of steel tubes, auxiliary products and by-products; technical consultation services relating to steel tube rolling, warehousing, import and export.

#### **12** Overseas Subsidiaries

As of 31 December 2011, the Company had subsidiaries in the USA, Japan, Germany, Singapore and Hong Kong. They played an important role in expanding the Company's market and procurement network and improving its competitiveness at the international market

### Reader's Feedback Information Form

Baosteel would greatly appreciate your comments on this Sustainability Report, which would help the Company further improve. Please fax the form with your answers to +86-21-2664 3433. You may also visit our website at http://www.baosteel.com and interact with us on line.

I. Have you found the information you need in this report? If not, please let us know.

2. Which part of this Report are you mostly interested in?

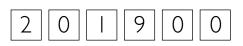
Personal information (optional):

Name	 Occupation	
Employer	 Address	
Postal Code	 E-mail	
Tel.	 Fax	

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