

# Sustainability Report 2007

Baoshan Iron & Steel Co., Ltd.

#### **About This Report**

From 2003, Baoshan Iron & Steel Co., Ltd. (hereinafter referred to as "Baosteel" or "Company") began issuing the Annual Report on Environment to the public every year. Since 2005, new contents of social responsibility and operation performance have been super-induced and its title was changed to Annual Report on Sustainable Development. This is the Company's third report since introduction.

This report was compiled with reference to *Guide to Sustainable Development Report* GRI (G3 version) and *Guide to Social Responsibilities of Chinese Industry Enterprises and Industry Association* (APR. 2nd, 2008 version).

#### Range

The report mainly describes the activities of Baosteel and its 13 branches and subsidiaries, and concerns the aspects of economy, environment and social responsibility, etc. from January 1 st to December 31st, 2007, unless otherwise specified. The above-mentioned 13 branches and subsidiaries are: Baosteel Branch Co., Stainless Steel Branch Co., Special Steel Branch Co., Special Steel Branch Co., Shanghai Meisteel Co., Ltd, Baosteel Group Nantong Steel Co., Ltd, Ningbo Baoxin Stainless Steel Co., Ltd, Baosteel-NSC Automotive Steel Sheets Co., Ltd., Yantai Lubao Steel Pipe Co., Ltd., Baosteel Huangshi Coated and Galvanized Sheets Co. Ltd., Chemical Branch Co., Baosteel Research Institute, Shanghai Baosteel International Economic and Trading Co., Ltd. and Shanghai Baosight Software Co., Ltd., Compared with the last report the main criteria have not been changed, only some contents were added to the range of report concerning Baosteel Group Nantong Co., Ltd.

The financial data in the report is stated in Renminbi Yuan (CNY). For the convenience of reference the following exchange rates are used in the report; USDI = CNY 7.3046 (or CNYI = USD0.1369), and the Euro exchange rate used is EURI = CNY10.6669 (or CNYI = EUR0.09375). Both rates are taken from the rates published by the People's Bank of China on Dec.29, 2007.

Unless otherwise specified, the electric power purchased externally is converted based on the equivalent coefficient of electric power, that is  $10,000 \text{ kW} \cdot h = 4.04 \text{ tons of standard coal}$ .

#### Language and Publishing Format

The 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 that any question arises about this report, please contact us by phone or letter at the following address:

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The report is issued in two forms - print and PDF electronic document that can be downloaded from Baosteelk Website (http://www.baosteel.com/).

Mission:	Becoming A World-class Steel Manufacturer, Devoted to Providing Products & Service with Super Value for Society
Core Values:	Credibility, Cooperation, Innovation, in Pursuit of Maximi- zation of the Enterprise's Values
Strategic Target:	Becoming A Steel Enterprise with the Most Competitive Competence in the World

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# Message from the Top Management

Stepping into a new historical development stage in the socialist construction, we are confronted by an industrialized, information-based, urbanized, market-oriented and internationalized situation which brings us unprecedented opportunities as well as unprecedented challenges. How to implement further development in China in order to cope with the opportunities and challenges has become an urgent requirement of the time, and to thoroughly apply the Scientific Outlook on Development, an important strategic plan made by the Party Central Committee at the Seventeenth National Congress of the Communist Party of China. It meets the urgent demand of promoting sound and rapid development of the national economy, and is an important guideline for our social development. The Scientific Outlook on Development takes the development as its essence, putting people first as its core, comprehensive, balanced and sustainable development as its basic requirement, and overall consideration as its fundamental approach. Being a long - run development model based on conservation of environment and natural resources, sustainable development is in conjunction with Connotation of Scientific development outlook, and it is concrete implementation and practice of scientific development outlook. It is designed for the purpose of building a harmonious relationship among human beings, society and nature in the process of development.

Being the most active group in modern economic activities and a main body for sustainable development, enterprises shoulder the holy duty of promoting a coordinated harmonious relationship between economical development, social progress and environmental protection. As one of the largest modern steel enterprises in China, Baosteel deeply feels its own great responsibility as China moves from being a large country in the steel industry to a powerful one. Baosteel will try its best to play an exemplary role as a bellwether, actively carrying out the national steel industrial policy to promote strategic restructuring and structure adjustments of China's steel industry, push ahead with industrial upgrade and technical progress, and optimize the structure through mergers, purchases and elimination of the backward productivities. As a member of "Global Compact", Baosteel always pays great attention to sustainable development and applies it to the Company's production and operations, guides and pushes forward the implementation of the Company's strategy by means of a strategic map and balanced scorecard. So we have preliminarily set up a sustainable development management system that is based on international practices, while taking into consideration China's situation and Baosteel's actual conditions.

Baosteel implements the leap-forward development strategy which takes "scale and technology" as its foundation, "scale expansion" as the main thread, "premium products and scale" as its developing mode, and further applies the important measures of developing a recycle economy to follow a new-type of industrialized road, persisting in management innovation, deepening synergy, improving soft strength and enhancing core competitiveness. Baosteel constantly seeks to strengthen internal controls and risk controls; makes an overall assessment of its internal controls, establishes and gradually improves the management system for internal control so as to form an overall risk control system and to upgrade integrated risk control skills. Baosteel takes active measures to cope with unfavorable factors such as rising raw material prices, increasing transportation cost and fierce market shocks, puts forward various key tasks, optimizes product structure, launches the activity of "reducing cost, increasing benefit" and thoroughly explores integrated synergistic effects, so as to fulfill production and operation targets in all aspects. In 2006,



the sales volume of commercial slab products amounted to 22.6 million tons; a gross operating income of RMB 191.56 billion and total profits of RMB 1.931 billion were fulfilled, realizing the preservation and increase of the value of state-owned assets.

Baosteel actively constructs a technological innovation system focusing on self-integration, and puts forward a technological innovation strategy and system construction which gives the first place to the independent intellectual property right. To aim at the environment management objective of "creating a world first-class clean iron and steel enterprise", by focusing on energy-saving and pollutant discharging reducing, Baosteel adopted advanced environmental management and developed advanced technology concerning energy saving, environmental protection and comprehensive resource utilization, so a series of new processes and new equipment have been developed. By utilizing low-carbon fuel, CO<sub>2</sub> emissions were reduced, which eased the greenhouse gases effect on the environment. Moreover, through further carrying out the national "program of taking the energy saving actions in thousand enterprises" and Shanghai's "three year action plan for promoting environmental protection", Baosteel has achieved continuous improvement in all spheres of the energy and environment indexes.

Baosteel regards obeying and serving society as its developing objective, and puts every effort into fulfilling its social duties for realizing common development with various relevant stakeholders: for employees, to adhere to the idea of putting people first as its core, to constitute a harmonious labor relationship and to provide a good stage for their development and helping them realize their own value; for users and strategic suppliers, to focus on developing long-term mutual-beneficial cooperation with them and to introduce upstream and downstream enterprises to promote green-production, taking social responsibilities and constructing green production chains together; for investors, to strive to serve investors, to steadily improve investing environment and to reward them with fine performance and stable revenue, to establish good relations with them; for community and society, to devote itself to society, to support public welfare, to actively participate in the national poverty alleviation plan, and to show concern and assist in the development of poverty-stricken areas, support 2008 Beijing Olympic Games and sponsor 2010 Shanghai Expo to do its best to promote a harmonious development of enterprise and society.

Looking forward to 2008, the Company will, based on the sustainable progress achieved in 2007, continue with every effort to practice the Scientific Outlook on Development, exert itself to impart its mature and advanced experiences in iron and steel making techniques, environmental protection and resource utilization technology and modernized management, and strike for improving and deepening the management system for sustainable development, coordinate relations with various relevant stakeholders, finally upgrade itself to the most competitive steel enterprise in the world. We will conscientiously undertake to fulfill our social responsibility to build an economizing-type and environment friendly society and to boost and realize harmonious development of enterprises, society and nature.

President: 2 2 4 2

General Manager:

竹村

# **Company Profile**

Baosteel is the largest and most modernized iron and steel complex in China. With its comprehensive advantages in reputation, talents, innovation, management and technology, Baosteel has established its status as a world-class steel manufacturer in the international iron and steel market. According to the assessment by "World Iron and Steel Industry Guide", Baosteel was ranked amongst the first three of the world's iron and steel industries in terms of integrated competitiveness and also the most potential iron and steel enterprise in the future. In October, 2007, Standard & Poor assessed Baosteel long-term credit rating as "A-" with a positive. outlook.

Taking "becoming a first-class steel manufacturer worldwide and being devoted to providing value-added products and service" as its mission, "reputation, cooperation, innovation, and seeking the maximization of the enterprise value" as its core value, and "becoming the most competitive iron and steel enterprise in the world" as its strategic target, Baosteel carries out the leap-forward development strategy, which is based on "technology and scale" and takes the important measures of developing a recycle economy to follow a new-type of industrialized road, persisting in management innovation, improving soft strength and enhancing core competitiveness.



Baosteel specializes in producing high-tech and high-value-added steel products. Meanwhile it is also engaged in trade, shipping, coal chemistry, IT service and finance. Its products covers three major categories: carbon steel, stainless steel and special steel, including hot rolled coils, heavy plates, normal cold rolled sheets, galvanized plates, tinned plates, color coated plates, silicon steel, seamless pipes, hot rolled pickled strips, high-speed wire rods, stainless steel, special steel etc., which are widely used in fields of automobile, household appliances, petrochemical industry, machinery manufacturing, energy transportation, architecture and decoration, metal ware, aerospace, nuclear power, electronics and instruments. The Company executes a "Target Focusing Competitive Strategy" in its main business of iron and steel with a focus on the development of overwhelming products for automobiles, household appliances, silicon steel, pipeline, energy, shipping, stainless steel, high alloy, etc., to enhance their integrated competitive competence and maintain their dominant position in the domestic steel plate market.

The Company has adopted an international advanced quality management system, and its main products are all recognized by the international authoritative institutions. The Company has received the following certifications along with the rights and privileges pertaining to them: attestation and reexamination by BSI (British Standards Institution) ISO9001; the emblem of API (American Petroleum Institute); certificate from JIS (Japanese Industrial Standard) in Japan and passed the attestation of QS 9000 system by GM, Ford and Chrysler, three most famous car makers in the world; and Baosteel's products have also obtained recognition by seven ship classification institutions in China, France, America, Britain, Germany, Norway and Italy.

The Company possesses tremendous research and development strength, mainly undertaking the development of new technologies, new products, new processes and new equipment, which has accumulated vigorous driving force for the company's development.

The Company attaches great significance to environmental protection, has clean production practices, develops recycle economy and pursues sustainable development. It is the first enterprise in China's metallurgical industry to pass the ISO14001 certification, and the first one awarded the title of "national environment friendly enterprise" in Chinese metallurgical industry and Shanghai.

In 2004, Baosteel acceded to "Global Compact", being one of the first three enterprises which joined this treaty in China . In 2006, Baosteel joined "World Business Council for Sustainable Development" (WBCSD), becoming the 2nd domestic enterprise which joined the organization, and is among the first who joined WBCSD in the Steel and Iron industry worldwide. The Company supports and implements the UN's Global Compact to uphold sustainable development, laying stress on environmental protection, pursuing recycle economy and harmonious development of society, so as to make its due contribution to improving the environment and fulfilling its social duties.

#### Development Trend of the Steel Industry and the Market Competition Pattern Facing the Company

#### Development Trend of the Steel Industry

Considerable progress was made in the world steel industry in 2007. The statistics by the International Iron and Steel Association shows that world crude steel total output reached 1344 million tons, an increase of 7.5%, and China's total output increased by 15.7% to 489 million tons, accounting for 36.4% of the world total output.

Since 2002, the world steel industry has entered a new development stage. In the steel market, prosperity has emerged in both supply and demand, and steel prices have been rising continuously. The CRU global steel price index has risen from 94.6 point at the end of 2002 to 176.2 point by the end of 2007. It shows that the world steel industry is now in a long period of prosperity.

Along with the world's economic center moving from developed countries to developing countries, especially to emerging developing ones, global production and consumption of iron and steel began to transfer from mature markets in developed countries to developing ones, particularly emerging developing countries and regions. The dominating power in the world steel market tends to shift from Europe and America towards Asia and surrounding areas. According to the International Iron and Steel Association, in 2007 and 2008, the demand for iron and steel in four countries, China, India, Brazil and Russia, will increase respectively by 12.8% and 11.1%, and these four countries will contribute to the global steel demand increment by 77% and 71% respectively.

In 2005 the Chinese government promulgated "Development Policy for the Iron and Steel Industry". This document places emphasis on adjusting steel industry distribution, optimizing steel product structure, enhancing self-innovation ability and developing a recycle economy so as to strengthen the competitiveness and to realize sustainable development. Since the policy went into effect, the steps in product structure adjustment have quickened, a certain degree of achievement has been made in eliminating backward productivity, controlling investment, especially investing in low-grade products, therefore, the self-innovation ability of steel enterprises have been enhanced. Now the comprehensive level of some equipment has been advanced in the world. A notable effect in optimizing product structure has been produced.

In 2008, with further effect of the policy and macro-control, many problems existing in the developing process of our steel industry, such as over production, excessive stock of low-grade products, slow centralization and reducing the speed of productivity will be solved, while enhancing the overall strength and international competitiveness.

With industrialization and urbanization progressing, demand for iron and steel by major downstream trades will increase stably and steadily, so there will be great long-term potentialities and a wide market for our steel industry. It is estimated that in 2008 exports will slow down due to policy restrictions but this can be overcome and a balance can be maintained between supply and demand.

In 2008, operations cost for steel enterprises will obviously increase because of the following factors: firstly, resource prices in international markets will greatly increase resulting from the flourishing demand in emerging developing countries; also, resource prices at home will rise due to a tax increase on resources, which will impact enterprises' production cost. Moreover, flourishing demand for transportation due to internationalization and growing trade and sharp increases in petroleum prices, will place a heavy burden on enterprises' logistics cost; secondly, with land resources becoming more and more strained at home and greater pressure to protect the environment, both of these two factors will also have a further impact on enterprises' cost. Besides, labor cost will also go up with the implementation of relevant laws and regulations such as "Labor Contract Law" and "Social Insurance Law".

In order to face the rising cost of raw materials and fuel, our major steel enterprises must strengthen their resource exploration and development strategies at home and abroad.

At present, our country's steel industry is, after a round of rapid increases, in a new stage which features promoting industry upgrade by self-innovation, optimizing industry structure through mergers and reorganization, attaching great significance to energy-saving and environmental protection, and developing a recycle economy. In the coming years, connotative growth with stable and relatively fast development as the main tune will be an important feature of our steel industry.

#### Market Competition Pattern Facing the Company

In this new development stage, competition among iron and steel enterprises is focusing on scale, product structure, cost, supply chain, adaptability to environment, therefore, the enterprises tend to pay more attention to upgrading integrated competitiveness.

Facing the possibilities and challenges brought about by the constantly changing competitive environment at home and abroad, the Company seized the opportunity to work out a new development program in 2007 and progressively change the development strategy from "premium products" to "premium products and scale"

At present, the Company possesses a wide-spread national sales and service system. For high-grade products such as automobile steel sheet, etc., Baosteel possesses leading research and development capability, production techniques and utilization techniques in the country. Product differentiation is the Company's core advantage. In the current fierce market competition the Company will continue to maintain a comprehensive advantage in the field of high-grade products, on which the Company concentrates its energies. In 2007, product structure was further optimized and the sales volume of strategic products and unique and leading products increased rapidly and steadily.

For carbon steel products, in 2007 the domestic market's share of cold rolled steel sheets of the Company for automobiles, household appliances plates, tinned plates, pipeline steel are 50.3%, 36.8%, 18.9%, 34.5% respectively, occupying a leading position in China. In the future, the Company will pay more attention to developing products of cold rolled silicon steel, heavy steel for shipbuilding, high intensity steel for oil-storage tanks etc., and will implement tactics for developing advanced steel sheets for automobiles, so as to maintain and expand its leading advantages. For stainless steel products, the sales volume in 2007 was almost equal to that in 2006, ranked second in the country. In the near future, with major domestic stainless manufacturers increasing productivity, competition will be more acute in the stainless steel market. The Company will take important strategic measures to optimize burden structure, to accelerate the structure adjustment of stainless steel products, to break through the "bottleneck" of product quality and to speed up stock rotation, so as to develop our stainless steel products. For special steel products, sales volume proportion of strategic products has been significantly raised, an increase of nearly 13% compared to that of 2006. The output of stainless steel series and special smelting series has accounted for 24.9% of the total of three special product series. Later, after starting production of high alloy bar and putting into operation the alloy strip project, the alloy steel production structure will be further optimized and the proportion of unique and leading products will further increase.

#### Future Development Strategy

#### **Opportunities**

Influenced by the subprime mortgage crisis of the United States, the world economy in 2008 will slow down further, however, owing to non-synchronism existing in the world's major economic communities and strong growth in emerging markets, the global economy can still experience a comparatively mild growth. According to the latest report by the IMF, growth of the global economy is preliminarily estimated to be 4.9% in 2007, and 4.1% in 2008. Emerging developing countries will continue to experience growth, such as China (10%) and CIS countries (7.0%). Under such a background, the demand for steel in the domestic and foreign markets will have stable growth, thus providing a fine developing space and bringing a developing opportunity for our country's steel industry.

Along with the strengthening of macro-controls and the quickening pace of elimination of backward industries, specifically the completion of bankrupted, closed, merged and changing production for the first batch of projects and unfolding these measures for the second batch, 2008 will be a key year when the tasks to adjust industry structure and eliminate backward productivity will make important achievements in our steel industry.

Following the rapid development of the leading trades and main steel-consumption trades such as building construction, machinery, automobiles, shipbuilding, household appliances, petroleum and natural gas, the demand for steel in China will continue to stably increase on the whole. In 2008, supply and demand in the iron and steel market should see a basically balanced situation.

For a period of time in the future, a new consumption direction, in which the housing and automobile trades will play a primary role, and trades such as home decorations, luxury goods, electronic communications and tourism will play a secondary role and will stimulate a steady demand for high grade steel products. With the product structure optimization in our steel industry moving forward, import of high grade steel will gradually be reduced. However, since the substitution shortage problem will still exist, the demand for high grade steel products will still grow relatively fast.

Our country's steel industry policy and other relevant policies and measures encourage steel enterprises to develop domestic local market distribution and adjustments, thus bringing a strategic opportunity for us to carry out the "premium products and scale" strategy and realize leap forward development.

A series of policies and measures laid out by the state, such as strict control of fixed assets investment, elimination of backward productivity, enhancement of energy-saving and reduction of emitting pollutants, adjustment of export taxes, raising the threshold of entry into the steel industry. A lot of preferential policies of the new Enterprise Income Tax Law, such as reducing expenditure of enterprises' income tax, implementing tax reduction, tax credit, increased deductions of technological research and development expenses for special equipment used for resource-saving and environmental protection, actively promoting production and operations in the steel industry.

#### Challenges

Alongside the export tax policy to control low grade products effectively and the cost increases in our steel products in the international market due to the RMB's sustained appreciation, the pressure of reduced exports of our steel products is becoming greater. If the supply and demand balance is broken, our steel enterprises will be under great pressure in their production and operations.

It is an important strategic measure of our steel industry to enhance energy-saving and reduce pollutant emissions so as to realize sustainable development. It is clearly stated that by 2010 China's GDP energy consumption will be reduced by 20% and total pollutant emissions will be reduced by 10% compared with those of 2005. As the requirement of our country for energy-saving and environmental protection is more and more strict, the Company will face challenges of elimination of backward productivity and enhancement of energy-saving and environmental protection to maintain its leading position during merging and acquisition.

In order to prevent the economy from being over-heating, our government has adopted tight monetary and credit policies, so financing of capital-intensive steel enterprises will be restricted to a certain extent. In the event of rapid increases in raw material cost, environment cost and debt cost, domestic enterprises will suffer serious pressure resulting from cost-up and profit-down.

The Company will still face isomorphic competition as some domestic steel enterprises continue to expand their productivities at low cost and rapidly upgrade their technical equipment.

After add-issuance and acquisition, the Company's operation range expanded rapidly, thereby an unbalanced situation in management level between various internal units is appearing, which will lower the Company's integrated management level and weaken the management efficiency. At present, although this unbalanced situation has been slightly improved, it is necessary for us to put more effort on realizing perfect harmony in production and management.

#### **Development Strategy**

As a world-class fast-growing steel enterprise, Baosteel will, on the basis of existing achievements, go on executing its mission - "becoming a first-class steel manufacturer worldwide devoted to providing value-added products and services"; persevering at its core value - "reputation, cooperation, innovation, and seeking the maximization of the enterprise value"; pursuing its strategic targets - "becoming the most competitive iron and steel enterprise in the world"; carrying out a leap-forward development strategy having "scale and technology" as its foundation , "scale expansion" as the main thread, "premium products and scale" as the developing mode, and pursue the important measures of developing recycle economy to follow a new-type of industrialized road, persisting in management innovation, deepening synergy, improving soft strength and enhancing core competitiveness.

Based on the principle of "win-win", the Company will establish a complete, optimized and competitive supply chain, and make cooperative operation with partners of customers and suppliers to achieve a complementary advantage and enhance market competitiveness together.

The Company executes a "Target Focusing Competitive Strategy" with focus on the development of strategic products for automobiles, silicon steel, pipeline steel, pipes used for energy, shipbuilding, stainless steel, high alloy etc. so as to enhance their integrated competitive competence and maintain their dominant position in the domestic steel plate market. And the Company will uphold Scientific Outlook on Development to march forward on a new-type of industrialized road with Baosteel characteristics.



# Operation Plan in 2008

2008 is the key year for the Company to implement its business plan. Starting from a new round of development strategy, the Company will continue to consolidate its advantageous area, deepen its reform and integrate steel business. It will tag its potential for management, increase its soft power and core competitiveness, and realize leap-forward development on scale, quality, technology, and circular economy, in an effort to achieve sustainable development.

General operation principle: To deepen cooperation, boost soft power and increase core competitiveness; to innovate and reform, expand new space for development, and realize sustainable development.

General operation target: To realize a revenue of Rmb 200 billion, a profit of Rmb 1.2 billion from integrated development, over 1% of revenue investment in R&D, and Rmb 2.6 billion from reducing cost and increasing efficiency. Besides, it requires that the overall energy consumption per ton of steel is less than 737Kg of standard coal.

In view of the uncertain factors existent in the steel market in the latter part of the year and the possible increase of the cost of raw material and fuel, the administration will, so long as the market situation basically remains unchanged, adopt effective measures and strive to achieve the following business objectives in 2008: producing 21.37 million tons of iron, 24.55 million tons of steel; sell 24.19 million tons of raw materials with a revenue of Rmb 200 billion and cost of Rmb 171.10 billion.

In accordance with the business policy and objective of 2008 and the requirements for a new round of development, the Company will focus on the following work in 2008:

- Making effort to push the production and management of 2008 to a new stage;
- Systematically promoting the process, mechanism and standards of integration and pursuing the maximized efficiency of the Company;
- Accelerating the implementation of the relevant investment projects for the new round of development and expanding the scale and product development of the Company;
- Improving the construction of the purchase and supply chain and boosting cooperation;
- Further optimizing the mechanism of technology innovation system and increasing the efficiency of technology innovation;
- Making effort to develop the circular economy and achieving new breakthroughs in energy conservation and environmental protection;

Implementing the strategy of boosting development through talents and increasing the competitiveness of the Company's specialized personnel;

Conducting internal contests to improve performance, save energy and reduce emission, try to be environmentally friendly, reduce cost and increase efficiency and cultivate integration synergy;

- Accelerating construction of the corporate culture and boost the influence of the Company;
- Conducting strict management to ensure production safety; and
  - Promoting the construction of good employment relation and harmonious enterprise

# Capital Stock Change and Shareholders

# Changes in Capital

#### Changes in Capital

(Unit: 10 thousand shar							
	Beginning o	Beginning of year		Changes in the period (+,-)		End of year	
	Number of shares	Percentage	Expiry of lockup period	Sub-total	Number of shares	Percentage	
I. Shares subject to conditional sales							
I. Government	1,277,651.74	72.96%	- 87,560	- 87,560	1,190,091.74	67.96%	
2. Domestic state-owned institutions							
3. Other domestic investors	2.25	0.00013%	0	0	2.25	0.00013%	
Including:							
Domestic legal persons							
Domestic natural persons	2.25	0.00013%	0	0	2.25	0.00013%	
4. Foreign investors							
Including:							
Foreign legal persons							
Foreign natural persons							
II. Shares not subject to conditional sales							
I. Rmb common shares	473,546.01	27.04%	87,560	87,560	561,106.01	32.04%	
2. Domestic listed foreign investment shares							
3. Overseas listed foreign investment shares							
4. Others							
III.Total	1,751,200	100%	0	0	1,751,200	100%	

#### Shares Subject to Conditional Sales

						(Share)
Shareholder	Conditional shares at beginning of year		Conditional shares added	Conditional shares at end of year	Reason for lockup	Date of expiry
Baosteel Group	12,776,517,441	875,600,000	0	11,900,917,441	Commitment in non- tradable share reform	20 August, 2007
Li Li	22,500	0	0	22,500	Supervisor shareholding	
Total	12,776,539,941	875,600,000	0	11,900,939,941		

#### Share Issuing and Listing

Following the approval by the China Securities Regulatory Commission (CSRC), as provided in the approval document No. [2005]15, on 27 April 2005, the Company issued five billion new shares at an offer price of Rmb 5.12 per share, including three billion state-owned shares to Baosteel Group and two billion to the general public. The 1,649,857,731 shares of preemptive rights offering to existing shareholders were listed on 9 May 2005 at Shanghai Stock Exchange. As indicated in the public subscription notice, the off-line offerings of 350,142,269 shares to institutional investors on the pro-rata basis bear lock-up periods: the 7,986,000 shares to C-type investors, with a lock-up period of a month, were listed at Shanghai Stock Exchange on June 9, 2005; the 299,036,269 shares to B-type investors, with a lock-up period of two months, and the 43,120,000 shares to A-type investors, which bear a three-month lock-up period, were listed at the same stock exchange on July 11 and August 18, 2005, respectively.

In accordance with the reform program approved on the 2005 First Interim Shareholders' Meeting held on 12 August 2005 and enacted on 18 August 2005, Baosteel Group made tradable its shares in the consideration of a payment to the tradable shareholders and the nontradable shares of the Group circulated on market when credits were made to the accounts of the shareholders. After the implement of the program, the total capital stock of the Company remains to be 17,512,000,000. Due to the reform program, Baosteel Group issued a total of 387,700,000 call warrants as considerations paid to existing tradable shareholders. The warrants, abbreviated as "Baosteel JTB1" and with the stock code 580000, listed at Shanghai Stock Exchange on 22 August 2005. On 30 August 2006, altogether 5,542,559 JTB1 warrants were exercised and a total of 5,542,559 shares were transferred from the account of Baosteel Group to the holders of the warrants. The shares began to be traded on August 31, 2006, and the total share of the Company remained unchanged. The list of the warrants was terminated and delisted at Shanghai Stock Exchange on 4 September 2006.

#### Shareholders

## Shareholders and Shareholdings

Number of shareholders					753,074
Top 10 shareholders					
Name	Type of investor	Percentage	Total shares	Shares subject to conditional sales	Shares pledged or frozen
Baosteel Group Corp.	State-owned	73.97%	12,953,517,441	,900,9 7,44	None
Bank of Communications—E Fund 50 Index Fund	Others	0.59%	103,999,907	0	None
Chinalife Insurance Company Ltd.—Dividends—Personal Insurance—005L—FH002	Others	0.51%	88,505,000	0	None
Chinalife Insurance (Group) Company Ltd.—Traditional Common Insurance Products	Others	0.47%	82,174,213	0	None
Industrial and Commercial Bank of China—Invesco Great Wall Blue Chip Investment Fund	Others	0.42%	74,119,068	0	None
Industrial and Commercial Bank of China—E-Fund Fund of Stable Growth	Others	0.41%	71,499,886	0	None
Bank of China—Harvest Stable Open Stock Fund	Others	0.40%	70,826,003	0	None
Agriculture Bank of China—China Post & Capital Stock Fund of Central and Growth Investment	Others	0.39%	67,870,789	0	None
Industrial Bank—Industrial Trend Mixed Stock Investment Fund	Others	0.38%	66,200,000	0	None
Industrial and Commercial Bank of China—BOC International Investment Stock Fund of Stable Growth	Others	0.37%	65,615,754	0	None

Top 10 tradable shareholders

	Share type
1,052,600,000	Rmb common share
103,999,907	Rmb common share
88,505,000	Rmb common share
82,174,213	Rmb common share
74,119,068	Rmb common share
71,499,886	Rmb common share
70,826,003	Rmb common share
67,870,789	Rmb common share
66,200,000	Rmb common share
65,615,754	Rmb common share
	103,999,907 88,505,000 82,174,213 74,119,068 71,499,886 70,826,003 67,870,789 66,200,000

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

I. Chinalife Insurance Company Ltd. is a subsidiary of Chinalife Insurance (Group) Company Ltd;

(Unit: Share)

2. E Fund 50 Index Fund and E-Fund Fund of Stable Value Growth are managed by E Fund Management Co., Ltd.

## Trading Dates of Shares Subject to Conditional Sales

Unit: Share					
Date	New tradable shares after the expiry of lockup period	Balance of the shares subject to conditional sales	Balance of the shares not subject to condi- tional sales (Existing shares and new shares)	Notes	
August 19, 2008	,900,9 7,44	0	17,512,000,000	Within the 12 months after the 24-month non- trading period since Baosteel Group obtained the circulation right, the shares to be traded at stock exchanges shall not exceed 5% of the total shares and the shares traded shall be at a price no less than Rmb 5.63 per share. Within the three years after the company's shares got the circulation right, the Group's shareholding would not be lower than 67% of the total shares.	

#### Holding Company and Controlling Shareholder

(1) Holding company	/
Name	Baosteel Group Corporation
Legal representative	Xu Lejiang
Date of incorporation	17 November 1998
Registered capital	Rmb 49.478571 billion
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 and mining, 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 , domestic and international trading and services where allowed.

#### (2) Controlling shareholder

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

#### (3) Relationship between the Company and its controller



# Directors, Supervisors and Senior Management

#### Directors, Supervisors and Senior Management

Board of Directors		
Name	Position	Gender
Xu Lejiang	Chairman	Male
Ouyang Yingpeng	Vice Chairman	Male
Fu Zhongzhe	Director, President	Male
Li Haiping	Director, Vice President	Male
He Wenbo	Director	Male
Wu Yaowen	Director	Male
Laura Cha	Independent Director	Female
Buck Pei	Independent Director	Male
Katherine Tsang	Independent Director	Female
Sun Haiming	Independent Director	Male
Edward C. Tse	Independent Director	Male

Board of Supervisors				
Name	Position	Gender		
Li Li	Chairwoman of Board of Supervisors	Female		
Zhou Zhuping	Supervisor	Male		
Zhou Guiquan	Supervisor	Male		
Liu An	Supervisor	Male		
Han Guojun	Supervisor	Male		

Senior Management		
Name	Position	Gender
Fu Zhongzhe	President	Male
Li Haiping	Vice president	Male
Zhao Zhouli	Vice president	Male
Cui Jian	Vice president	Male
Zhu Junsheng	Vice president	Male
Chen Ying	Financial Controller, Secretary to Board of Directors	Female
Chen Shouqun	Assistant to President	Male
Li Yongxiang	Assistant to president	Male
Xie Wei	Assistant to president	Male
Lou Dingbo	Assistant to president	Male
Wang Li	Assistant to president	Male

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

The following resolutions concerning recruitment and termination of directors, supervisors and senior executives were approved in the fifth meeting of the third Board of Directors of the Company held on 29 March 2007 and submitted to 2006 Shareholders' Meeting for approval: accepting Mr. Xu Lejing's resignation as Chairman of the Board of Directors, Director and other positions in the Board of Directors and electing Mr. Ai Baojun Chairman of the third Board of Directors; accepting Mr. Ai Baojun's resignation as President of the Company and Mr. Fu Zhongzhe was appointed as President of the Company and elected Director of the third Board; electing Mr. He Wenbo and Mr. Fu Zhongzhe as Executive Directors of the third Board, Mr. Ai Baojun as Chairman of the Strategic Committee of the Board and Mr. Fu Zhongzhe as member of the Strategic Committee of the Board.

In the fifth meeting of the third Board of Supervisors of the Company held on 29 March 2007, Supervisor Zhong Yongqun's written resignation, due to his change of job, as member of the third Board of Supervisors was accepted.

In the 2006 General Shareholders' Meeting held on 26 April 2007, Mr. Fu Zhongzhe was elected as member of the third Board of Directors and Mr. Zhou Guiquan as member of the third Board of Supervisors.

In the seventh meeting of the third Board of Directors of the Company held on 29 August 2007, Mr. Jia Yanlin's resignation as Assistant to President of the Company was accepted.

Mr. Dai Zhihao resigned as Vice President of the Company due to his change of job on 19 September 2007.

Mr. Xu Lejiang was elected Director of the third Board in the 2007 first interim General Shareholders' Meeting held on 27 December 2007.

Mr. Ai Baojun resigned as Chairman of the Board of Directors, Director and other positions in the Board of Directors on 27 December 2007.

The resolution was passed in the tenth meeting of the third Board of Directors of the Company held on 27 December 2007 to elect Mr. Xu Lejiang Chairman of the Board of Directors, Executive Director and Chairman of the Strategic Committee of the Board.

#### Annual Remuneration

The compensation of the directors, supervisors and senior executives for the year 2007 totaled Rmb15,500,000 (pre-tax, same as the below mentioned figures), among which three people ranged from Rmb1,100,000 to 1,450,000; ten from Rmb800,000 to 1,100,000; seven from Rmb200,000 to 300,000. The total of the three highest paid directors and senior executives was Rmb 3,950,000.

The pre-tax annual allowance for outside directors (including independent directors) and supervisors other than those from controlling shareholders is Rmb250,000. Expenses and fees for travel and accommodation incurred by directors, supervisors and other senior executives due to board meetings and shareholders' meetings are borne by the Company.

#### Progress in Corporate Governance

Ever since listed at the stock exchange in 2000, the Company has endeavored to create and execute, by means of standardizing its management and regulating its operation, a thorough and comprehensive corporate governance system, which features operational transparency in information disclosure, interactive relationship with investors, and strict and effective internal auditing and monitoring system, risk-controlling systems, sound credit and transparency in management, in strict compliance with the Company Law, the Securities Law, as well as relevant rules and regulations issued by China Securities Regulatory Commission and the requirements set in the listing regulations by the Shanghai Stock Exchange. Efforts have also been made for further improvement in its corporate governance by means of keeping abreast with domestic and international progress in management while focusing on creativity and innovation.

In the reported period, the Company completed its basic management framework and drafted or revised significant management regulations in all business areas of the Company for approval of the Board of Directors, laying a solid foundation for further improvement of the corporate governance system. According to the Corporate Charter of the Company, a topdown approval procedure must be followed in making decisions of great significance. The Shareholders' Meeting, the Board of Directors, the Executive Directors, and the management have their own distinctive and respective rights, making an interactive and balanced system among the departments of power, decisionmaking, management, and supervision, who have their own duties and responsibilities.

The Company attaches great importance to the Board of Directors and efforts have been made to improve the operating efficiency of the Board. The new Board has 11 directors, including five Independent Directors, which take up 45 per cent of the total. The Board of Directors of the Company is to a great extent independent, playing an important role in further optimizing corporate governance of the Company. In addition, Mr. Wu Yaowen has been entrusted by the State-owned Assets Supervision and Administration Commission of the State Council as the Outside Director as well as one of the Directors, which makes him more independent from the Company. For better efficiency, the new Board elects Executive Directors, who have been entitled to decide on certain affairs, helping the Company better deal with the changing market and the competitive industry. At present there are five Executive Directors in the Board.

Efforts have also been made to help the interaction between the Board and the management. In the reported period, several meetings involving the directors and senior executives were held to exchange opinions about production, management, techniques and innovation, which have helped the directors to better understand the Company and the management to better understand the expectations of the directors, having greatly improved the communication between the Board and the management.

On 9 March 2007, China Securities Regulatory Commission (CSRC) made public "Notice on the Matters Concerning Carrying out a Special Campaign to Strengthen the Corporate Governance of Listed Companies", requiring all the listed companies in the country to improve their corporate governance. The Company up to date has completed, in accordance with the CSRC notice, the three stages of self-examining, public assessing, and rectifying and improving.

In accordance with the CSRC notice, the Company held its second 2007 interim meeting of the Board on 28 March 2007, approved the "Proposal of Baoshan Iron and Steel Co., Ltd. Concerning Carrying out a Special Campaign to Strengthen the Corporate Governance", and disclosed the resolution of the Board meeting, with a telephone number and an email address for soliciting opinions from investors and the general public, and the "Self-examining Report of Baoshan Iron and Steel Co., Ltd. Concerning Campaign to Strengthen the Corporate Governance".

An on-spot examination of the work in the Company was conducted by CSRC Shanghai Regulatory Bureau on 29-30 April 2008. The Company received on 7 June 2007 a response from Shanghai Regulatory Bureau entitled "Examination Report to Baoshan Iron and Steel Co., Ltd. Concerning the Special Campaign to Strengthen the Corporate Governance", in which the corporate governance was considered to be sound and its operation up to standard and suggestions were made regarding improvements of the current systems of independent directors, internal control and incentive scheme so as to further improve the corporate governance of the Company. On 8 August 2007, Shanghai Stock Exchange sent its suggestions regarding the corporate governance of the Company in "Assessment Report to the Corporate Governance of Baoshan Iron and Steel Co., Ltd.": as no violations of the rules and regulations that the stock exchange focused on were reported in terms of information disclosure, shareholders' meeting and directors' performance, and internal control, further efforts of the Company were encouraged in these aspects.

On 30 August 2007, the Company published its "Rectification and Reform Report of Baoshan Iron and Steel Co., Ltd. Concerning Campaign to Strengthen the Corporate Governance", in which proposals are made as to how to improve its systems of independent directors, internal control and medium- and longterm incentive and disciplining scheme.

In accordance with "Notice on Selecting Procedures of SSE Corporate Governance Sector" by China Securities Index Co., Ltd of Shanghai Stock Exchange, the Company involved itself in the selection and became one of the 199 SSE composite stocks. The SSE Corporate Governance index was published for the first time on the first trading day, reflecting the trend of the SSE Corporate Governance Sector.

Being a member of the SSE Corporate Governance Sector has helped the Company to optimize its corporate governance and to improve its image in the capital market.

The Company continued to enjoy praises in the capital market in 2007. It was selected by Shanghai Securities News as one of the "Top Ten Listed Companies that Influenced China in 2006", awarded by Securities Times and Zhonglian Group as "2006 Top 100 Valuable Listed Companies'' and ''Top Ten Management Team in Chinese Main Board'', awarded by New Finance & Economics Monthly as one of the Blue Chip Listed Companies of Growth in the Next Ten Years in the third session of Top 50 selection in China. It was also awarded one of the companies with "Best Investor Relations in 2006" by Hexun.com and "Top 100 Investor Relations Management", "Best Large Companies", "Best Communicator" and "Best Disclosure" by China Securities News and Nanjing University in 2006.

#### Performance of Independent Directors

#### Performance of Independent Directors

As one of the first few companies in China which introduced the practice of independent directors, the Company attaches great importance to the role of independent directors and enjoys a mature system of independent directors both in institution and practice. The five independent directors, senior experts in security, finance and accounting, and management at home or abroad, are well-known professionals in corporate strategy, enterprise management, finance, accounting and human resources.

The Independent Directors attended, with a sense of responsibility and commitment, the Board meetings in the past year, making professional suggestions and advice to the Company in making decisions of significance and supervising the work of management in the interests of the Company and its shareholders.

The Independent Directors made comments on issues of related party transactions, guarantees provided by the Company, and the share incentive scheme according to the special rights of Independent Directors as stated in the laws, regulations and the Charter. All significant related party transactions should get the approval from independent directors in written form before the Board of Directors Meeting or Shareholders' Meeting approves it.

The Independent Directors are found to be active in the construction of the special committees of the Board, playing an important role in the special committees of the third Board of Directors. With Mr: Xu Lejiang as the Chairman of the Strategic Committee, one sixth of its members are Independent Directors. Mr. Buck Pei, an independent director, acts as the Chairman of the Auditing Committee, whose Independent Directors take up two thirds of its members. Ms. Laura Cha is the Chairwoman of the Remuneration and Appraisal Committee, whose members are all outside directors, with three fourths of its members are Independent Directors.

In the reported period, Independent Directors attended one of the meeting held by the Strategic Committee, five meetings held by the Auditing Committee and one meeting held by the Remuneration and Appraisal Committee. Their independent stands, professional perspectives and rich experiences have contributed greatly to the management, significant decision-making and corporate governance system of the Company.

The Company has established the scheme to hold a communication meeting by external directors before every Board Meeting. The communication meeting is held by Independent Directors and Director Wu Yaowen, with no internal directors and any director who hold a position in Baosteel Group, the Company's controller, involved. Proposals to be discussed in a Board Meeting and significant topics are reviewed by Independent Directors, helping the external directors to communicate with one another, which helps, in turn, with the roles of external directors to supervise and to control. In the reported period, the external directors of the third Board met for four times.

Independent Directors	Number of board meetings convened in the period	Attendance in person	Attendance by representative	Absence	Note
Laura Cha	8	7	I	0	
Buck Pei	8	8	0	0	
Katherine Tsang	8	6	2	0	
Sun Haiming	8	8	0	0	
Edward C.Tse	8	6	2	0	

#### **Dissents from Independent Directors**

No Independent Director has voiced their dissents on proposals of the Board of Directors and other proposals in the reported year.

#### Separation of Company's and Holding Company's Interests

(1) Sales and operations: The Company has full authority over its sales and operations management.

(2) Personnel:The Company is totally independent of and separate from Baosteel Group Corporation in regard to production, human resources and payroll management. The senior executives, including President, Vice Presidents, Financial Controller and Board Secretary, have not hold any concurrent positions in Baosteel Group.

(3) Assets: The Company owns all of its production processes, including raw materials processing, sintering, coking, iron making, steel making and steel rolling, as well as related infrastructure and facilities, such as ships and ports. The Company also exercises complete authority over its research and technology, manufacturing, procurement and sales systems.

(4) Organizational structure: The Company is totally independent of and separate from Baosteel Group Corporation with none of the Company's departments overlapping with those of the holding company.

(5) Finance: Equipped with its own finance and accounting department, the Company has independent accounting, auditing and financial management systems. All bank accounts of the Company are independent of the holding company and taxed separately.

#### 2006 Shareholders' General Meeting

#### 2006 Shareholders' General Meeting

The 2006 Shareholders' General Meeting of the Company was held on 26 April 2007, in Shenzhen, and the public notice of the resolution was posted in China Securities News, Shanghai Securities News, and Securities Time on 27 April 2007.

#### 2007 First Interim Shareholders' Meeting

The 2007 Interim Shareholders' Meeting of the Company was held on 27 December 2007, in Shanghai, and the public notice of the resolution was posted in China Securities News, Shanghai Securities News, and Securities Time on 28 December 2007.



#### Internal Control System

The internal control system was further improved in 2007 and its management was reformed and selfevaluating system of internal control established.

In order to meet the requirements for listed companies as stipulated by domestic regulatory institutions and other government departments, the Board of the Company decided in the year to introduce a famous accounting firm to evaluate and review, in accordance with related regulatory rules and with reference to best international practice, the performance of the management of the Company as well as those of 12 business procedures in terms of internal control. The task involved the Company's legal person entity and three of its subsidiaries—Meishan Steel, Baosteel International and Baosteel Chemical, with the assets and sales income involved accounting for 80% of those presented in the consolidated financial statements of the Company in the year. Among the items evaluated and reviewed were closing of accounts and financial statements, procurement and payment, sales and receipt, inventory management, fixed asset management, human resource and remuneration management, investment management, expense and expenditure management, capital management, budget management, general computer control and management of subsidiaries. Results show that no significant deficiency were discovered regarding internal control of the Company and the suggestions for improvement were reported to the Auditing Committee in time. The work has helped to optimize internal control system of the Company, ensure the efficiency of internal control and contribute to the healthy development of the system.

Self-evaluation of internal control was also conducted in the Company to help promote the effective execution of internal control and optimize continuous improvement scheme. It has also been decided that selfevaluation will be conducted every year in the Company.

#### Summary of Supervisors' Performance

In the reported period, the board of supervisors labored to ensure that the Company's operations, financial auditing, and performance by the directors and senior managers are carried out in strict compliance with the rules and regulations set in the Company Law and the Corporate Charter. The board of supervisors attended the fifth, sixth, seventh, eighth, ninth, and tenth meetings of the third Board to supervise the convening of the board meetings and ensure that voting procedures on resolutions conform to relevant laws, regulations and the Corporate Charter.

The Board of Supervisors was convened for the fifth, sixth, seventh, eighth, and ninth meetings of the third Board in the reported period. In line with its duty the Board expressed its opinion on the legality, procedures and financial impact of the resolutions proposed by the board of directors, and made public announcements of the resolutions accordingly. The details of the meetings by the boards of supervisors are listed as follows:

(1) On 29 March 2007, the Board of Supervisors held its fifth meeting of the third Board in Shanghai and approved the following proposals:

Proposal for Supervisors' Review of the "2007 Budget of the Company"; Proposal for Supervisors' Review of the "Estimation of Day-to-Day Related Transactions of the Company in 2007; Proposal for Supervisors' Review of "Proposal for Provisions for Impairment Losses of Assets of the Company as at the end of 2006" Proposal for Supervisors' Review of the "2006 Annual Report and its Abstract"; Proposal for Supervisors' Review of "the Report of the Final Annual Accounts of the Company at the End of 2006"; Proposal for Supervisors' Review of the "2006 Annual Profit Appropriation Proposal of the Company"; Proposal for Supervisors' Review of the "Regulations for Management of Assets Impairment in the Company"; Proposal for Supervisors' Review of the "Regulations for Management of debit financing in the Company"; Proposal for Supervisors for the Company. Proposal for Re-election of Supervisors for the Company.

(2) On 25 April 2007, the Board of Supervisors held its sixth meeting of the third Board in Shenzhen and approved the following proposals:

Proposal for Supervisors' Review of the "Proposal for Provisions for Impairment Losses of Assets of the Company as at the End of the First Quarter of 2007"; Proposal for Supervisors' Review of the "2007 Report of the First Quarter";

Proposal for Supervisors' Review of the "Proposal of Purchasing Baosteel Group Shanghai Pipes and Other Assets".

(3) On 29 August 2007, the Third Board of Supervisors held its seventh meeting in Shanghai and approved the following proposals:

Proposal for Supervisors' Review of the "Proposal for Provisions for Impairment Losses of Assets of the Company as at the End of the First Half of 2007";

Proposal for Supervisors' Review of the "2007 Interim Report and Its Abstract"; Proposal for Supervisors' Review of the "New Related Transactions of the Company in 2007";

(4) On 29 October 2007, the Third Board of Supervisors held its eighth meeting in Shanghai and approved the following proposals:

Proposal for Supervisors' Review of the "Proposal for Provisions for Impairment Losses of Assets of the Company as at the End of the Third Quarter of 2007";

Proposal for Supervisors' Review of the "Report of the Third Quarter of 2007";

(5) On 11 December 2007, the Third Board of Supervisors held its ninth meeting in Shanghai and approved the following proposals:

Proposal for Supervisors' Review of the "Proposal for Acquisition of Luojing Assets from Baosteel Group Shanghai Pudong Steel"; Proposal for Supervisors' Review of the "Proposal of Issuing Convertible Bonds with Attached Warrants"; Proposal for Supervisors' Review of the "Proposal of the Feasibility of Fund-raising Investment Projects"; Supervisors' Review of the Use of Funds Raised in the Previous Drive; Proposal for Supervisors' Review of the "Proposal of the Regulations for Fund-raising of the Company". Opinions on the Company's Operations

- 1. The Company has a well-structured internal control system and has followed the proper legal proceedings in making its decisions and formulating its policies. It has complied strictly with relevant rules and laws, and regulated the Company's operations accordingly. Board directors and senior managers have behaved responsibly and assiduously in performing their duties and carrying out the resolutions passed by the board and the shareholders alike. None of the directors or senior managers was found to have breached any rules, laws and regulations of the country and the Corporate Charter or conducted any deed that has harmed the Company's interest.
- 2. The Company was in good and solid financial health in 2007. Its sound financial management and internal control system ensured smooth and normal manufacturing and production operations. Its 2007 financial statements are a true reflection of the financial condition and operating results of the Company, and the unqualified opinion issued by Ernst & Young Hua Ming in the auditors' report is fair and objective.
- 3. The company has not involved in any fund-raising activity in the period reported;
- 4. The company acquired the assets of Baosteel Shanghai Pipe in the period reported and the price was found to be fair and no insider trading activities were discovered. The proposal to purchase Luojing assets of Baosteel Pudong Steel was approved by the meeting of the shareholders on 27 December 2007 but no further steps have been taken.
- 5. In the period reported, the related party transactions were carried out according to Baosteel Related Party Transaction Management Methods at fair prices and without any damage to the Company's benefits.





#### Organization Overview

Baosteel Co., Ltd. organization overview (up until December 31st, 2007)



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#### Major Events in Organization Reconstruction

#### Planning and Promoting the Mechanism of Variety Management Dept.

Following the practice and experience of advanced enterprises abroad, the Company, integrating the changes of management pattern, object, and methods after new issuance and acquisition, has focused on variety, and matched it with subsidiaries and departments such as technology and quality, production, research institute, purchasing, to construct a matrix management mode on the basis of combining the business process like production and sales, research institute, technology and quality, financial dept., human resources, etc.

In July, the Company experimented with executing the mechanism of variety management dept., established the Tubular Steel Management Dept. and the Stainless Steel Management Dept., and defined the business operating mode, division of labor in management, and correspondingly implemented methods for the two depts.

#### Completing the Optimization of Organizations in Construction System

In 2007, the Company started to streamline and optimize the management system, operation mode and process of the construction system, adjusted and optimized the settings of organizations in the construction system, established the Engineering Technology Dept. and the Investment Management Dept., as well as adjusted the mechanism and business process of the construction system.

#### Promoting the Optimization of the Organizations in Purchasing System

In March, the Company finished the switchover (purchasing of materials, spare parts and engineering equipment) of the purchasing system of Stainless Steel Branch Co., completing the overall coverage of PSCS purchasing computer system; in May, the Company finished the switchover program (purchasing of materials, spare parts and engineering equipment) of the purchasing system of Special Steel Branch Co., and promoted it in a substantial manner; in August, the Company completely finished integrating the purchasing system of the iron & steel units in Shanghai area, therefore, the purchasing dept of the iron & steel units in Shanghai area will no longer be set up.

#### Optimization of the Management System of Technology, Quality and Scientific Research

In 2007, the Company reconstructed the existing management system of technology, quality, and scientific research, functions such as research and intellectual property, etc., were transferred to the Intellectual Property Dept; integration of technology and quality, which focuses on products, became part of the Technical Quality Management Dept; the Company further optimized the management system of research, technology and quality system, defined the operation mode of the technical dept., enabling it to familiarize itself with the activities of the whole Company.

#### Restarting Operations of Baosteel Chemical Co. Ltd

To further develop the coal chemical industry, Baosteel Chemical Co. Ltd restarted its operations in September, 2007, so as to integrate the coal chemical system with the steel industry. Nanjing Baosteel Chemical Co., Ltd, as a subsidiary of Baosteel Chemical Co., Ltd, Suzhou Baohua Carbon Black Co., Ltd and Taiyuan Baoyuan Chemical Co., Ltd, as the holding subsidiaries, participated in the management.

# Promoting the Integration of Acquired Assets of Nantong Baosteel Iron & Steel and Shanghai Steel Tube

In September, 2007, the Company finished the delivery of the acquired asset of Shanghai Steel Tube, which was invested in for the construction of the Special Steel Branch High-precision Steel Tube Factory as a production unit affiliated to Special Steel Branch Co., Ltd.

In September; 2007, the Company purchased 92.5% of shares of Nantong Baosteel Iron & Steel Co., Ltd, which is positioned as a holding subsidiary of iron & steel industry of Baosteel Co., Ltd.

# Status of Key Promotion

#### Promoting the Integration of the Backbone Steel Business

The Company focuses on promoting 43 integrated synergy programs in seven major categories such as integrated production, sales and research, concentrated procurement, concentrated sales, technology popularization and transplanting, management technology popularization and informatization construction, realizing an annual synergy of Rmb 2.34 billion, completing 156% of the annual target.

All the integrated synergy work is proceeding smoothly. The production, sales and research of the nine major categories of products are further deepened, the marketing and service network covering the whole country and radiating the rest of the world has been basically completed, and unified negotiation, channels, technical standards and production scheduling for some products have been realized. Efforts are made to consolidate the integration of steel production unit purchase business in Shanghai through conducting unified source searching and unified delivery, increasing the proportion of concentrated purchasing of bulk materials and spare parts, and accelerating the consolidation and optimization of suppliers. The Company, with the help of the technology popularization platform, cultivates the productivity of major steel production units for unique leading high-end products, boosts the technology of the old production lines and cultivation of core talents and improved the overall technological level of the Company. The framework of accelerating informatization construction to support the integrated management information system of cross-regional and multi-manufacturing units is basically formed.



#### Boosting the Systematic Operation Capability of the Company

Adapting itself to the new requirement of crossregional development with multiple bases and production lines and in accordance with such principles as stable transition, unification and consistency, assets optimization and efficiency maximization, the Company further optimizes and improves the professional management system of steel business and relevant diversified businesses.

The Company constructs the system of strategic performance management and pushes forward a new round of planning on a full scale. It compiles, improves, issues and implements Baosteel Development Plan 2007-2012, forming a management system that takes competitiveness as the core and six subsystems, namely, product development, technology innovation, supply chain management, recycling economy and management innovation, as the platform for implementation.

The Company promotes products management system in good order and deepens the operation of integrated production, sales and research. Adapting itself to market competition and customer responses and the changes in the target of management and scope of business after additional share issuance, it basically specifies the business operation mode, management division and relevant management methods of the products management department. In August 2007, trial operation began to be conducted in Steel Tube Products Management Department and Stainless Steel Products Management Department. Centering the boosting of the capability for independent integrative innovation and optimizing the pattern of the management of construction system, the Company basically strengthens out the relevant business processes and management division, improves the project management system and fundamentally completes the integration of the construction system.

The Company reorganizes and optimizes technological quality and scientific management system, basically constructs the management system of scientific and technological quality featuring relatively concentrated business and optimized processes, which effectively promotes the establishment of the Company's technological innovation system and the strategic system of intellectual property and establishes a complete and unified platform to enhance the Company's overall manufacturing capability.



#### Enhancing the Overall Risk Management of the Company

In order to further strengthen internal control and risk management, the Company establishes crossdepartment project teams on the basis of the best international practices to conduct full-scale assessment of internal control. It has completed one after another the assessment of 12 management processes such as financial statement and account closing, purchase and payment, investment, personnel and salary. The assessment covers major assets and business units of the Company. For any points to improve found in the assessment, the Company strengthens supervision, guidance and examination by adopting the mode of "specified responsibilities and combination of strips and chunks" to ensure the implementation of the rectification plans. On this basis, it conducts full-scale internal control assessment and strives to establish a self-evaluation reporting system.

The Company further designs the risk management promotion plan for 2008-2009, specifies the overall idea of gradually establishing a risk management system geared to marketing, laws and regulations and strategic execution. Through the improvement of the construction of the risk management and internal control systems, the Company eventually forms its own full-scale risk management system and boosts the level of overall risk management.



#### Continuing to Optimize the Product Mix

The Company makes great efforts to develop the market for its Only I and No. I high-end products and new products, strengthens the cooperation between departments of sales, manufacturing, research and development, and seeks for the most rational product structure. While ensuring the match between product structure and allocation of production lines, it strives to expand the sales of its Only I and No. I products. In 2007, the total sales volume of the Only I and No. I products reached 7.39 million tons, making up 117.8% of the annual sales target, a 35.8% increase than the previous year. Among them, the sales volumes of electrogalvanized products, hot-dip galvanized products, wide and heavy plate, color coated sheets, and commercial grade cold-rolled products make up over 50% of the



sales of carbon steel products.

In terms of carbon steel, the Company's cold-rolled automobile sheets, wide and heavy ship-building plates, X70 series pipeline steel, high-efficiency and high-grade non-oriented silicon steel all see striking increase than the previous year. Besides, it has achieved breakthroughs in the use of such Only I and No. I products as double cold rolled steel strip for shadow mask, high-strength hotrolled weather resistant plates, and JIS series ship used steel pipes, among which the sales volume of double cold rolled steel strip for shadow mask has doubled for a consecutive 2 years, with the market share of 28.5%. 356,000 tons of products have been ordered for major projects in the year, of which, the Company's Only I and No. I products make up as high as 65%.

In terms of stainless steel, facing the large market fluctuation, the Company adjusts the product mix timely by raising the proportion of ferrite stainless steel to over 40%, a 13% increase than the previous year, and increasing grinded products, BA plates, thin sheets, and 400 series products. The Company has realized mass-production for 0.3-0.4mm BA products, successfully developed super-thin BA products with a thickness of 0.25mm, and organized the production according to contracts of highend BA2 products.

In addition, the Company has continuously raised the proportion of special metallurgy series and stainless series, both of which belong to special steel products.

#### Major Projects Completed One After Another

A series of major projects has put into production within the year, including the project of No.3 hot rolling mill, the second phase of Majishan Port expansion project, cold-rolled stainless steel strips project (phase I), and the project of special steel-making and continuous casting (steel-making part).

The preliminary work of a number of projects is proceeding smoothly, including the revamping project of the No.I blast furnace of Baosteel Branch, the heat extrusion project of Special Steel Branch, the follow-up project of Meisteel, the Yantai Baosteel steel pipe project. Another group of key projects have reached the set standards, such as the on-the-spot revamping project of the No.2 blast furnace of Baosteel Branch, No. 4 continuous casting machine, the reformation project of No.2 steel making plant, No.3 hot rolling mill, and upgrading of Meisteel's hot-rolling machine.

With the completion and put into production of a series of major projects, the production capacity and category development target of current steel bases have been ascertained and the production capacity and market share of automobile steel, stainless steel, home appliance steel, packing materials and special steel products has further expanded.



#### Making Efforts to Promote the Construction of Technological Innovation System

Centering the construction of the technological innovation system, the Company has made efforts to raise the efficiency of its innovated achievements to be translated into productivity. It invests 1.05% of its revenue in R&D, applies 800 patents, among which 350 are invention patents, forms 1,962 technology know-hows, and realizes academic economic profits of over Rmb 1.3 billion. The Company's innovation develops very rapidly. Besides, it fully strengthens the competitiveness of its products centering high-end and strategic products, meanwhile further enhances research in key common technology, and continues to expand and increase core

technology. It makes great efforts to trace the development of the world's metallurgical development and new technologies and intensifies its endeavor for cutting-edge technology research.



#### Making Effort to Reduce Cost and Increase Efficiency

Faced with the severe pressure caused by the rise of raw material price, the Company conducts full-scale and in-depth cost reduction and efficiency increase by means of competition among employees for such work, cross-plant bench-marking for the same working process and the three-year plan for bench-marking upgrading. All the production units continue to explore the best production and organizational mode under the low pig iron ratio and make efforts to raise the production of iron and steel, so as to ensure stable and high production on major production lines. Meanwhile, efforts have been made to find gaps, improve the target for technological and operational maintenance, optimize operation and strengthen the capability of process control. Besides, efforts are made to coordinate production, supply and

sales, study the technology of using low-quality raw materials, optimize the burden mixture of furnace, reduce the energy consumption level of the processes, strengthen the recycling and reuse of resources, and rationally control consumption and expenditure. Through full-scale promotion of cost reduction and efficiency increase, the Company has made good economic returns on cost reduction and efficiency increase of Rmb 2.87 billion.



#### Continuously Improving Energy Saving and Consumption Reducing Level

Faced with the ever-increasingly serious energy and environmental protection situation and the extremely challenging energy saving and environmental protection targets, the Company further implements the three-year environmental protection action plan and the "One Thousand Enterprises Energy Saving Action Plan" launched respectively by Shanghai Municipal government and the State and the targets for energy saving and environmental protection are better than the previous year. The overall energy consumption per ton of steel is 718.6Kg standard coal, a 2.1% decrease than the previous year; the energy consumption for every Rmb 10 thousand of output value is 1.1 tons of standard coal, a 10.2% decrease than the previous year; the consumption of new water per ton of steel is 5.1 ton, 15.2% lower than the previous year; the atmospheric dust fall dropped by 20.1% as against the previous year; indexes such as the total amount of sulfur dioxide emission, the emission of smoke and other airborne particles, waste water drainage, waste water COD emission have all dropped.

#### Improving Investor Relations Management

The Company constantly increases voluntary information disclosure and strengthens service to investors, which boosts the influence of the Company on the capital market. It gives timely publicity its operation status and future development through various means such as investors meetings, company website and news media, increasing the influence of the Company in the investment area both at home and abroad. In 2007, the Company gained the recognition of the capital market with its standardized information disclosure, fine relation with the investors, excellent management performance and good corporate governance. It was granted many awards in 2007 by authoritative organizations, such as "Best Investor Relations Award", Investor Relations "Best Large-Scale Corporation Award", "Best Communication Award" and "Best Information Disclosure Award".

"As one of the earliest companies to implement investor relations systematically (IR), Baosteel has rich experience in managing investor relations, it also has a mature mode in managing IR, establishing organs, and constructing systems; its IR management has entered the door of systematic operation", said Professor Li Xindan, Deputy Dean of School of Management and Engineering (SME), Nanjing University and Director of Research Center for Financial Engineering, when explaining why Baosteel got the prize.

He thinks, since its establishment, Baosteel has been expanding its channel of investor relations relentlessly, and constructed a multi-channel, all-directional communication platform, which in return guarantees its overwhelming advantage in communication. As for information disclosure, Baosteel devises its own way and takes the initiative in disclosing the news that the investors are keen to know, in the meanwhile, the news is disclosed in a fair manner and maintains its integrity. In addition, commitment made by top management is also a bright spot for Baosteel's IR management. Director of the Board is the manager of IR; other executive personnel also take a positive role in managing IR. Participation of top management also guarantees the smooth operation of IR management and its initiation from a high platform.

- From China Securities Journal August 7th, 2007

#### Credit Rating

In October 2007, Standard & Poor's announced that the long-term credit of Baoshan Iron & Steel Co., Ltd. was rated A-, revising its outlook on the Company's credit from "stable" to "positive". The rise in the credit rating was another step forward from its historic A- in December 2006.

# Social Responsibility

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#### Credibility construction

- Focusing on development strategy; promoting a credibility culture management system
- Solving problems of both root causes and symptoms; establishing a punishment and prevention system and purifying the business environment

#### Employees

- Profile of employees
- Protection of employees' safety, health, rights and interests
- Active promotion of harmonious labor relations
- Equal opportunity and diversification
- Concurrent Growth for both Employees and the Company

#### Investors

- Communicating with investors at and through multiple levels and channels; maintaining a good image in the capital market
- Management paying great attention to and getting involved in building relations with investors in person
- Creating values for and seeking win-win results with investors

#### Suppliers

- Common development based on good faith
- Constantly strengthening strategic cooperation with suppliers
- Strengthening environmental protection and promoting green production
- High efficiency; transparency and enhancement of social responsibility

#### Customers

- Key markets and users of company's products
- Probity and fairness at the links in sales
- Supply chain collaboratively creating value for customers
- Caring about customers' perception and improving management for customers' satisfaction

#### Social contribution

- Education aid
- Supporting China's environmental protection policies
- Disseminating Olympic culture; carrying forward Olympic spirit
- Eternal love forever-cataract blindness coverage action
- Supporting remote and poor areas

An over-riding goal of Baosteel's is to become one of the most competitive iron and steel enterprises in the world and a public company that is admired by society.

Baosteel has been putting great efforts into fulfilling its social responsibilities in order to achieve harmonious development and coherent progress with shareholders, customers, suppliers, employees and other social stakeholders. Shareholders are the foundation of the company's business; with steady growth, good performance, and stable profits, the company has continuously been providing rewards to the shareholders. Customers are the partners of the company's operation; with extra-value products and services, the company tries to meet customers' needs or even go beyond what they expect, and to create value for them. Suppliers are a vital resource to the company; through long-term co-operation with strategic suppliers, the company aims at setting up a competitive supply chain system.

Employees are the most important asset of the company. By providing a solid platform for employees' growth and incentives to realize their own value, the company has achieved joint-development with its employees; society is the living space of the company. The company consciously takes social responsibilities and moral obligations, making the contributions to improve ecological conditions, social progress and community harmony.

Baosteel is committed to the value concept of faithfulness and credibility. It aims to keep its promises to the shareholders, customers, suppliers, employees and social stakeholders. Furthermore, Baosteel educates its employees to carry forward the Baosteel culture, enhance self competence, keep actively forging ahead, build learning-oriented teams and make due contributions to create an innovating enterprise.

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#### Baosteel has been Awarded "The World's Most Admired Companies"

#### for Three Years in Succession

Since 1997, the world famous management & consulting company, Hay Group has worked together with *Fortune* magazine of America to conduct research and ranking of the "The World's Most Admired Companies", which is now the foremost authority worldwide for ranking and evaluating enterprises' reputations. In the afternoon of September 12, 2007, the SASAC (State-owned Assets Supervision and Administration Commission of the State Council), Hay Group and *Fortune* jointly held an award ceremony at Beijing Diaoyutai Guest Hotel for enterprises, which are governed by the central government and were awarded the title of "The World's Most Admired Companies", which Baosteel has been awarded in three consecutive years.

Chris Matthews, president of Hay Group, gave a high evaluation of Baosteel. He said Baosteel is China's biggest and most modernized iron & steel enterprise that cares about talent, and it not only has a promising long term prospect for investment but also an efficient financial and stable operation management.

Xu Lejiang, the president of Baosteel, delivered a speech out of gratitude for the award, "The World's Most Admired Companies' is very precious. It is a combination of credibility, fine reputation and popularity enjoyed by the public all over the world. Not only is it the recognition by the public for a product or brand, but also recognition for social responsibility assumed by the enterprise".

#### Focusing on the Strategy of Development; Promoting the Construction of Credibility Culture Management System

Credibility is the Baosteel basic value, core of its culture, and also the prerequisite for a respectable public company.

The Baosteel's construction of credibility includes five aspects such as external contact, full responsibility, internal relationships, protection of company interests and assets, and social responsibility. As far as the company is concerned, it means maintaining a faithful image by keeping its promises and commitments to investors, customers, suppliers, employees and social stakeholders. In terms of employees and internal management, construction of credibility system and promotion of faithfulness culture are implemented by emphasizing discipline and examples set by the management.

During the construction of faithfulness and credibility, the following four aspects have been emphasized: Firstly, conduct training on credibility for all employees, with examples to educate and normalize employees and to actively build a good environment of credibility to be abided by everyone. Secondly, combine credibility with management to design a credibility management process, establish a credibility management team, make credibility regulations, promote credibility management of training and education, commitment, evaluation, service, record and files. Thirdly, with regard to regulations, avoid situation, in where no regulation is to be consulted and no punishment for violations. Furthermore, solve the problem of credibility loss caused by systematic defects. Fourthly, strengthen information management to provide necessary support for credibility management.

In 2007, Baosteel was again awarded the title of "The Best Credible Company in China" by CEC (China Enterprise Confederation) and CEDA (China Enterprise Directors Association).

#### Solving Problems of Both Root Causes and Symptoms; Establishing a Punishment and Prevention System and Purifying the Business Environment

According to the general requirement of setting up a sound punishment and prevention system and the regulations of the "Baosteel Report System of Tendentious Problems in Anti-corruption and Promotion of Probity", a regular analysis shall be made and "zero report system" be strictly performed by various functional departments and branches (subsidiaries). The annual tendentious problem report identifies nine loopholes in risk prevention and defines rectification measurements for each item.

- The "No pass under 3 Conditions" for significant cases: It refers to no pass for unknown cause or responsibility of significant cases; no pass for failure of responsibility to enact investigative or rectification measures; no pass for failure to educate persons concerned and other employees.
- [2] Three Important Matters and Big Investments: It refers to the regulations that any important decision-making, any important personnel appointment, any important construction project arrangement and any big capital investment must be conducted through collective discussion. No arbitrary behavior is allowed.
- [3] Procurement under Sunlight: It refers to application of methods such as bidding, through which procurements must be conducted to make them transparent and procedural so as to build an "open, just, fair" procurement environment to realize probity and efficiency among employees.
- [4] Dual-signature for Honest: It refers to signing of "Probity Agreement" or "Agreement on Common Construction of Probity and Honesty" together with the economic contract with the other party in oder, to maintain and purify business environment.
- [5] Three-Prohibitions: With the intention to further strengthen the construction of Party Conduct and anti-corruption and promotion for probity system, the regulations of "Three Prohibitions" were proposed by Baosteel CP's standing committee to regulate leaders and managers at all levels. Firstly, no public money is allowed to be used for individual consumption, and company's credit cards are not allowed to be used against the regulations of the Company for duty consumption. Original certificates or corresponding situation explanation must be provided while using company's credit cards for duty consumption. Secondly, no violation of regulations of part-time job rewards is allowed. Whoever has permission to take a part-time job must submit to the company (which assigned him/her) the reward or allowance, which will be handled according to relevant regulations. Besides, anyone who takes a part-time job within the group will receive no reward or allowance. Thirdly, no violation against the decision-making principals and procedures is allowed, including making arbitrary decisions on important matters, personnel appointments, proceeding arrangements and matters concerning operation of big amount of capital.
  - Insisting on governance of root causes and symptoms, comprehensive control, punishment and prevention, and prevention-oriented policy, Baosteel regards the punishment and prevention system as the key point, with the leaders and staff, who are in charge of businesses, taking the lead to develop the impact of education, strengthen restrictions of system and intensity of supervision. In addition, for the synchronized advancement, mutual promotion and harmonious development of the anti-corruption system and promotion for probity, the company's reform and productive operations, Baosteel actively focuses on probity and self-discipline, case investigation, efficiency supervision, root causes control and so on.

Baosteel lays emphasis on education of probity, risk prevention, warning of the "No Pass under 3 Conditions" for significant cases <sup>[1]</sup> and so on. Meanwhile, the company enhances all employees', particularly leaders' and managers' awareness of moral, law and discipline. The proportion of employees that received education and training is above 90%, while 100% of all the managers or employees in charge of business have received anti-corruption education.

Baosteel adheres to the control of commercial bribery via normalizing operation, optimizing management processes and purifying the business environment. It promotes demonstrative examples set among managerial personnel and executes the decision making principles strictly in accordance with the regulations of "Three Important Matters and Big Investments''[2]; implements Procurement under Sunlight [3]; launches activities such as "Commitment Declaration to be Honest and Faithful" and "Dualsignature for Honesty"<sup>[4]</sup>. In some important projects, the company promoted the activity of "High Quality Project and Outstanding Cadres"; in combination with enterprise risk management, Baosteel has intensified internal control and system limitation of moral risk and operational risk; regularly released lists of no-entry and no-trading companies and rejected 20 companies for entrance; improved probity and established "Three Prohibitions"[5]; carried out inspection on prohibited items. It has processed 4 disciplinary violations, and illegal cases have been investigated, with relevant persons being punished via judicial procedures.

# Employees

#### Profile of Employees

As an admired enterprise, Baosteel not only pays attention to operation efficiency, but also concentrates on providing more job positions. As of the end of this report period, the company had 40,059 employees in total, among which 24,421 are production staff, 11,760 are technical staff, and 3,878 are management staff. There are 1,339 staff members more than those at the time of last report, and there are 21,971 employees with a record of formal schooling above colleage degree.

Our employees are working in various places including Shanghai, Jiangsu, Zhejiang, Shandong, Hubei and some overseas areas.

As the steel industry is characterized with heavy duty and high temperatures, the company has a gender ratio of 6.7:1 (male to female). Our female employees mainly hold management and technical positions. Our employees are young and vigorous, with the majority being under the age of 45, or 80.29% of all employees. For more details please see the employee's age figure.

In 2007, 514 employees resigned, or 1.28% of total employees. The company completely respects employees' choices. In light of differences when employees want to resign, the company will hold discussion with him/her to understand the reasons, and then go through the formalities in accordance with relevant laws.

Baosteel always keeps its door open to those who resigned to come back.







#### Protection of Employees' Safety, Health, Rights and Interests

The company fully complies with the laws, regulations, and standards for safe production. The policy of "Safety First, Prevention the Center and Comprehensive Goverance" has been implemented to guarantee employees' safety and health. On the basis of this, the company has been advocating the safety concept and sound enterprise regulations; stressing basic safety management responsibility at all levels and strengthening investigation on violations. Moreover, Baosteel has enhanced the management's and employees' awareness of legal compliance and attention to health as well as their knowledge of the value of life. Finally, Baosteel's concept of "100" (safety first, zero violation and zero accident) safety management has been continuously strengthened.



- » Implementing the safety target responsibility
- Baosteel's General Manager Director signed the "Responsibility Letter of Safety Target Management" with the first superintendents of 13 branches (subsidiaries) such as Baosteel Branch Co and Stainless Steel Co. The content of the letter includes superintendent's job responsibility, the examination target of safe production, examination measurements, and standards for rewards and punishments are clearly defined. All units put the safety responsibilities into effect by splitting the responsibilities at each level from top to bottom.
- » Conducting the internal examination for the management system of occupational health and safety
- The Companies' branches (subsidiaries) that are mainly engaged in the production
  of iron and steel have passed through the certification for the management system
  of occupational health and safety. In 2007, Baosteel conducted an internal evaluation of Stainless Steel Co, Special Steel Co, Meishan Iron&Steel Co, and Chemical
  Co. The focus of the evaluation was on the efficiency of each system including
  system planning, dangerous sources identification, risk evaluation, risk control, operation control and so on.
- » Strengthening onsite safety supervision
- Baosteel has recruited safety professionals from branches (subsidiaries) to set up the safety supervision team, which conducts safety supervision at branches (subsidiaries) two days a week on the establishment and execution of the safety management system, production sites, repair sites, and building sites.
- » Expanding safety communication channel
- Leaders in charge of safety brought their teams to attend the meeting held by the safety and professional health committee of the International Iron & Steel Association. During the meeting, they exchanged ideas concerning safety management with foreign competitors.
- Still, Baosteel participated in the first "Shanghai Exhibition of Safety Production and Technological Equipment" where it was awarded the prize of "Best Organization".



- » "Prevention First" health safeguard plan
- To keep the employees healthy, the company has been implementing the "Prevention First" health safeguard strategy, executing an active fitness plan. Baosteel provides places to facilitate employees to participate in fitness activities and daily physical exercises. Employees are also encouraged to take part in community activities.
- With its continuous development, the Company always keeps employees' health in mind. Baosteel has built a first-class and large-scale stadium incorporating fitness, sports, leisure and entertainment, which is quite rare among domestic companies.
- With long-term co-operation with medical organizations Baosteel provides medical
  examinations and occupational health checkups for employees. The company organizes health checkups each year, covering 100% of the employees. For those who
  work in special positions, special occupational examinations are arranged, together
  with other policies to provide recreation and regular job-changes, etc for them. And
  for female employees a gynecology examination is added once a year in addition
  to regular checkups.
- The company has developed an information system for employee health management, which facilitates the inquiry of health information in a timely manner for all employees.
- In the plant area, a health examination center, a rescue center, a disease control center and regional clinic stations are provided for the employees with timely and complete medical and health services.
- » Competitive salary
- In return for the contributions employees have made, Baosteel provides a fair salary based on their performance and competence. Meanwhile, the company ensures the employees get the most competitive salary within the same industry and same region to share the fruit produced by social progress and company development by means of paying attention to the change of commodity prices and average salary levels in the same region.



- » Sound welfare guarantee system
- To ensure our employees keep their mind on work without too much concern about retirement or what happens in the case of
  accidents,Baosteel pays full dues to the statutory social insurances according to relevant national regulations, i.e., pension insurance, medical insurance, unemployment insurance, work-related injury insurance, maternity insurance, and also the house provident fund. In addition
  to these policies, the company provides its employees with supplementary pension insurance.
- Furthermore, in order to deal with economic difficulties in case of unexpected accidents or severe diseases, Baosteel provides its employees with comprehensive group insurance against unexpected accidents with the insurance interests being domestic medical insurance and international accidental/medical insurance and rescue plan.
- » All-around assistance funds
- Baosteel has built a long-term system for multi-layer and all-around assistance in the respects of life, school, medical and so on. For assistance to destitute people, the company advocates the "Three Assurances": assuring every employee's family reach the living standard; assuring each employee's child attend school; assuring each employee afford health care.

#### Constructing Harmonious Labor Relations

- » Standardizing labor relations
- As a "National Model Enterprise of Harmonious Labor Relationship", Baosteel always abides by the Labor Laws and Labor Union Laws to standardize the enterprise's operations. After the Labor Contract Law and Regulations of Paid Annual Leave for Employees were issued, the company re-built its labor relationship management system in conformity with the new law and revised and established a series of management systems such as Labor Contract Management Method, Labor Contract Management Method for Employees Involved in Company's Commercial Confidentiality, Resignation Management Method for Company's Key Employees Involved in Company's Commercial Confidentiality, Employee Reward and Punishment Management Method, Labor Contract Management Method for Employees in Probation Period, Employee Resignation Management Method, Regulations on Employee Retirement, Employee Performance Management Method, Position Recruitment Management Method, Management Method for Personnel Waiting for Engagement, Execution Details of Regulation on Post Salary System, Employee Attendance Management Method, Employee Holiday Execution Method. Through timely response to and active dealing with the new laws, the company has ensured normalized and legitimate employment, laying a solid foundation for harmonious labor relations.
- In Feb, 2007, Baosteel successively held the first session of the Third Employee Representative Congress. At the session it proposed to follow the outlook on scientific development in the new round development planning. The company has inspired employees' creativity, raised their enthusiasm and encouraged them to make efforts to fully fulfill the production and operation targets of 2007 and to help turn Baosteel into the most competitive steel enterprise worldwide.
- At the session, the implementation results of labor safety, environment protection, and business entertaining expenses of 2006 and the arrangement of 2007 were examined; systems such as "Employee Representative Congress Sysytem of Baosteel Co., Ltd.", "Collective Negotiation and Contract System of Baosteel Co., Ltd.", "Detailed Working Regulations of the Production and Production Operation Committee, Leading Personnel Democratic Evaluation Committee, Labor Protection and Law Committee, Proposal Reviewing Committee of the Employee Representative Congress of Baosteel Co., Ltd.", "Voting Method of The Third Employee Representative Council of Baosteel Co., Ltd.", "Employee Welfare Project Management Framework of Baosteel Co., Ltd." were voted through. The committee members of all democratic management committees, the employees' representatives of collective negotiation, the employees' representatives for committee of labor dispute mediation, and Baostel Co., Ltd.'s representatives attending the Second Employee Representative Congress of Baosteel Group were selected. People received the 2006 "Zengle Innovation Award" and advanced individuals in the labor contest called "Cost Reduction with Efficiency Increase" received ceremonious praise in the session. Also, five representatives of the delegations delivered separate speeches in order to exchange ideas and introduce the targets and measures in 2007.

- » Perfecting the employees' rights and interest guarantee system by expanding channels for telling troubles and difficulties
- Based on the principal of "system design, function optimization, structure compliance, high efficiency", Baosteel established and perfected the multi-level organization structure of Employee Representative Congress and systematically designed the authority of multi-level Employee Representative Congress, integrating it with the close-loop management for building a transparent, open, and scientific democratic management system for employees, and providing a strong guarantee for stable enterprise reform.
- In the second half of 2007, focusing on serving the employees and enterprise, the labor union of company conducted the third investigation among 5000 employees with the aim to determine their demands and attention to Baosteel's development strategy, to put the CP committee's opinion on intensifying the management of employee's demand and attention into effect, to open channels to those who need to pour out their ideas and seek help and to build a channel or system that cares about people. In this survey, 73 questions of 18 types, relating to the "employees greatest concerns", were carefully designed, so that the "most cared, most direct, most realistic" information of enterprise development and personal demands were directly sent to leaders and relevant functional departments.
- Concluding from this survey, the labor union suggested ten improvements such as "to revise the Baosteel long-term system for helping the poor" and the "Implementation Method for Helping the Poor", to properly raise the assistance standard for underprivileged employees"; to properly increase the living standard of employees experiencing internal retirement, layoffs, paid off, long-term sick leave by taking into consideration income and price increases.
- Implementation of equal negotiation and collective contract system
- Labor Union of each unit signed the collective contract with the company and 100% employees are protected by collective contract.


#### Equal Opportunity and Diversification

- » Baosteel pursues an "equal opportunity" value concept, which is reflected in the policy/decision-making processes and embodied in different type of employees or different social groups. For instance, different employees, no matter male or female, holding the same posts, are rewarded according to a uniform salary standard. The company has never discriminated in any way whether it be gender, post or social group.
- The proportion of male operation managing personnel to female operation managing personnel is lower than the proportion of male employees to female employees. Therefore, for the proportion of operation managing personnel of different genders to the total number of employees of the same gender, the proportion of female operation managing personnel is higher than that of male operation managing personnel.
- » The company pays high attention to minority nationality employees by providing certain allowances to part of them, and offering some important management posts for them according to their performance.
- » Baosteel encourages foreign and Chinese employees who have completed overseas learning and come back from abroad to join the company. In 2007, the company strengthened its efforts for such recruitment by collecting foreigners' information on public websites, and formulated a special recruitment program for overseas talents, to improve diversity and globalization of the company.

#### Concurrent Growth of Employees and the Company

- » Continual improvement of employees' skills
- Focusing on the new round development planning, following the strategic, multi step training system, Baosteel strengthened the qualification training, competence training, and special training with a wide range of improvements and breakthroughs with a combination of system training and special training. In 2007, the company continued to foster college graduates, emphasized international competition, and implemented the training of management, technique, and skill of types at different levels.

In 2007, a total of 2020 training programs were executed; average training hours for each employee were 102 hours, 27.18% higher than that in 2006. There was a tatal of 142,464 training man times, among which 20,684 were managerial man times, 48,291 technician man times, and 73,489 operator/maintenance personnel man times. The average academic years of employees increased year by year and reached 14.42 years by the end of this reporting period. For details, please see the following diagram.



- » Satisfying individualized demands by implementing pertinent special training
- "One lecture every two months". In order to enhance employees' ability for strategy, thinking, learning
  and research, the company launched the "One lecture every two months" and other research activities
  like More Pressure More Power-Pressure Control, Transformation Management and Standard Operation of Company Governance based on a survey for employees.
- Training on internationalized competence. One of Baosteel's main focuses in 2007 was the special training program for overseas personnel such as performance training according to different types of management, technical business, and skills to further intensify training. Key points are described as follows: to intensify the training of overseas management personnel by focusing on promoting leading ability and expanding international outlook; to encourage technical research personnel to participate in the reach of overseas projects by focusing on upgrading innovating capacity, learning advanced technology and methods; to send more domestic personnel suited to the jobs on probation in overseas companies by focusing on perfecting their foreign language and foreign trade knowledge; to send more business personnel to go overseas to study and be on probation by focusing on perfecting their professional ability.
- Special training on intellectual property rights (IPR). Together with activities of the April 26 World Intellectual Property Day, the Company offered training courses on "situation and significance of IPR in domestic and foreign countries" and "technology innovation and IPR protection" for core managers in the company, which helps to enhance employees' awareness of IPR.







#### Building the employee's satisfaction index system

The company has improved the existing employees' satisfaction system to make employees more devoted, to gain an understanding of their demands and priorities and to get their best performance. The system has been improved in five aspects: employees' demands, employees' expectations, demand compliance, basic perception and values. Three other aspects in the employees' satisfaction system that were evaluated for the 1st time were: company's overall development (whether the company can give employees a sense of hope and faith decides the employees' recognition of the company), direct personal benefit (it includes work and returns, which refers to whether employees can live up to their value), internal relationship (whether employees can mix in the company and experience long-term development).

- » Baosteel strives to build a learning orientated organization, cultivate employees with knowledge, and promote collective innovations
- With further advancement of integrated management, cross plant, cross department and cross specialality employees' innovation teams are in full flourish. Kong Liming-style innovation teams have been set up everywhere. Now there are 797 innovation teams with 8,854 members.
- Since the Company laid emphasis on encouragement and guidance, it has set up the "Golden Bull Award" and "Zengle Innovation Award".
   In 2007, there were 20 winners of "Golden Bull Award", 80 winners of "Sliver Bull Award", 41 winners of "Zengle Innovation Award".
- In 2007, Lin Chengcheng from Baosteel Iron Smelting Plant was awarded the "National Labor Prize"; Researchers like Xiao Yongli from Baosteel Research Institute worked together with others and create a new safe and environment friendly steel making slag granulation technology which was awarded the second prize of the National Technological Invention Award; "Technology of High Strength and Totally Sealed Finishing Straightener Backup Roll" of Wang Jun from Baosteel Hot Rolling Mill was awarded the second prize of the National Science and Technology Progress Award.

Kong Liming, known as "The Inventor Kong", was born in 1951. He joined Baosteel's transportation department in 1984, and is now a senior technician of the department. In Shanghai, Kong Liming has the No. 1 professional inventions and patents. He started in the company as an average electric worker, and has become a Baosteel's skilled expert, Kong has been successively awarded many titles, such as one of "Ten Shanghai Worker Inventors", one of "Ten National Prominent Employees", one of "Ten National Self-educated Models", and many prizes, such as "Shanghai Working Model", "National Labor Award" and "National Working Model".



Awards, such as the "Golden Bull Award" and "Silver Bull Award", are given once every two years; – and are the best awards for advanced employees at Baosteel, and they are especially set up for the purpose of selecting advanced employees, making full play of the model effects of advanced persons to realize Baosteel development target.

The purpose of setting up the "Zengle Innovation Award", which is awarded once a year, is to encourage employees to learn from Zeng Le, known as the "God of Welding" to regard making Baosteel a first-class iron & steel enterprise in the world as their personal target, to show enthusiasm in their job posts, to venture on new inventions, and to create innovative atmosphere.

• For the patents and proprietary technologies Baosteel has obtained, see Table 1 and Table 2 f:



- » Baosteel advocates a "Work Effectively and Live Happily" lifestyle
- · Through various mass communities or organizations, the company tries to create conditions for employees to enrich their leisure time.
- The company supports employees taking part in different associations for their spare time activities including l-go, bridge, calligraphy, arts, and sports such as soccer, basketball, table tennis, badminton, tennis, billiards, etc.
- The Company sponsored employee culture and arts festivals and sports games on a regular basis, so as to enrich employees' life, widen internal exchange channels, meet the employees' spiritual and cultural demands.
- Besides, other activities related to arts are regularly held in Baosteel with the subjects pertaining to iron and steel making or district features. Many outstanding works of music, painting, and photo have been made available for employees to enjoy. The company also has a professional-level choral ensemble, which has won many prizes at various national contests.

#### Baosteel was Successively Awarded the Title of "China's Top Employers".

On Dec 7, 2007, the winners of "2008 China's Top Employers" held by the First Financial and CRF (Corporate Research Foundation) were unveiled. There were 24 winners including Bayer, DHL, Volkswagen and Baosteel, who were awarded the title for the second time in succession.

Standards for selecting the award winners is now stricter and more formal than before. Starting from March 2007, selection was made after every enterprise had completed the strict self-evaluation questionnaire, which was then reviewed by a group of international experts; interviews were given by human resource practitioners and an online poll was held as well. Finally after strict screening, 24 enterprises were selected for awards in fields that covered (38 enterprises in 2006) electronic information, software, chemical, food, automobile, iron and steel, consulting, financial, physical logistics, etc.

The criteria for winning the award include such factors as brand power and social influence, development potential and social contribution, enterprise culture and employment relations, continuous innovation and environmental protection, talent policy and attraction/retention. After comprehensive evaluation, the organizers concluded that Baosteel had always regarded people as its top and most precious resource and has always insisted on coherent growth of the enterprise and employees. Baosteel encourages employees by giving competitive salaries, great welfare and a green environment, and Baosteel has been recognized by all experts for its unique feature in the respects of salary and welfare, work environment, training and education, promotion and development prospect, enterprise culture, and innovation.

The relation between Baosteel and its investors is based on fair disclosure and "Telling Investors the True Story". The Investor Relations (IR) team has maintained a steady and low-key working style; they have constantly strived to establish and perfect an investor communication platform step by step, constantly expanded active information disclosure, and enhanced investor services in previous years; which has earned the company praise from the capital market.

#### Through Multi-Channel, Multi-Level Communication with Investors, Maintaining a Good Image in Capital Market

Baosteel has always been dedicated in improving management of IR. Since its listing in 2000, the Company has set up a multi-channel, multi-level communication platform, including "one-to-one" discussions, performance analysis, site investigation shareholders' meeting, news conferences, online performance reporting, a company website, TV meetings, and conversations with industrial sector analysts, etc., which creates favorable conditions for effective communications with investors.

Besides meetings and the requirements for statutory disclosure, the company constantly upgrades its active information disclosure in regular reports in order to provide more information. In addition to annual reports, the company also published the Company Veritable Recording, which includes data about management, production, sales, procurement, etc., giving investors a comprehensive understanding of the Company's management status and development direction.

Early in 2007, the English version of the Company's IR column was successfully posted online. The company instantly enriches and renews the contents of the IR column to keep the information online accurate and timely. The company will continue to optimize the IR website, think the way of the investors, and try every effort to create an IR website that is friendly and contains valuable information.



#### Management Attaches Great Importance to IR And Participates in IR Personally

The management fully realizes the importance of IR, actively participates in different kinds of IR activities, such as Analyst's Performance Description, online performance reporting and "one-to-one" discussions. It also discusses with investors the information on the company's production and operations and future development plans, and studies the influence that macroscopic

changes have brought. The involvement of management helps the investors get a more comprehensive and accurate understanding of the company's operation status and mid-long term strategic planning. Through communications with investors, the management can learn about issues that the capital market is concerned about for relevant information for decision making.



#### Creating Value for Investors; Seeking Win-Win Results with Investors

The company has always regarded "Creating Values for Investors" as its duty. Since its listing, the company has paid out not less than 40% of its yearly net profit as annual cash dividends, and has steadily increased them. The company regarded the investors' wishes for clear determination of dividend ratio. With approval of the shareholders' meeting in 2004, it was clear that the annual cash dividend ratio should not be lower than 40% of yearly net profit. Through commitment to assure the lowest cash dividend ratio, the investors' expectations have been stabilized, and a stable return is guaranteed for the investors. In order to perfect the current IR, the company has consecutively been learning the newest ideas on IR, studying the best practice on IR at home and abroad, improving IR work process and information disclosure, in order to provide better service for investors.



An ultimate goal, determined by Baosteel, for the supplier relations management is to build a highly competitive procurement supplier chain, based on the principle of sharing interests and risks and joint development, and to create a cooperative, win-win and sustainable development strategy for a cooperative partnership with major suppliers.

#### Jointly Development Based on Creditability

Baosteel recommends to suppliers its value idea with "creditability" as its core, and consecutively intensifies and promotes the cooperative partnership in the supply chain through normalizing access conditions and establishing a scientific evaluation system.

Baosteel seeks win-win benefits with suppliers, taking the following aspects as a standard of evaluation for major suppliers: delivery capability, cost capability, manufacturing capability, quality control capability, service capability and cooperation capability. Baosteel resolutely resists domestic suppliers who may have irrational and discreditable behavior towards price and delivery by means of advantageous opportunities in the market.

Baosteel has won respect from its suppliers by right of its honest image in business. In 2007, Baosteel met with the most severe raw material supply challenge since its establishment, but the rate of contract fulfillment turned out high in spite of the shortage of resources.

# Consecutively Promote Strategic Cooperative Relations with Strategic Suppliers

Baosteel insists on upgrading the strategic cooperative relations with strategic suppliers, and establishes stable cooperative relations with them in the form of signing middle- and long-term procurement agreements with them, and gives full play to the resources, expertise and technological advantages to face the market challenges together with the suppliers.

In 2007, Baosteel successively signed strategic cooperation agreements and long term supply contracts with several suppliers in the fields of mining, coal, ferroalloy, international shipment and coast shipping. In the respect of steel scrap supply, Baosteel has successfully signed a long-term procurement agreement for the first time, which locked scrap supply and ensured stable and safe supplies.

In 2007, Baosteel's locked proportion of raw materials and fuel, etc., of strategic resources was 76.93% and 83.72% in cash, while the proportion of procurement from strategic suppliers reached 78.17%.

#### Baosteel Signed A Transportation Agreement with CSCP

Recently, Baosteel and CSCP held a signing ceremony in Baoshan Hotel to strengthen long term cooperation in shipping on the Yangtze River and the coast. Baosteel's Vice General Manager, Zhujun Sheng, CSCP Vice Chairman of the Board, Yesheng Wei, etc., attended the ceremony. As representatives of both parties, Baosteel's Assisstant General Manager and concurrently General Manager of the Raw Material Procurement Center, Jia Nianlin, and CSCP's Vice General Manager, Wang Tao signed the contract.

CSCP is the largest company that deals in domestic inland water dry bulk cargo transportation, and the only one that has full logistics ability for river, sea and ocean shipping. In recent years, under the tense transportation power pressure, CSCP has always been regarded Baosteel as its most important cooperation partner, and making great contribution to Baosteel for production safety and stability and decrease of transportation cost. In order to realize its new strategic development goal, Baosteel will need to increase imports of iron ore. Domestic coastal coal, auxiliary material and iron ore transition transportation demand will be more than 50 million tons. CSC also makes great efforts to build a river, sea, ocean transportation coexistence pattern. On the principle of mutual benefits and joint development, both sides focus on building strategic cooperative partnership, and improving cooperation: Baosteel makes its domestic shipment joint tracks with international shipment, Baosteel's domestic transportation cargo amount agreement will be made in the form of long-term agreement, CSC will become one of Baosteel's major strategic carriers, and the cooperation will be in long term instead of a year long. These are all beneficial to upgrading anti-risk and key competitive abilities of both sides and to realize sustainable development.

- Baosteel Daily 3-12-2007

#### Strengthening Environmental Protection and Promoting Green Production

Baosteel recommends that suppliers to attach importance to environmental protection, and proper, effective resource utilization, and jointly promote a green production chain. Concerning the un-renewable feature of raw materials, Baosteel actively promotes the "production-supply-research" work to develop low-grade ore, hot briquette iron and other new raw material varieties, which reduces influences on society. Baosteel also has an internal raw material supply management system, to strengthen internal company supply of pig iron, ore, coal, blank material, auxiliary raw material and other resources, which makes resource sharing a reality and social environment value maximization.

#### High Efficiency and Transparency, Strengthening Social Responsibility

Baosteel has established and improved the procurement management system in combination with seeking resources, implementation and strategic management within the enterprise, in order to ensure that the procurement process is highly efficient, transparent and controllable. Baosteel has also improved the hierarchical authorization system, various sectors such as the introduction of new suppliers, pricing and the signing of important contracts should be conducted in accordance with the strict regulations and procedures in order to void any uncontrollable conditions.

## Baosteel signed a long term cooperation agreement with Jiangxi Tungsten Industry Group Co., Ltd

Recently, Baosteel signed a long term tungsten iron cooperation agreement with Jiangxi Tungsten Industry Group Co., Ltd to establish a ferrotungsten strategic supply chain together. As the representatives of both sides, Baosteel's Vice General Manager, Chu Junsheng and Jiangxi Tungsten Industry Group's General Manager, Zhang Chunming signed the contract.

Baosteel is one of the major domestic consumers of tungsten, with an annual demand of 20% of the total amount. Jiangxi Tungsten Industry Group Co., Ltd is a comprehensive company of ore resources and has market scale advantage, technological advantage and quality advantage. Its wolframite concentrate recoverable reserves account for 60% of China's total. Its tungsten output accounts for more than 40% of domestic output. In recent years, with the rapid development of the do-

#### Baosteel signed a long term shipment contract with China Shipping Development Co., Ltd

In the afternoon of January 26th, Baosteel and China Shipping Development Co, Ltd signed a long term ocean and coastal transportation contract in Shanghai, which symbolizes that cooperation of both sides has stepped into strategic level. Baosteel's Chairman, Xu Lejiang, General Manager, Ai Baojun, Baosteel Vice General Manager, Dai Zhihao; China Shipping Development Co., Ltd president, Li Shaode, Vice President, Lin Jianqing, and Zhang Guofa, attended the signing ceremony.

With the increased amount of mergers and acquisitions in the steel and iron industry, the world's steel plant tycoons will all put controlling iron ore, coal resources and reducing relevant logistic and transportation cost on the top of their agenda in the future development of enterprises. Meanwhile, with the constant upgrading of Baosteel's competitive power, the demand for iron ore, coal and auxiliary materials will continue to increase. This year, Baosteel's estimated amount of iron ore imports will be more than 45 million tons, and over 50 million tons of domestic coastal coal and other auxiliary materials. For this reason, Baosteel is planning to take approximately 70% of its transportation needs on long term contracts, and cooperate with those ship owners who can provide competitive shipping prices, which includes China Shipping Development Co., Ltd.

At the signing ceremony, Li Shaode said that the long term ocean and coastal shipment contracts signed are based on the principle of "equality and mutual benBaosteel adds the agreement of clean procurement when signing official contracts with suppliers. Bribes offered by suppliers to buyers are strictly prohibited, and if discovered, the supplier will be promptly eliminated from the qualified supplier list.

Baosteel strengthens suppliers' social responsibility management, implements ISO9000 certification management towards production-orient suppliers, and chooses suppliers who are more social responsible.

mestic iron and steel industry, the demand for ferrotungsten has increased speedily. Tungsten market price fluctuates frequently along with tungsten ore price. Conflicts between resource demand and supply is becoming increasingly visible. In order to upgrade resource control ability and further promote joint development, Baosteel and Jiangxi Tungsten Industry Group signed a long term cooperation contract.

According to the contract, over the next 3 years, Jiangxi Tungsten Industry Group will take the "send-and-sold" mode to supply tungsten ore to Baosteel. That is to say Baosteel can use tungsten before they sign the contract, and make the settlement later. In this way, Baosteel raw material center can shorten the procurement period and reduce occupation of funds. Meanwhile, Jiangxi Tungsten Industry Group can also expand their market share in Baosteel.

Baosteel Daily 9-7-2007

efit, creditability and cooperation, joint development, realization of win-win results". It will have important and positive influence on our steel and iron industry, and create a model of state-owned enterprises with strong-strong union and joint development. China Shipping Development Co., Ltd pays great attention to the strategic cooperation with Baosteel. In the "11th 5 year" period, China Shipping Development Co., Ltd will continue to develop container transportation and enlarge its shipping amount of oil and dry bulk cargo by 10 million tons, and build a large scale ship team with expertise, to provide more powerful support and service for Baosteel.

Ai Baojun pointed out at the ceremony that since its commissioning, China Shipping Development Co., Ltd had always been the biggest carrier of Baosteel coastal ore transfers and coal transportation. It carried about 11 million tons of cargo, which accounts for 60% of its total, and the amount is still steadily going up. With the powerful transportation possession amount and flexible transportation power for Baosteel, but also made contributions to lowering Baosteel's logistic cost. The signing of the long term pelagic and coastal shipment contract is the symbol of the cooperation from coastal to ocean, from annual short term to long term. He hopes that from the new starting point, both sides can upgrade enterprise anti-risk ability, seek joint development and form a sustainable development core competitive ability.

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#### Products Major Market and Customers

Baosteel's commodity billets are extensively applied to cars, home appliances, ships, petrochemicals, mechanical manufacturing, pressure vessels, energy resources, architectural ornaments, steel wire products, aerospace and electronic instruments, etc..

Baosteel commodity billet sales are mainly sold in the domestic market. Our customers are scattered allover China. Meanwhile, Baosteel is strengthening its internal and external coordination, and constantly upgrading it competitive edge on overseas sales and possesses solid overseas customers. Through constant development of high value-added commodity market, and consolidating and developing first hand customers, the company has steadily enlarged its domestic market share year by year; and optimized and upgraded its export commodity structure. In 2007, Baosteel commodity billet direct sales ratio reached 83%.

#### Being Honest and Fair in Sales

Baosteel actively builds honest business culture with creditability as its core. Baosteel strengthens the "honest" conception in sales, and has established a comprehensive education system to punish and prevent corruption. Baosteel has established and is implementing the so called "8 Prohibitions"<sup>[1]</sup> and "3 NOTs"<sup>[2]</sup> regulations. For example, The Sales Center worked out "Management Method and Detailed Executive regulations of Sensitive Posts", which stipulates that the creditability and performance of personnel at sensitive posts should be tracked and evaluated in order to intensify supervision on personnel at sensitive posts and in charge of business, so as to make business process open and transparent.

#### [1] 8 prohibition

It's prohibited that personnel who take advantage of their authority, post influence and job convenience for their spouses, children and relatives in business (for example, procurement, sales and project, etc.), or provide convenience in intermediary (for example, recommendation and so on).

It's prohibited that personnel runs a company or makes investment in capital in an enterprise that is in the same field, or in a relevant enterprise or having business relations (except from security investment).

It's prohibited that individuals makes loans or lease relation with any customer having direct business transaction with Baosteel.

It's prohibited to take cash, securities, payment document (for example, oil coupons, cards, supermarket or department store coupons, high level consumer membership cards, VIP cards, discount cards, etc.) and precious presents, and any other kinds of payments or sponsorship.

It's prohibited to use public funds and playing golf during working hours or playing golf on the invitation of a subsidiary unit or playing golf on the invitation of each other subsidiary units. If it is necessary to play golf, it should be organized by a unit office.

It's prohibited to make business relations with those who are fired by Baosteel because of violation of law and discipline, or who left Baosteel voluntarily.

It's prohibited to make business relations with those units or persons that have a bribery record. If found on the list, the business transaction should be stopped.

It's prohibited to incite, indicate, or force a financial institution or personnel to manipulate accounts or provide false financial reports, to forge, fabricate unauthorized destruction or to deal with accounting documents, accounting books and other accounting materials; or incite, indicate, or force financial personnel to set up a small treasury.

#### [2] Three NOTs

It's not allowed to use public funds for personal consumption, or to use credit cards of public funds for personal consumption. Use of a credit card of public funds for personal consumption should be accompanied with original documents and relevant notes:

It's not allowed to take part-time jobs to earn money. If it is approved, the reward and subsidy should be turned over to the sending unit and disposed of according to the regulations. No reward and subsidy should be taken if a part-time job is taken within the Group.

It's not allowed to violate the policy of decision making discipline and procedures, to make important policy decisions, important personnel appointments and transferals, important project arrangements and large capital investments personally.



#### Supply Chains Jointly Create Value for Customers

Baosteel has always insisted on the principle of "Customers First and Fast Response". By upgrading supply chain it has enhanced ability to satisfy customers' constant developing demand and created value for customers. In 2007, by building up an integration platform of sales and a logistics control system, Baosteel focused on advancing pilot customer contract whole course period management; strengthened weekly delivery management; extended inner-company management to sales, processing and distribution channels, so as to upgrade consumer perception by whole supply chain optimal service. By carefully defining units responsible for implementing contract stipulations, contract disposal, production organization, ex-works transportation and JIT delivery, etc., it corrected loopholes and abnormal conditions of all links and achieved remarkable results. The whole course contract period of pilot customers is shortened by 7% on average compared with that of 2006; customers' stock was reduced apparently, which made customers have a real feeling of the value added advantage of Baosteel's supply chain.

#### Raising the Customer Satisfaction Level by Concerning about Customers' Perception

With the help of production-sales-research platform, Baosteel has been constantly improving product quality and upgrading the performance of material objects. Combined with substitutions of imported materials and supplies for key projects, Baosteel has push forward the research and development of new products, and has been constantly providing more and better products for customers. In 2007, Baosteel's sales volume of unique and lead products reached 7.393 million tons. Meanwhile, it takes "Raising the customer satisfaction level by concerning about customers' perception" as the guide line to develop customer service. Through further implementing the customers' representative system, Baosteel has refined the customer service work, improved the whole course management of customer contracts, and has been constantly optimizing product discrepancy processing procedure, strengthening overseas customer technical service, so as to constantly upgrade customer service soft power of the marketing system. Therefore, customers' satisfaction degree has been constantly kept above 90 marks.



### Social Dedication

Apart from the rapid development and the huge economic benefits Baosteel has created, it also takes social responsibility seriously, and actively participates in work for the public good. Baosteel has explored a sustainable and effective way of rewarding society by various methods and spares no effort to realize the harmony of economic development and humanity and nature.

#### Financial Aid for Education

Up to 2007, Baosteel Education Fund, founded in 1990, has accumulatively given over 100 million RMB in aid and subsidies. It has rewarded 13,213 excellent teachers and students from over 100 colleges and universities, 18 science and technology institutes.

In 2007, nationwide, 773 excellent teachers and students from 82 colleges and universities and 18 institutes directly under the Chinese Academy of Sciences were rewarded Baosteel Education Fund, among them 30 got Baosteel excellent student special awards; 539 Baosteel excellent student; 10 Baosteel excellent teacher special award; 194 Baosteel excellent teacher; accepted the following 18 universities as Baosteel Education Fund Assessment Universities: Zheng Zhou University, Guang Xi University, Ning Xia University, Qing Hai University, Hai Nan University, Nan Chang University, Gui Zhou University, Shan Xi University, He Bei University, Hu Nan University, An Hui University, Fu Zhou University, Shi Hezi University, Beijing Jiaotong University, Yan An University, Yan Bian University, Xiang Tan University and Shan Xi Normal University.



#### Supporting Chinese Environmental Protection Cause



On May 14th, 2007, Baosteel donated 50 million RMB to China Environmental Protection Foundation to award those collectives and individuals that had made great contributions and got remarkable marks for making contributions to China's environmental protection cause. Chinese environment award is the highest social award in the Chinese environmental protection field, which features in sociality, universality and impartiality.

In 2007, Hang Zhou city, Beijing Cement Plant, Yun Nan Xishuangbanna Forest Public Security Bureau, CCTV News Center Public Information Department Reporter Team were awarded the China national Baosteel Environmental Prize. Yellow River Water Resources Committee of Water Resource Ministry, Shanghai Minhang District, Yunnan Aluminum Co., Ltd, Women Development Ministry of China Women's Federation, and Xinhua Agency reporter Gu Ruizhen, etc., were awarded the China National Baosteel Environmental Excellent Prize.

# Society

#### Carrying Forward Olympic Spirit by Spreading Olympic Culture

On the afternoon of June 12th local time in Switzerland, Baosteel donated \$1 million to the Olympic Museum. Baosteel was engraved on the "Donators'Wall" of Olympic Museum. Baosteel is the first iron and steel enterprise to put its name on the wall and the second Chinese enterprise to put its name on the wall after China Petrochemical.

The new Olympic Museum, completed on June 23rd, 1993 and costed \$6.5million, was 70% funded through donations. Museum sets high standards for donor selection. It is stipulated that the donator must have a high reputation in the international community and only one representative enterprise in a sector can be accepted as the donator in this sector.

In 2008, the Olympic flame will be lit in Beijing, China. As one of the global 500 enterprises, Baosteel, unquestionably takes the responsibility for "Carrying forward Olympic spirit by spreading Olympic culture". Since Beijing won the right to host the Olympics, Baosteel has successively provided over 70 thousand tons of exquisite steels for the "Bird's Nest", "Water Cubicle" and other Olympic stadiums and ancillary works, which contributes greatly to the nationalization of Olympic steel.

> International Olympic committee president, Rogge, said at the ceremony of Baosteel memorial stone unveiling: The Olympic Museum is the place where human beings will review the Olympic history. If there were no such excellent enterprises as Baosteel, there would be no Olympic Museum today. From now on, Baosteel will forever be on the wall of the Olympic Museum. The world will pay attention to Baosteel, pay attention to Beijing Olympics. Baosteel also actively participates in the construction of Beijing Olympic stadiums. International Olympic committee believes that the Beijing Olympic organizers will hold the Olympics 2008 successfully, and will give the whole world a chance to see China, which accounts for 1/5 of the world's population.

#### Igniting Passion, Realizing Dreams -Zang Yong Becomes the Beijing Olympic Torchbearer

"Becoming the torchbearer is not only my honor, but also Baosteel's honor". Baosteel employee Zang Yong, 33 years old, has persisted in doing youth volunteer work for 10 years. He took part in activities such as 1998 anti-flood and solid dike, annual Spring Festival travel season service, environmental protection, hope project, National Games and "Nan Jing Red Cross Remains Donation Volunteers" etc. In 2005, Zang Yong was awarded Chinese Youth Volunteer Gold Award.



#### Eternal Love, Bright Action

"Eternal love, bright action" is a nation wide cataract re-bright project of the largest scale, largest coverage, and most effective up to now. It is co-initiated by China Disabled Person Federation and China Welfare Fund for the Handicapped, to give sight to poor patients who are blind because of cataracts. As the first state-owned enterprise participates in the project at home, Baosteel donated RMB 3.4 million, which can help 3400 patients.

"The action of Baosteel is the practice of "17th session". Representing a model for state-owned enterprises to care for the handicapped, and also embodies the global 500 fortunes style."

— Jiang Shangzhou, chairman of China Welfare Fund for the Handicapped



# Operation

#### Helping Outlying and Poverty-Stricken Areas

At the end of 2003, Baosteel started the pointed poverty alleviation work in Ning'er County, Mojiang County, Zhenruan County and Jiangcheng County of Puer City, Yunnan Province. According to overall demands of the State council poverty reduction office, and overall planning of Yunnan Province poverty reduction work, Baosteel invested over RMB 30 million to plan and implement whole village improvement, health center buildings, school buildings, industry development and other poverty reduction projects, making great contributions to better the backward local social economy. reduction projects, making great contributions to better the backward local social economy.

Baosteel has set up 17 hope schools, 34 hygiene centers, 196 houses, helped 45 villages and helped 3570 students. Meanwhile, Baosteel has actively encouraged its subsidiaries to donate computers, books, tables, desks, stationary and winter clothes to the pointed county. In June 2007, Ning'er County had an intense earthquake. Baosteel sent 1.5 million RMB in donations, which was used for restoration and production recovery.





In order to meet the new demand of comprehensively building a well-off society, and bringing the Socialist Harmonious Society a step further, Baosteel made out the 2008-2012 pointed Yunnan poverty reduction plan. The plan stipulates that in the following 5 years, Baosteel will contribute about RMB 10 million annually to help pointed Yunnan counties to provide a better life for their people, and to develop education, and industry etc.

In the following years, The Poverty Alleviation Plan will mainly focus on promoting the Whole Village Development Project, implementing relocation and hygiene projects to better their living conditions; developing education including school buidings, one-to-one student and helper partnership, "Baosteel Stipend for Poor College Students", etc. The plan will bring advantages of local resources to full play, to support local culture and tea industry. The plan also stipulates the project management pattern, responsibility units, capital, poverty alleviation projects, process management and result track in advance. Baosteel will continuously send excellent cadres to the pointed poverty area to take responsibility for project coordination and management.

In June 2002, by designating aiding Tibet cadres and disbursing aiding Tibet funds, Baosteel started up the pointed aid to Tibet Xigazê Prefecture Zhongba County. In 6 years, Baosteel sent 6 cadres in 3 batches to Tibet to develop the pointed aid, and has invested 67.55million yuan to aid Tibet. It has completed over 43 projects including Zhongba County comprehensive center, the pilot units of plateau "vegetable basket" project, renovation of dangerous house along the streets, well-off model units, agriculture, animal husbandry product markets, pastoral area building improving projects, etc.. At present Zhongba Vocational College, culture center, planting demonstration garden and other projects are under construction.

Zhongba County is the only pure stockbreeding county along the border in Tibet Rikaze Region. It covers the most area of this region and has the worst climate, the most occurrence frequency of disasters and is located at the highest altitude. In addition, the County has the longest distance from Rikaze Administration Center with the hardest traffic condition and the longest distance along the border. Furthermore, the County has the slowest access to information, possesses the poorest finance and the most widely scattered habitation with the lowest living level, the highest living cost and the least living facilities in the region and Tibet. Encouraged by the veteran Aiding Tibet cadres' spirit of hard work, patience, cooperation and dedication, Baosteel's aiding Tibet cadres have overcome difficulties such as highland anoxia, body unwell, hard life and climate changes. They made research on common people's life there, and did a lot of beneficial work for the local people. Under the guide of consolidating political power, developing pastoral area economy, and improving the life of pastoralists, they aided Tibet wholeheartly, and fufilled the appointed aiding Tibet task successfully. Tibet government and Rigaze Prefectural Party Committee fully appraised their work.



# Environmental Protection

#### Aim, Policy and Organizational System of Environmental Management

- Aim
- Policy
- Measures
- Organizational system
- System certification

#### Tackling Global Climate Change

- Popularizing the application of energy saving technology
- Launching research on energy saving and emission reduction technology
- Control sources and raise efficiency
- Life cycle assessment of products and production
   technology process
- Developing environment-friendly products

#### **Process Management and Cleaner Production**

- Aligning with the standards of international advanced iron and steel enterprises
- Launching energy resource auditing and detecting the potential of energy saving
- Advanced energy resource management system
- Water saving and drainage reduction
- Realizing online environmental automatic measuring
   and monitoring
- Building persistent organic pollutants analizing laboratories

#### End Treatment, and Standard-Reaching Emission

- Air pollution control
- Flue gas desulphurization
- Evaluation of cleaner production

Making Full Use of resources by recycling and regeneration

- General of recycle economy
- Blast furnace slag
- Steelmaking slag
- Iron-containing dust slime
- Fly ash and desulphurized gypsum
- Waste refractory material
- Waste acids and oils

#### Undertaking Social Responsibilities and Promoting Environment Friendship

- Protecting biodiversity
- Interaction of community environment
- Supporting EP undertaking and fulfilling social responsibilities

#### Environmental Costs and Investment in Environmental Protection

- Environmental cost
- Investment in environmental protection and control
   and in energy saving reconstruction

The relevant member units of the International Iron & Steel Institute (IISI) have studied the life circle assessment (LCA) of iron and steel products, and their study indicates that iron and steel products are environment friendly - this conclusion has changed people's long misunderstanding about iron and steel products. However, the undeniable fact is that being a typical resource and energy-intensive industry, all the iron and steel enterprises inevitably produce a huge impact on the environment. Therefore, Baosteel attaches great importance to environmental protection (EP) in its production and business activities, and upholds the concepts of "Green operation" and "Sustainable development", to keep on expanding the connotation and denotation of "Green operation".

The Aim of Baosteel environmental management is to build up a first-class clean iron and steel enterprise in the world. To this end, it founded the Environmental Protection & Resources Utilization Committee, established a relevant business managerial department; and worked out a policy of environmental management and sustainable development, extending the environmental responsibilities to the supply chains and covering procurement, manufacturing and distribution. All the branches (subsidiaries) in the main businesses under Baosteel have passed ISO14001 Environmental Management System Certification, and receive internal audits twice a year and an external audit once a year for the environmental management system (EMS).

Baosteel has been promoting clean production in an all-around way usingt the following measures: strengthening the source control, adhering to the refining raw material guideline, purchasing raw materials with low sulfur content as far as possible, paying attention to the process management, actively promoting the application of energy saving and consumption reduction technology, and effectively decreasing the emission of green-house gases (GHG), improving the end treatment with focus laying on paying attention to flue gas desulphurization, smoke dust treatment, and standard-reaching reduction of wastewater discharge. It has built up many EP projects, promoted recycle economy, made an overall arrangement of comprehensive utilization of secondary resources according to the 3R Principles, thus converting wastes to reusable resources. It has made great efforts to develop environmentfriendly products based on the results of the LCA study, and lessened, as far as possible, the environmental burden of iron and steel products.

In 2007, Baosteel concerned about the influence of the company's operations on biodiversity, and decided to study on this issue. It hopes that by promoting such activities it will encourage more and more enterprises to concern about the protection of biodiversity.

Adhering to the "people-centered" development concept, Baosteel is actively building a harmonious and healthy relation with neighboring communities, by irregularly visiting the neighboring residents, communicating about EP issues with them, and properly solving any EP problems that are influencing their lives.

In 2007, Baosteel pushed forward construction of a sustainable development system and regarded it as an important project of the year, and implemented and refined the indexes of "Green Operation" in all business fields. In 2008, the company will continue to regard the implementation of this work as an important task, and hope to perfect the basic management of sustainable development by constantly enriching the index system.

Baosteel has strictly abided by relevant laws, regulations and systems concerning EP, and has not yet been subjected to any major punishment because of violation of EP laws or regulations.

# Aim, Policy and Organization System of Environment Management



To build a first-class clean iron and steel enterprise in the world



First class management

First class technology

#### Policy

- » Strictly abiding by the State's EP laws, regulations and standards, and fulfilling the international environment convention;
- » Persisting in reduction of environmental pollution in the enterprise's operation activities, and implementing the internal environmental control standards in an even more strict way;
- » Consistantly promoting reduction, recycle and reuse of solid secondary resources;
- Caring about comments from and requirements of relevant sources, and actively improving the environmental quality of the communities;
- » Taking an active part in international environment communication and cooperation to improve the global ecological environment;
- » Actively promoting exchange and implementation of advanced environmental technology in the domestic iron and steel industry;
- » Renovating backward technology causing serious environmental pollution in production units, and enhancing the performance level of the company's overall internal environment.

#### Measures

- » Adopting advanced clean production processes and pollution control technology for newly built projects;
- » Ensuring stable operation of EP facilities by means of strict facility management, maintenance and repairing;
- Introducing advanced environment technology to reform the existing environment facilities so as to enhance operation efficiency;
- » Implementing an all-around environmental management, and taking advanced management measures, so as to keep increasing the efficiency of environment management and improve the management results;
- » Launching an all-around environmental propaganda and training program in the company to enhance environment awareness of all employees;
- » Promoting R & D of environment technology and popularizing the advanced environmental technology;
- » Adopting rational methods to evaluate the company's environmental performance and carrying out a consistant improvement plan.

#### Organization System

Baosteel Co., Ltd. has established Environmental Protection & Resources Utilization Committee, which is responsible for preparing guidance for the company's EP and resources utilization (RU), direction, studying and determining the company's EP and RU development planning and programs, coordinating relations among various branches and subsidiaries, and the distribution of resources among them, and making decisions for major projects concerning EP and RU.

The company has correspondingly established EP & RU Department. Composition of the EP & RU Committee, which is specialized in energy, EP & RU management. It's organization is as follows:

Director				
Chairman of BOD of Baosteel				
Vice Director				
General Manager	Chairman of Trade Union	Vice GM in Charge		
Members				
Head of EP & RU Dept.		General Managers of Branches (Subsidiaries)		
Office				
of EP & RU Dept.				

Each branch (subsidiary) has set up a corresponding production management section concerning energy management, EP and resource synthetic utilization. From 2007, in order to promote the integrated management of energy saving, EP and resource comprehensive utilization, the company integrated, in a planned way, the functions of the above production management sections of various branches (subsidiaries).

#### System Certification

In accordance with ISO 14001 and the requirements of the State Environment Administration, Baosteel Co., Ltd. organizes internal auditors to carry out internal system auditing and receives external auditing on a regular basis so as to ensure consistant improvement of the environmental management system.

Presently, all the branches (subsidiaries) of iron and steel production under Baosteel Co., Ltd. have acquired the certification of ISO 14001 Environmental Management System.

## Tackling the Global Climate Change

Although "Kyoto Protocol" does not have a quota for allowable carbon dioxide emissions for developing countries, it cannot be denied that China, due to its fast economic growth, has become the world's second biggest contributor of carbon dioxide emissions, second only to the United States.

China plans to realize the reduction of GHG emissions mainly by cutting down energy consumption, and to reduce the ratio of energy consumption per GDP. The goal is to reduce the amount consumed as of the end of the tenth five-year plan period by 20% by the end of the eleventh five-year plan period. For this purpose, the Chinese Government decided to organize and initiate "Top-1000 Enterprises Energy Efficiency Action" among the key energy consuming industries. The top 1000 enterprises include independent accounting units above medium scale in the nine key energy consumption industries such as iron and steel, non-ferrous metals, coal mining, electric power, petrochemical, chemicals, construction materials, textile and paper-making, totaling 1008 enterprises in China. The comprehensive energy consumption of these enterprises in 2004 exceeded 180,000 tons of standard coal.

Baosteel, listed among the "Top-1000 Enterprises" in China, is to realize the reduction of GHG emissions mainly by cutting down energy consumption and developing recycle economy.





#### Popularizing the Application of Energy Saving Technology

At present, the six major energy saving technologies, including CDQ, TRT, blast furnace coal injection, pellet ore, converter negative energy steel smelting, hot transportation and hot charging and direct rolling of continuous casting ingot, are all popularized and applied in Baosteel. The company has adopted the currently advanced energy saving technology in every working procedure, thus lowering the overall energy consumption per ton of steel production with each passing year. The comparative important energy saving technology and the overall energy consumption per ton of steel production over the years are shown in the figures below:



Baosteel has prepared the "2007 - 2012 Energy Saving Program". Over the coming years it will increase investment in energy saving and emission reduction projects, and every year it arranges over one hundred energy saving projects, including technical reforms, maintenance improvements, scientific research for tackling the major problems. Besides, these kinds of projects can be established whenever necessary and approved promptly, so as to assure their popularity and apply the advanced energy saving technology.

The company uses the income produced in the energy saving projects to establish a "special fund for energy saving and emission reduction", to help and encourage the enthusiasm of various branches and subsidiaries to carry out the projects of energy saving and emission reduction.

Baosteel emphasizes the recovery and utilization of waste energy resources, such as overpressure, waste heat, by-product gas, etc. produced during the production process, thus cutting down on primary energy consumption. The total recovery amount of waste energy resources in the last three years is listed below:





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#### Launching Research on the New Technology of Energy Saving and Emission Reduction

Baosteel has launched a series of research projects on the technologies of energy saving, and GHG emission reduction and storage.

Study on the transfer and combustion characters of waste plastic injected into a BF. A comprehensive research on the transfer, combustion, blockage handling technology and relevant equipment parameters has been conducted; and in Baosteel blast furnace #3 an industrial test verification was carried out on waste plastic big injection from a single tuyere. The successful test of waste plastic transfer and combustion technology from a single tuyere of a blast furnace is the first of its kind in China, and also provides a good operation platform for large scale industrialization, with profound significance to the expansion and reuse of metallurgic resources and EP. In respect of lab test, Baosteel has (1) completed a study on experimental simulation and digital simulation of the interrelations of the conveying concentration (solid-gas ratio) with the kind and size composition of waste plastic for blast furnace injection, flow and pressure, the conveying pipe diameter, flow in pipe and pressure losses, obtaining the optimal process parameters; (2) conducted a study on pyrolysis and combustion properties for different kinds and sizes of waste plastic and coal powder, analyzed the burning mechanism, and set up a dynamic model for plastic combustion; (3) adopted the test tube static and furnace dynamic injections, respectively to imitate the blast temperature conditions in a Baosteel blast furnace, and carried out the comparative burning tests and hearth injection combustion tests of different kinds of waste plastic and coal powder; (4) conducted the study on plugging a gun under a blast temperature of 1250°C with different kinds and size of waste plastic, different solid-gas ratios, and different diameters of injection gun.

The industrial test was performed jointly by the iron works of Baosteel Branch, Baosteel Research Institute, Anhui University of Technology and Baosteel Engineering & Technology Co., Ltd. Baosteel succeeded in the injection ratio test with a single tuyere injection of 100kg/ton powder; realized the large injection quantity of 6000kg/h with a single tuyere in a blast fumace, and reached the capacity of the supporting conveyor system; and identified, verified, completed and improved the industrial parameters concerning conveying and injection. The large number of laboratory data acquired has laid a solid foundation for further industrial tests, and provided first hand information, reliable process parameters and precious operation experience for field application.



Study on development and application of high-viscosity molten slag treatment technology. On the basis of the research results about steelmaking slag composition and high temperature characteristics, the study made a breakthrough in the process, equipment and key technology, formulated a complete set of high-viscosity molten slag treatment technology and implementing facility for safe, rapid, continuous production suitable for large-scale industrialization, and developed a safe granulation process of high viscosity steel making slag brand new slag treatment equipment in a special structure (such as BSSF-B2 Model in dual-layer twin-cylinder structure, BSSF - RC Model in a structure combining granulated roller with cylinder), as well as auxiliary equipment, like slag racking machine, combined conveyor; etc. Their work surmount the bottlenecks restricting the BSSF technology, that is, after lining protection by slag splashing the high viscosity steelmaking slag is difficult to be guided in, easily explodes and causes melting erosion, and wears equipment out. After a large-scale trial production on line, the feasibility of this project's achievement has been proven, with the following innovative points:

- a. Development of BSSF RC Model Equipment in combination of granulation roller and cylinder; and the intensified crushing technology for hot-state molten slag;
- Development of BSSF B2 Model Slag Treatment Equipment with a brand new structure, thus forming a safe crushing and enhanced cooling technology;
- c. Development of the hot-state granulation treatment technology and equipment for casting slag, thus achieving a preliminary refined treatment of casting slag, and creating a good foundation for further utilization of casting slag. On the basis of the BSSF- B2 Model Slag Treatment Equipment, Baosteel has designed and developed slag treatment equipment specially for casting slag, and also designed a diversion tunnel resistant to molten steel corrosion as a replacement for distribution disk, and their technological feasibility has been verified through practice;
- d. Development of the auxiliary equipment for feeding high viscosity steelmaking slag slag racking machine, which is flexible, simple, reliable and easy to operate, and able to walk back and forth, and sway right and left, up and down;
- e. Development of the combined granulated slag conveyor with slag-water separation function;
- f. In order to cope with the severe working conditions in which the granulated roller and working cylinder are experiencing a periodical change repeatedly from 1000°C to 100°C, development of spare parts made of a material resistant to high temperatures, thermal fatigue and wear, thus greatly prolonging the service life of these parts;
- g. Completion of the test and application study on BSSF slag properties, mastering its physical and chemical properties, and the study on the technical parameters for the production of fine powder of blast furnace slag with highly added value, to provide theoretical basis and process parameters for large-scale production.

Basic study on the utilization of steelmaking slag to absorb carbon dioxide. Baosteel carried out the study in two different aspects: one is the identification and optimization of parameters for converter slag carbonated process; and the other is the effect of converter slag on accelerating the growth of marine phytoplankton. Around these two major themes, it has developed, designed and manufactured steelmaking slag carbonated facilities; optimized and identified the process parameters of slag carbonated process; and the other is sensitive elements in fresh and sea water before and after the carbonation of BF slag, analyzed and finished the components and phase composition of slag; studied the impact of slag on seawater quality; probed the ecological effect of BF slag on key species of marine organisms; fulfilled the research on the impact of slag on the growth of marine phytoplankton; and estimated the biological utilization quantity of carbon in sea water by slag. The results of the study indicate that the carbonation of slag can absorb a certain amount of  $CO_2$  gas, evidently lowering the alkaline; and that the application of a proper amount of converter slag to sea water can explicitly accelerate the growth of plank-tonic algae. This promotion of algae growth will further absorb  $CO_2$  gas (the marine algae can absorb  $CO_2$  gas and release oxygen through photosynthesis).

Development of regenerative body used for regenerative combustion and establishment of its evaluation system. The regenerative combustion technology, a totally new technology that emerged in the beginning of the 90's, has been proven to significantly reduce the formation of CO<sub>2</sub> and NOx and energy consumption. This technology has been already applied widely in Japan, United States, Europe, and other developed countries. In China, the regenerative combustion technology has been used a lot in small-scale bar and wire heating furnaces and ladle baking furnaces, but up until 2005 no domestic company had applied the regenerative combustion technology to a large-scale continuous slab reheating furnace. In September, 2004, Baosteel applied the technology to a large-scale slab reheating furnace, but in this application some problems occurred, such as the high cost of the regenerative body, over heating of the regenerative box, etc. In this project, the research emphasis is the fulfillment of the test and evaluation of thermal performance and refractory property for the regenerative body and regenerative chamber in reheating furnaces for more than two years. This small ball is superior to the imported ones in performance, but only half the price of the latter. The development of the diagnosis technology for regenerative box performance has filled the gap in this field in China. Now, Baosteel has set up a multi-function regenerative body experimental platform, holding the lead in China, and has applied for 3 patents and possesses one know-how in this field.

Development of high heat value porous media combustion technology. Baosteel has developed the full radiated, high efficient porous media combustion technology, to optimize the natural gas combustion process, and achieved the gas-saving target of natural gas. In comparison with compacted material, porous media in burning has the following advantages: high thermal efficiency, fast combustion rate, combustible with low heat value fuel, high radiation output, well-distributed combustion temperature, large combustion equivalence ratio, low CO<sub>2</sub> emissions and extremely low pollutant discharge. (1) By adopting a method in combination of cold test, hot test, industrial test and digital simulation test for a single burning jet, it developed a high-heat-value gas (like natural gas, etc.) ceramic porous media combustion technology with Baosteel's independent intellectual property rights. (2) In consideration of the process conditions of the industrial furnace at Baosteel Special Steel Branch Co., it has designed and machined porous media burning jet used for industrial furnace, and put it into a production line for industrial test, to examine its service life. Now Baosteel has set up a porous media burning jet experimental platform, and fulfilled the pre-preparation for the industrial experiment, acquiring 4 patents.

Low and middle temperature waste heat utilization technology. At present, the waste heat recovery ratio of the high temperature flue gas from rolling reheating furnace domestically is about 20% ~ 25%, but the waste heat of low temperature flue gas is usually discharged into the atmosphere directly as it's difficult to recover. The low temperature waste heat generation technology can be used to recover and utilize this heat in low temperature flue gas. According to the calculation, each 1000 m<sup>3</sup> of flue gas at 400°C can generate 20kWh. Baosteel is developing this low and middle temperature flue gas waste heat utilization technology, and once the technology is successfully popularized and applied in its branch companies, it can save over 170,000 tons of standard coal every year:



#### Controlling Sources and Raising Efficiency

Controlling the sources is our first choice for reduction of consumption and emission. The primary measures taken by Baosteel are to exert strict controls over the quality of raw material and energy sources, and to utilize scrap steel for smelting.

Baosteel is always adhering to the exquisite material policy, which can from the very beginning diminish the material taken from nature, and decrease energy consumption and smelting slag production. The iron ore used by Baosteel mainly comes from the top three mining companies in the world, to ensure the quality of the raw material. Baosteel exercises a rigid control over the sulphur content in coal, thus cutting down SO<sub>2</sub> content in the flue gas. Besides, the company insists on constant enhancement of the strategic cooperative relations with strategic suppliers, and adopts the mode of long- and middle-term procurement agreements to form stable cooperative relations with these suppliers, so as to guarantee the quality of raw material and fuel.

In 2007, Baosteel, for the first time, introduced the mode of long-term agreement in respect of the supply of scrap steel, locked up scrap steel sources to secure a safe and stable supply of scrap steel, and expects to continuously increase the scrap steel utilization proportion.

Constantly increasing the use of clean energy sources, like natural gas, electric power, etc. and decreasing coal use. In 2007, construction of a natural gas pipeline exclusively for Baosteel started laying a foundation for long-term guaranteed energy supplies for Baosteel's development.

Baosteel's consumption of energy resources and main raw materials in 2007 are listed as follows:

Consumed energy purchased from outside					
Coal	million ton 17.20				
Coke	million ton	1.23			
Natural gas	million standard m <sup>3</sup>	354.33			
Electric power	million kWh	5465			
Energy supplied to the society					
Coke oven gas	million standard m <sup>3</sup>	41.49			
Blast furnace gas	million standard m <sup>3</sup>	1819.49			
Main raw material consumption					
Iron ore and finished ore	e million ton				
Scrap steel	million ton	5.05			

Ore and raw materials used in Baosteel's production mostly come from Australian, Brazilian and Indian mining companies, by sea transport. Fuel consumed in Baosteel production mainly comes from the domestic market and its products are also mainly sold in the domestic market. The transportation of fuel and products primarily depends on railway and highway. As we have always been paying attention to the impact of fuel and product transport on environment, and taking relevant measures to exert a strict control, no major environmental accident has occured due to transport.

#### Life Cycle Assessment of Products and Production Technology Process

In recent years, Baosteel applied "Life Cycle Assessment (LCA)", a new tool, to the study of energy saving and environmental protection in the products and production technology process.

First, LCA was conducted on the electro-galvanized products, the work could be divided into three parts: (1) LCA study; (2) study on decision-making and consultation; and (3) study on energy efficiency analysis model.

We launched LCA study on the electro-galvanized products, in order to calculate resource consumption, energy consumption and environmental emissionsin the life cycle of the production of I kg of galvanized products; analyzedthe environmental impact caused by the said consumption and emissions, also obtained the LCI results of 12 other categories of intermediate products; put forward planned improvements according to the main factors affecting the life cycle environmental performance of Baosteel's products; sought to satisfy the needs of the productive enterprises downstream, tookthe first step of application for Green Product (Ecolabel III) label. In addition, we developed LCA environment decision-making model and the analysis platform for data uncertainty, to forecast the environmental income of electro-galvanized products gained from power plant desulphurization, sinter desulphurization, synthesized desulphurization, waste plastic injection into blast furnace, reduction of molten iron ratio in secondary steel-making, thus offering Baosteel the basis of decisionmaking for the environmental impact, such as reduction of products'energy consumption, emissions reduction of

CO<sub>3</sub>, SOX and PM10, decrease of product resource depletion, solutionof global warming and acidification. On the basis of the LCA study on 1kg electro-galvanized products, we carried out analysis and research on the energy efficiency of Baosteel Branch Co., set up a wholly digitalized production site model for the Branch, which can reflect its total production situation, promptly imitate its production operation, and visualize the energy flow and material flow used in the production site. When the production site requests revision of strategy, the model can, through the analysis of energy efficiency, provide an estimation of the integral results in energy consumption and emission of main pollutants, analyze the impact of different procedures according to different parameters (e.g. energy resources, energy carrier, CO<sub>2</sub>, SO<sub>2</sub>, NO and dust), analyze which flow has the maximum energy saving potential, and conduct a sensitivity analysis on this flow.

The company has currently started adopting LCA for all its main products to search for latent points of energy saving and emission reduction.

In 2007, the company applied methods like LCA, environment cost analysis, life cycle energy consumption analysis, etc.; to study various water treatment process schemes and the impact of treatment depth on environment, energy consumption and cost. This was used to optimize the implementing scheme with minimal energy consumption and environmental pollution, and for achieving best economic benefits, and to instruct enterprises on how to determine a proper fresh water consumption index for producing per ton of steel.



#### Developing Environment-Friendly Products

Baosteel has always been devoting to the development and production of environment-friendly products with high quality and highly added value, including products with energy saving and  $CO_2$  emission reduction, such as high strength steel, thinned DI tinplates, high efficiency non-oriented electrical steel, etc.

#### Automobile steel sheet

A car made of high strength steel sheet is able to use less steel, thus saving resources. Due to its lighter dead weight, it can save fuel and reduce pollutant emissions. Application of steel sheets with good corrosion resistance can prolong the service life of a car body, which in turn conserves of steel resources.

Baosteel has successively developed automobile hotrolled high strength sheets, cold-rolled high strength IF steel, cold-rolled high strength low-alloy steel, cold-rolled TRIP steel, cold-rolled dual phase steel, cold-rolled baked steel; also automobile anti-corrosion steel sheetswith pure zinc, zinc-iron and zinc-nickel plating; and in the near future, it will develop steel sheets of higher strength grade.

#### **Tinplate DI sheets**

DI sheets, also called DWI, is a kind of material that can be die-stamped, thinned and stretched. Baosteel Co., Ltd. Has succeeded in developing tinplate DI sheets, which are mainly used for making two-piece steel cans, in replacement of aluminum alloy DI sheets. Concerning the environment, these two piece steel cans made of tinplate will degrade in one year, 10 times the degradation rate of two-piece AI cans in the same environment.

The energy consumption in tinplate DI sheet production is lower than that in AI alloy DI sheet production, saving a lot of energy resources. As it is far higher in strength than AI alloy it canbe continuously thinned, there is even more room for cutting down cost, and saving more energy resources.

#### Fire and weather proof steel

Using steel for building structures has many advantages, such as being light weight, fast construction, high strength and great span, but there exists two major problems: one is corrosion in the atmospheric surrounding; the other is that steel structures tend to soften and collapse in case of fire.

Baosteel Co., Ltd. has independently developed the fire and weather proof steel, which possesses excellent weather proof and fire proof properties. Its weather proof ability is over two times of ordinary steel and its fire resistance limit exceeds 4 hours. This kind of steel can greatly decrease antirust and fireproof painting, and can be used without painting for some buildings.

#### High pressure boiler tube

Baosteel's T91 high pressure boiler tube, mainly for import substitution, is used for manufacturing high temperature superheaters and reheaters of large capacity, high parameters, supercritical and ultra-supercritical power plant boilers. These two kinds of boilers have a virtue of low coal consumption, respectively, 99g/kWh and 138g/kWh lower than the average coal consumption of power supplying, and their thermal efficiency can be raised by more than 5%.



# Series of economic type anti-corrosion oil casing pipe products

This series of products were developed solely for deficient oil and gas wells which account for a large share in China's oilfields. After nearly 4 years of research, Baosteel Co., Ltd. successfully developed the anti H2S and CO<sub>2</sub> corrosion economic type oil casing pipe series with independent intellectual property rights. Their CO<sub>2</sub> resistant property is enhanced by over 5 times that of regular oil casing pipe. These products have been successfully applied in Tarim, Jianghan and Sichuan Oilfields.

# Hot-dipped (AI) zinc chromium-free passivation post-treatment steel sheet

Hot-dipped (AI) zinc chromium-free passivation steel sheet, being one of surface treated steel sheet with highly added value, has excellent corrosion resistance and processability, and is widely applied to bare parts in household appliances, AV/OA electrical apparatus, etc. The traditional passivation is done on the surface of steel sheet treated with chromate (main component  $Cr^{6+}$ ).

In 2004, Baosteel Co., Ltd. initiated "Application research on hot-dipped (AI) zinc chromium-free post-treatment technology", up to now laboratory research has been completed on 1550 chromium-free (exclusive of Cr<sup>6+</sup> and Cr<sup>3+</sup>) hotdipped zinc passivation steel sheets, and the company has recently began preparations of facilities for trial production.

#### Highly efficient electrical steel

The cold-rolled non-oriented electrical steel produced by the traditional technology, of low or medium grade, is high both in magnetic induction and in iron loss; and that of high grade, is low both in iron loss and in magnetic induction. After adjustment and optimization of ingredients, and solving the process problem of the mutual conflict between iron loss and magnetic induction that occurred in traditional grades, the highly effective electrical steel is one with high magnetic induction and low iron loss, satisfying the needs of highly efficient and energy saving motors and El transformers.

The highly efficient electrical steel developed by Baosteel has been applied to frig compressors, El iron cores and middle sized motors; all with good results.

#### Self-cleaning type building color coated sheet

Self-cleaning type building color coated sheet developed by Baosteel raises, on one hand, the compactness of the coated surface, and on the other hand, introduces a mass of hydrophilic group onto the color coated sheet surface, achieving the hydrophilic function of the color coated sheet, and enabling water film to be more easily spread on the sheet.



### Process Management and Clean Production

#### Aligning Standards with Advanced Iron and Steel Enterprises in the World

Baosteel regularly carries out technical exchange and standard-aligning work on environmental protection and energy resources. In recent years it sent people on several occasions to visit foreign iron and steel enterprises, like POSCO (South Korea), Nippon Steel Corporation (Japan), JFE Holdings (Japan), Thyssen Krupp (Germany), etc., conducting exchanges on the technology and management issues concerning energy conservation, environmental protection and resource comprehensive utilization, and visiting production sites. Through technical exchanges, foreign experts can directly involve themselves in the diagnosis of any weakness in Baosteel's EP management, and jointly explore the possibility of cooperation. Besides, this sort of exchanges can constantly improve Baosteel's management level in energy saving and EP, and promote the advancement of energy saving and EP work in the domestic iron and steel industry.

The company has established a standard-aligning database, which provides a function for carrying out comparisons with the optimal factory database to search for gaps, thus putting forward measures for improvement in a targeted manner.



#### Launching Energy Resource Auditing and Detecting Potential Areas of Energy Saving

In accordance with the requirements of "Top-1000 Enterprises Energy Efficiency Action" drawn by the State, in 2005 the company started energy resource auditing under the guidance of the authorities in charge of energy saving in the local government. For branches (subsidiary) with a great amount of total energy consumption, Baosteel will invite external auditing institutes to execute auditing, and the remaining branches (subsidiary) may arrange audits by external auditing institutes or carry out internal auditing.

In 2006, Baosteel Co., Ltd. and various branches (subsidiaries) submitted reports on 2005's energy resource auditing. In accordance with "Report of Top-1000 Enterprises Energy Resource Auditing", issued by the State Development & Reform Commission(SDRC), the summaries and assessments of the results of 2006 energy resource auditing work by various enterprises show that the reports on energy resource auditing prepared by the top 1000 enterprises can be classified into three classes (three grades) based on quality: Class I accounts for 32.5%; Class 2 - 50.7%; and Class 3 - 16.8%. Baosteel Co., Ltd., together with its holding subsidiaries: Meishan Iron & Steel Co., Ltd., Pugang Co. (Now Baosteel Medium & Heavy Plate Branch), Baosteel Group Nantong Iron & Steel Co., took part in the activities of "Top-1000 Enterprises Energy Efficiency Action", and the reports of these 4 enterprises were all appraised as Class I reports by the SDRC.

In order to raise the quality and preparation level of reports on energy resource auditing, Baosteel in 2007 consulted Det Norske Veritas (DNV) and Nanyang City Energy Testing & Inspection Institute, Henan Province about the methods and relevant standards of energy resource auditing, and afterwards worked out the frame-work and the project plan and schedule. Special Steel Branch and Baosteel Branch implemented them with good results.

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# Operation

#### Advanced Energy Resource Management System

Baosteel Baosight Software Co., Ltd., taking "Recycle economy and environmental protection economy" as the thesis, on the basis of the energy management system (EMS) for iron and steel enterprises, made further efforts to expand research on EP monitoring integrated automation, wastewater treatment automation, flue gas dedusting and desulfurization automation, etc., and formed an independent, comprehensive integrated automation solution. Baosight metallurgical enterprise energy management system (EMS), was awarded the title of "Shanghai Key Novel Product".

Baosight metallurgical enterprise energy management system (EMS) is an important part of automation and information of metallurgical enterprises, which provides an integrated solution for the following aspects: (1) unified control over energy resources in iron and steel enterprises, optimization of balance between coal and gas, improvement of environment quality, reduction of energy consumption, and promotion of labor productivity; (2) formulation and execution of accident prevention program, quick analysis on accident causesand timely judgment and treatment, reasonable adjustment and balance of energy supply and demand; and (3) on the basis of information, analysis on actual energy performance, preparation of energy plan, management of energy quality and forecast of energy system. Centering on "recycle economy and environmental protection economy", Baosight further has expanded the commercialization of the EMS system to form a comprehensive EMS system, whichcontains energy resource management, monitoring and sub-station control, and has thecapacity to add I - 2 clients in the metallurgical industry. Meanwhile, Baosight has created a mature, reliable and advanced integrated automation solution in respect of integrated environment monitoring automation, wastewater treatment automation, and flue gas dedusting and desulfurization automation.



#### Water Saving and Drainage Deduction



Baosteel has been always laying emphasis on water conservation and drainage reduction, and the main measures for water saving are as follows:

Water resource utilization and pollution control	Water saving technology	Adopting technologies such as coke dry quenching, dry dedusting of blast furnace gas, and dry de- dusting of converter gas.
	Water supply and draining system	Water supplies are separated strictly according to different qualities: the plant has pipe nets providing pure water, soft water, filtered water, recycled water, intermediate water and living water, which are clearly defined for different purposes to avoid wasting water. Implementing rigidly separate drainage: 5 water draining systems have been built to facilitate recover wastewater after treatment.
	Intermediate water technol- ogy	Domestic wastewater (bathing water, washing water) is drained into the central water treatment plant, and further treated by physical, chemical and biochemical methods, and sterilized, after reaching the miscellaneous water quality standards, it is used for road sprinkling, greening, vehicle washing, etc.
	Water of the river surround- ing the plant	By recovering production blow-down water, living wastewater and surface rain water within the area of the river surrounding the plant to supplement industrial water or cascade water, the wastewater in the river surrounding the plant are reused.
	Recycling water	Each production process is equipped with a clean recycling water system and muddy recycling water system, and water quality stabilization technology is used, raising water temperature to a certain degree. In addition, a water-saving type cooling tower is adopted.

Baosteel has been implementing the above mentioned water saving technology to constantly enhance the recovery and reutilization of wastewater resources, therefore, the industrial water recovering ratio is always kept at over 97%, and the fresh water utilization index per ton steel has kept dropping.

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The fresh water utilization indexes per ton of steel in recent years are shown in the following diagram:

In 2005, Baosteel Co., Ltd., after add-issuance and acquisition, carried out a large scale technical reform in energy saving and environmental protection in the newly added production units. Relying on the technical force of Baosteel Branch Co., it established water saving and drainage reduction virtual technical teams and held group consultation of experts to conduct diagnosis of the present status of water saving, water utilization and water treatment of the newly added branches (subsidiaries), put forward solutions in accordance with the concept of supplying water separately according to water qualities, adopting cascade utilization, recovering intermediate water, separating rain and sewage water; and centralized treatment; and invested a large sum of money for technical renovation of wastewater recovery systems, achieved remarkable results in water saving and drainage reduction.



At Meishan Iron & Steel Co., Ltd., the Xipaikou wastewater comprehensive treatment and intermediate water recovery project is in response to the call to "build up a water-saving type enterprise". The key water saving and environmental protection works for constructing an environment-friendly enterprise has had a very positive and significant impact on the protection of water resources of the Nanjing section of Yangtze River.

The implementation of this project has produced good results, and has cut down fresh water consumption by about 30 million m<sup>3</sup> each year. Furthermore, it has greatly reduced wastewater discharges by 1500 ton of COD each year, playing an important role in the protection of the water resources of Yangtze River.

This project was appraised as a "Water conservation demonstration project" of Nanjing City, and hence Meishan Iron & Steel Co. was awarded the title of "Water-saving type enterprise" by the Reconstruction Department of Jiangsu Province.

Special Steel Branch Co, due to the application of wastewater comprehensive treatment and intermediate water recovery technology, has cut down wastewater discharge by 74.52%, COD discharge in the pollutant by 71.32%, and oil discharge by 73.16%. Because a large quantity of wastewater is being used for production after treatment, it has brought an annual benefit of RMB 17 million.



With the increase of production capacity, the convergence of wastewater containing phenol cyanogen from other plants into the chemical company for treatment would cause instability of the inlet wastewater quality, thus squeezing greatly the flexible space of wastewater treatment. Once the inlet wastewater quality fluctuates, it may cause the quality of the water discharged to the outside to fall below the allowed standard of outlet drainage. In order to cope with this problem and ensure that the outlet drainage conform with the discharge standard, in 2007 the chemical company built two wastewater reactment regulating pools, each with a capacity of 3000 m<sup>3</sup>, thus alleviated the situation and assured that the outlet drainage after the wastewater treatment reach the discharge standard.



#### Realizing Online Environmental Automatic Measuring and Monitoring

For the purpose of a better online real-time environmental management of production processes, Baosteel, from 2005, started planning and building an environment automatic monitoring and measuring system, and by the end of 2007, finished Project Phase I, which covers: Baosteel Branch Co.(including the cold-rolling sheet plant), Stainless Steel Branch Co., Special Steel Branch Co., and Chemical Co. The main task of Phase I is to complete the platform of Baosteel Co., Environment Information Center, and has now completed the following projects: (1) environment automatic measuring and monitoring function and information online inquiry function; (2) environment data online filling, counting and inquiry functions in the range of Baosteel Co.; (3) information inquiry and sharing function concerning EP laws, regulations, technology, etc. The online measuring signals and video monitoring records can be referred to through the company's local area network (LAN), so as to enhance the control power over the emission of fugitive and smoke dust, flue gas emissions, wastewater discharge and other problems. The subsequent project is to use the environment center as a platform to gradually spread it to all the branches (subsidiaries), and continuously to add monitoring points, to form an integrated EP information management system covering the whole company.

The contents of Project Phase 1:

Project to be built	Q'ty (set)	Remarks
Baosteel Co, Environment Center	I	Newly added
Baosteel Branch EP Information Center	I	Newly added
Stainless Steel Branch EP Information Center	I	Newly added
Special Steel Branch EP Information Center	I	Newly added
Air Automatic Measuring System	7	Newly added 2 sets, and original signals access to 5 sets
Wastewater Online Measuring System	9	Original signals access in
Flue Gas Online Measuring System	7	Newly added 3 sets, and original signals access to 4 sets
Noise Automatic Measuring System	2	Newly added
Video Monitoring System	6	Newly added

Baosteel has built an advanced world standard persistent organic pollutants analytical laboratory (POPs Lab for short), which can analyze and study the issues of discharge and emission reduction of pollutants, like dioxin, so as to share with the society the responsibilities of pollutants emission reduction.

Steelmaking process may produce and discharge some persistent organic pollutants, such as polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, coplanar polychlorinated biphenyls, etc. These organic pollutants are of extremely low contents, but are able to travel long distancesthrough various environmental media (like air, water, organism, etc.) and exist in the environment for a long time, presenting serious harmful risk to people's health and the environment. The POPs Lab aims to find ways of detecting and analyzingthese trace organic pollutants to research and develop the process and technology for controlling and reducing such emissions.

After researching the sampling and analyzing methods for dedusting, flue gas and dioxin in the air in steelmaking process, and exploring duringoperation practice, the lab has developed a dioxin sampling and analyzing methods suitable for the process features in iron and steel industry, and acquired comparatively accurate analysis results of dioxins in a short time. The establishment of this high level POPs Lab and the cultivation of a talent team has enabled Baosteel to have the key capacity to fulfill the Stockholm International Convention, and Baosteel's POPs Lab will be open to society, so as to actively support the country's implementation plan for China's fulfillment of POPs convention.

Baosteel, cooperating with POPs Fulfillment Office of State Environmental Protection Administration, has successfully carried out a demonstrative project "Sino-Italian Cooperation - Chinese UP-POPs Emission Reduction Strategy: BAT/BEP and Increment Cost Estimation in Pilot Industry", and actively undertakes and strives tofulfill the Chinese iron and steel industry, striving for lifting the experiment and research of UP-POPsemission reduction to the demonstrative level of the Chinese iron and steel industry.

An industrial experiment of dioxin emission reduction was carried out separately in two productive procedures: Sintering Machine #1 of Baosteel Branch Co. and 100t Electric Furnace of Special Steel Branch Co. The preliminary industrial experiment results show that after taking special technical measures, such as regulation of sintering raw material and selection of smelting scrap steel, the concentration of dioxin in the main sintering exhaust gas and in the flue gas from the electric furnace dropped by  $40\% \sim 50\%$  comparing with that before the experiment, but the sintering cost and the steelmaking cost of the electric furnace rose significantly. For this reason, the next action target is to develop a highly efficient, low cost technical measure for dioxin emission reduction suitable for the production process characteristics of the Chinese iron and steel enterprises, and to put it into industrial use.

Besides, through cooperation, the lab has launched the research and development on dioxin decomposition catalyst, and the complex nano-catalyst prepared by the lab has reached at maximum ofover 90% in catalytic decomposition efficiency. Meanwhile, it has unfolded the quantum chemistry calculation of dioxin basic thermodynamic properties, obtaining systematic and accurate dioxin thermodynamic data. Therefore, the lab has published many research papers in periodicals at home and abroad, at international forums about dioxin and Baosteel's annual academic meetings. In this project 4 patents, 2 technical know-how and 2 technical procedures have been acquired.

# End Treatment, and Standard-Reaching Emission

In 2007, neither serious environmental safety accident nor grave leakage of dangerous materials occurred at Baosteel.

The company has worked out relevant regulations on hazardous waste management to conduct management of dangerous waste strictly in accordance with the laws, regulations and rules, and entrusted qualified units with the special management, transportation and disposal of hazardous waste. The company has never exported any hazardous waste.


The company carries out constant technical modifications at every production unit, and has completed a large amount of projects in respect of flue gas desulfurization, wastewater treatment, dry dedusting, etc., ensuring the fulfillment of the EP indexes program.



## Air Pollution Control

In respect to air pollution control, Baosteel mainly takes the following technical measures:

Air pollution control	Dust	Use of high-efficient bag dust collectors and electrostatic precipitators for emis- sion reduction and organization of dust emissions; adopted effective measures, like road sprinkling, windbreak net, etc., to control fugitive dust.
	SO <sub>2</sub>	Controlling sulphur content of raw materials and fuels, and installing flue gas desulphurization facilities in the sintering plants and the power plant.
	NO <sub>x</sub>	Employing low NOx combustion technology
	CO <sub>2</sub>	Adopting advanced energy saving measures to cut down fuel consumption.

The company has been actively promoting the dry dedusting technology, which cannot only reduce dust emission, but also reduce the consumption of energy and water:

- » In 1997, the company adopted the dry-dedusting technology for coal charging in the coking plant;
- » In 1998, Baosteel's converter gas electrostatic precipitation system, the first in China, was put into operation;
- » In 2007, Stainless Steel Branch Co. carried out technical renovation on thebag dust collectors of the 2500 m<sup>3</sup> blast furnace.

As for other pollution sources, such as potential gas leaks, the Company implements strict management in order to detect potential problems at an early stage, and carries out technical renovations to minimize risks. For example:

The benzene hydrogenated KK tank area in Chemical Co. was built and put into production in 1998. Owing to the limitation of technology and equipment conditions in the initial stage of construction, the media tanks of various kinds were mostly of arch-roof type. Along with the liquid level in the tank rising and falling, there also existed gas volatilization, which affected the air quality in the plant area and the health of the operation personnel, constituting certain potential safety hazards. In 2007, the Company renovated these tanks to reduce the amount of saturated gas released into the atmosphere, so as to guarantee the safety of the tank area and improve the environment. In the plant area. According to the analysis and monitoring of the released gas sampling from the top of the tank, the toluene's content was 51,800 mg/m<sup>3</sup> before modifications, but only 1,122 mg/m<sup>3</sup> after modifications, or a drop of by 97.83%, obtaining a fine comprehensive result.

## Flue Gas Desulphurization

Baosteel has signed Letter of Responsibility for Energy Saving and Emission Reduction with Shanghai Municipal Government and Jiangsu Provincial Government, respectively, promising the completion of all the construction of flue gas desulphurization projects by 2010.

In May, 2006, Flue Gas Desulphurization Facility No.2 of Baosteel's coal fired power plant, the first in Shanghai was put into operation.

Main Technical and Economic Indexes of Flue Gas Desulphurization Facility No.2							
Treated flue gas volume (dry flue 120~160X10 <sup>4</sup> Nm <sup>3</sup> /h cake 31,000							
SO <sub>2</sub> inlet concentration	400~1800mg/Nm <sup>3</sup>	Annually consumed electric power	36 million KWh				
Dust inlet concentration 200~250mg/Nm <sup>3</sup>		Annually consumed industrial water	56,000 m <sup>3</sup>				
SO <sub>2</sub> emitted concentration	≤50mg/Nm³	Annually consumed compressed air	24 million m <sup>3</sup>				
Dust emitted concentration	≤50mg/Nm³	Annually by-product gypsum	44,000t				
Desulphurization rate	≥95%	Annually wastewater discharge	40,000 t				

In 2007, Baosteel initiated the flue gas desulphurization facilities respectively at sintering machine #3 of Meishan Iron & Steel Co. and sintering machine #1 of Stainless Steel Co. By 2010, all the existing sintering plants of Baosteel Co., Ltd. will have realized flue gas desulphurization.

Project of Meishan	Project of Meishan Iron & Steel Co.						
Area of sintering machine	180 m <sup>2</sup>						
Flue gas flow	700,000 m³/h Flue						
Concentration of SO <sub>2</sub> in flue gas	2000 mg/Nm <sup>3</sup>						
Dust content in flue gas	100mg/Nm <sup>3</sup>						
$SO_2$ content in outlet	≤100mg/Nm³						
Dust content in outlet	≤50mg/Nm <sup>3</sup>						
Desulphurization rate	≥95%						



## Evaluation of Clean Production

On July 3, 2006, the State Environmental Protection Administration officially issued HJ/T 189-2006 "Clean production standard-Iron and Steel industry". According to this clean production standard, the main pollutants emission indexes of Baosteel in 2006 had already reached Clean Production Class I Level in the Chinese iron and steel industry, and in 2007 even greater improvement was made.



Pollutant emissions of Baosteel in recent years are shown in the following diagrams:











In 2007, under the guidance of the Shanghai Green Industry Promotion Society, Special Steel Branch Co. completed preparations of "Clean Production Auditing Report" and "Recycle Economy Development Program", both were reviewed and approved by the expert group consisting of Shanghai Environmental Protection, Economy Commission, Cleaner Production Office, etc. At the same time, it keeps promoting relevant work of the "Clean Production Year", so as to improve the clean production conditions of the branch. Special Steel Branch was awarded the title of "2007 Baoshan District Environment-friendly Enterprise".

At Baosteel, other branches (subsidiaries) have also passed the clean production auditing organized by the concerned departments of local government.

## Profile of Recycle Economy

Now we are using the terms "secondary resource" or "by-product", in replacement of the term "waste", and by this we advocate the sense and action for saving and protecting resources.

In respect to the comprehensive utilization of secondary resources, Baosteel has formed a relatively sound management system, and operation and disposal methods. Environmental Protection and Resource Utilization Dept. puts the management and use of the company's secondary resources under its centralized leadership, and every branch (subsidiary) sets up a corresponding section, which is also under the management's control. The secondary resources are disposed of in three modes: paid disposal, free disposal and subsidy disposal.

The company's resource comprehensive utilization industry is of remarkable scale. After over ten-year's growth, it has formed a certain foundation and gained certain experience. Every enterprise is setup independently or jointly with others, a solid secondary resource comprehensive utilization workshop or site, to perform site recovery, off-site concentrated treatment and processing, and comprehensive utilization, with certain treatment capability. Now, Baosteel has preliminarily built up its industrial solid secondary resource utilization industry, possessing initial scale-production conditions in respect of management system, technology, talents, and processes and equipment, market sales, etc.

Baosteel, with a batch of proprietary technology, is developing in a direction of professionalization and industrialization. The development and utilization of blast furnace granulated slag and dry slag is of a certain scale and is growing continuously. A breakthrough was made in technology and application path for the development and utilization of steelmaking slag, and the comprehensive utilization rate keeps on rising. The slag treatment process by rotary cylinder was awarded 2007's State Science & Technology Invention Second Prize. The additional value of the comprehensive utilization product of fly ash is rising continuously. Though the waste refractory regeneration and utilization has just started, the regeneration and utilization rate increases year by year, and has succeeded in developing the technologies of "Regeneration of waste MgO-C brick into raw material", "Recovery and utilization of waste runner brick - quarts sand", "Regeneration of iron runner into dense corundum", etc. These technologies have been applied to the production of recycling utilization, with 7 categories and some dozen kinds of products, like MgO-C brick, MgO-Cr brick, converter ladle brick, blast furnace large trough stuff, etc.

Baosteel's products made of solid secondary resource are successfully applied to the engineering practice, obtaining distinctly social and environmental benefit. Baosteel, on one hand, through the scientific research, keeps on developing value-added products, and investing in and building solid secondary resource disposal and processing enterprises; on the other hand, it has participated in the establishment of the application standards of products in building material category after processing of the relevant solid secondary resources, so that the products after being standardized can be accepted by the market. Besides, it promotes the application of the relevant products in its own renovation construction and in public works, so as to set up good examples for promotion of the utilization of solid secondary reproduced products.

Baosteel has been developing industrial solid byproducts from the storage disposal, simple sorting utilization and sales in the initial stage, to the adoption of new technical treatment, return to the production system and in high value-added utilization at present.

Baosteel carries out sorting, recovery and utilization of all the packing materials of out-purchased products with a value of recovery and utilization, and prepares relevant policies to advance the recovery and utilization of packing materials of sold out products.

In 2007, the company produced 14.10 million tons of industrial solid secondary resources of various kinds, with a comprehensive utilization rate of 98.48%.

Industrial solid wastes	Output (t)	Comprehensive utilization rate (%)	Recycling production utilization rate (%)
Blast furnace slag	5,573,754	100	/
BF slag	3,704,365	100	11.19
Furnace slag and fly ash	452,092	99.82	/
Iron-containing dust slime	1,614,410	100	66.67
Iron-containing dust slime	38,187	73.31	/
Other industrial solid wastes	2,608,810	92.22	64.18



Baosteel's producing channels of industrial solid by-products, and the schematic diagram of the treatment and utilization modes are shown below:

Production procedure	Solid by-product	Treatment mode and fate	
Sintering	Sintering dedusting	Sintering and desilication	
Blast furnace	Granulated slag, dry slag	Cement, ceramics, slag wool, road paving	
Diast furnace	Sintering dedusting     Sintering and desilication		
	OG slime	Return to sintering	
Converter	Briquetting	Return to converter for slagging	
	Converter slag	Granulated iron recovery and return, Building	
Electric furnace	Electric furnace slag	material	
	Electric furnace dedusting ash	Cement	
Cold/hot rolling	Oxide scale	Sintering, de-S, Si and P, magnetic material	
Powerslant	Fly ash	Road building, heat preservation agent	
Power plant	OG slime Return to sintering   Briquetting Return to converter for slagging   Converter slag Granulated iron recovery and ret   Electric furnace slag material   Electric furnace dedusting ash Cement   Oxide scale Sintering, de-S, Si and P, magnetic	Reuse	

## Blast Furnace Slag

The blast furnace slag in Baosteel can be divided into two kinds: granulated slag and dry slag.

"Admixture special for Yangtze River Tunnel-Bridge Project" made of Baosteel blast furnace slag fine powder was awarded the title of Asserted product of "Shanghai Hi-tech achievement transformation" project, and was successfully applied in Yangtze River Tunnel-Bridge Project.

There are mainly two modes of using the granulated slag: to grind it at the company into slag fine powder for selling; and to sell it directly as a raw material for cement production.

The blast furnace slag fine powder is an "environmentally harmonious type of green building material", can be used as a high-performance concrete admixture, to replace 30% ~ 70% of cement content. This fine powder has already been applied to construction of many major state projects, such as Shanghai Maglev Project, Lupu Bridge, Shanghai S & T Museum and Yangshan Deep-water Seaport. Its market share in Shanghai Area reaches 50% ~ 60%. Blast furnace granulated slag, as a raw material for cement production, can save a large amount of limestone and energy resources, and decrease  $CO_2$  emissions during cement production, with very high economic efficiency and social benefits.

Blast furnace dry slag through crushing, screening and recovery of granulated iron, is mainly used as works backfilling, roadbed material, cement admixture, etc, and some of it is employed to the production of goods with high additional value, like slag wool heat reservation material. The granulated iron recovered returns to the blast furnaces within the company for iron-making production.

Glass ceramics is made through control over crystallization primarily with Baosteel granulated blast furnace slag. It is a kind of material between glass and crystal, hence, possessing many special properties, including excellent corrosion resistance, wear resistance, non-conductivity, low specific gravity, seamless welding with metal material, etc., widely applied in certain fields, like mechanical engineering and building materials.



## Steelmaking Slag



Steelmaking slag generally contains 10% residual steel, and has to be crushed, magnet-separated and sorted to get slag steel and tailing for different utilization.

The steelmaking slag utilization modes outside of enterprise are mainly used in various projects, such as road works, foundation backfill and reinforcing soft soil ground, marine works, sewage treatment, water treatment system for constructed wetland, etc, and in production of building material, steelmaking slag fertilizer, soil amendment, and others. Steelmaking slag concrete can be applied to marine project, with some merits, like high flexural and tensile strength, good wear resistance, fine impermeability. In addition, it contains many nutrients needed by marine phytoplankton, and, as a result, has ecological characteristics of high attaching rate of marine organisms. As the steelmaking slag cement can be used for cast-in-place and precast concrete in construction, it has a broad market application prospect. The new slag treatment process (BSSF) by rotary cylinder created by Baosteel has the following advantages, such as short treating period, less land occupation, low pollution, full slag-iron separation, convenient for post utilization, etc., and won 2007's State S & T Advancement Second Prize. This process has already been popularized and applied in Baosteel, and is starting to be used by iron and steel enterprises at home and abroad.

Baosteel adopted a grid method to dispose of cast residual slag, solving a tough problem - remnant steel cutting in the casting residual slag, and realizing the target of short flow treatment of remnant steel or iron and direct recovery and utilization, thus avoiding hammering and cutting big slag lumps in the original process, which causes noise and dust pollution, energy consumption and other unsafe factors and making the recovery of casting residual slag more environment friendly, economic and safer.





## Iron-Containing Dust Slime

Iron-containing dust slime is a solid by-product of iron and steel enterprises, the most in varieties and most complicated in components, and mainly has the following varieties: blast furnace gas slime (dust), converter OG slime, converter and electric furnace dedusting ash, cold- and hot-rolling water treated sludge, oxide iron scale, etc. The iron-containing dust slime makes up for about 10% of the total quantity of the company's industrial solid secondary resources, and reaches a return production utilization rate of about 70%.

## Fly Ash and Desulphurized Gypsum

Both fly ash and desulphrized gypsum are the primary solid by-products turned out by the power plant. Fly ash amount accounts for 3.5% of the total quantity of the industrial solid secondary resources; and after the flue gas desulphurization facility of the power plant generating set #2 of Baosteel Branch Co. is put into operation, the desulphurized gypsum produced will be 55,000 t/y.

A part of fly ash after grinding process is used as concrete admixture, and the rest of it is employed as raw material for cement production or directly as roadbed material.

Baosteel possesses a desulphurized gypsum dry line, specialized for drying and treating the desulphurized gypsum from the power plant to produce various gypsum goods or additives of admixture. At the same time, Baosteel has built up a production line which uses the desulphurized gypsum from the power plant as raw material, and turns out the new, environment friendly and energy saving type gesso body material and brush-using dry powder mortar.

Desulphurized gypsum and slag fine powder are mixed in a certain proportion and compounded with a rational process, to create G type admixture of concrete, which can effectively regulate the setting time of cement, increase the added amount of slag fine powder, and effectually make use of desulphurized gypsum. Furthermore, the addition of desulphurized gypsum would play a certain adjusting role for the slag fine powder; thus improving the durability of the cement-based material made of slag fine powder, and widening the application field of slag fine powder.





# Environment

## Waste Refractory

In recent years, Baosteel has enhanced the scientific research for tackling comprehensive utilization of waste refractory and market development, achieving great progress and setting up several production lines that can crush waste refractory for recycling and utilization, such as primary MgO-C brick granule line, soil runner brick line, stereotyped product line, dense corundum screening line, etc., forming a comprehensive utilization system integrating the recovery, processing and R & D of waste refractory.





## Waste Acids and Oils

Baosteel launches the regeneration and utilization of waste acids produced in the cold-rolling line.

Meanwhile it recovers all the waste oils turned out in the production process to store in the waste oil stock yard, and after sorting out, regenerates, purifies and prepares them into qualified oils, like hydraulic oil, diesel, lubrication oil, antirust oil, etc.





## Undertaking Social Responsibilities and Promoting Environmental Friendship



## Protecting Biodiversity

As the production and operation activities of iron and steel enterprises would inevitably affect the periphery environment, the issue of biodiversity protection in the periphery area is increasingly attracting people's concerns.

The main production units of Baosteel all attain water from Yangtze River for their production, and discharge the industrial wastewater, which has been treated in conformity with the standards, finally discharged into Yangtze River. Therefore, the production and operation processes would necessarily cause some impact on Yangtze River water resources and the eco-environment in its near-shore tidal flat. From 2007 on, Baosteel plans, stage by stage, to make a survey and research on the ecologic situation in the periphery area of the main production bases, so as to assess Baosteel's current biodiversity protection and problems, and to analyze the impact of enterprise actions and development strategy on biodiversity protection, in order to put forward suggestions and countermeasures about biodiversity protection related to the company's sustainable development.

Uperation

According to current information, there is no enterprise in the world that carries out this type of research, so there is a lack of experience or technical means for this research. Baosteel mainly depends on the local technical forces engaged in environment science research, to survey and assess the local biodiversity situation, as the first step of the whole plan. Baosteel has chosen the production areas and the shore areas near the branches (subsidiaries) within Baoshan District, Shanghai, to launch this ecological survey, which lays focuses on the following aspects:



## Ecological sensitivity analysis

Baosteel will use airborne remote sensing images and related information, to analyze and identify the positions and acreage of the land owned, leased and operated by Baosteel's branches (subsidiaries) within Shanghai area near the nature reserves (Dongtan, Jiuduansha, Qingchaosha) and with high biodiversity value, the relation with the nature reserves in location; investigate the impact of Baosteel's activities, products and service on the fish migration channels, spawning grounds, bird habitats, etc., and assesse the grade of the ecological sensitivity.

#### Analysis of landscape ecological pattern

Making use of airborne remote sensing images for explanation, it will obtain the basic information of acreage and rate of land use type (water surface, green land, road and plant building) of the branches (subsidiaries) of Baosteel within Baosteel District, Shanghai, comparing it with the historical data and analyze the changing process; and then further analyze the present situation of landscape ecological pattern of Baosteel's plant area to create an optimized scheme..







#### Survey and assessment of ecological status

Exploiting the combination of multi-means, such as collection of historical information, field reconnaissance, monitoring, etc., Baosteel will survey the environment and biological status of the plant areas of Baosteel's branches (subsidiaries) in Baoshan District, Shanghai, and shore area, and analyze the status of the ecological system structure and functions, so as to provide the basic data and scientific basis for the long term observation in future and the assessment of biodiversity.

#### Biodiversity impact assessment

Depending on Baosteel's environment management system, internal relevant documents and assessment on environment social impact, it will determine the direct and indirect impact of Baosteel's activities, products and services on biodiversity, and work out the strategy and plan for Baosteel, in order to realize the biodiversity management countermeasures.

## Interaction of Community Environment

On March 15, 2007, 15 delegates of the No.5 Delegation of Baoshan District People Congress, headed by Chairman Ma Yuguang, came to Baosteel to inspect environmental renovation and hold informal discussions. They fully affirmed the environment renovation made by Baosteel and the sustainable development strategy plan.implemented by it.

On June 11, 2007, the residents of Wusong Community of Baoshan District visited their neighbor, Special Steel Branch. They highly appraised changes taken place in recent years, and expressed their gratitude for the efforts the Branch made for building up a harmonious Baoshan District.

On June 13, 2007, over 29 CPPCC members led by Chairman of CPPCC of Baoshan District, Kang Dahua came to Baosteel. They made inspection and survey on the energy saving and emission reduction of Baosteel. They affirmed that Baosteel is an enterprise responsible for the society, and put forward a suggestion to build, through common efforts, Baoshan District into a society with harmonous relations between production and life, between human and nature, between enterprise and society.









## Supporting EP Undertaking and Fulfilling Social Responsibilities

In order to support China's EP undertaking, elevate the environment awareness of the whole society, encourage more people to be engaged in environmental protection, and highlight the enterprise's responsibilities in the EP field, Baosteel Co., Ltd. donated RMB 50 million yuan to China Environmental Protection Foundation on May 14, 2007, in the Great Hall of People, Beijing. This amount will be devoted to the "China Environment Prize" of public welfare undertakings related to environmental protection, praising those collectives or individuals for their significant contributions or excellent achievements in China EP undertaking.

"China Environment Prize" is a social encouragement of the highest level in China EP field, characterized by sociality, universality and fairness. This prize lays emphasis on the widespread participation by the whole society, and imposes no restriction on nationality, locality, race or religious beliefs of candidates. Candidates will be recommended by units, and take part in the appraisal and selection activities. The appraisal and selection committee is composed of well-known experts and scholars. The whole appraisal and selection activities will proceed in an open, fair and just way following the procedures of recommendation, preliminary appraisal, public notification, re-appraisal, auditing, etc.

For the purpose of commending the outstanding achievements made by Baosteel in EP and its support to the public welfare undertaking, approved by the organizing committee of China Environment Prize, the enterprise name of "Baosteel" was added into the title of China Environment Prize, that is, "China Baosteel Environment Prize".

NPC Vice-Chairman Jiang Zhenghua and CPPCC Vice-Chairman Huang Mengfu fully affirmed Baosteel's undertaking of social responsibilities, active support to EP public welfare.

## Baosteel Co., Ltd has Become the First Demonstrative Base of

## Ecological Enterprise Park in China

In March, 2007, Ecological Society of China granted Baosteel Co., Ltd. the medal of the first demonstrative base of ecological enterprise park in China, for the purpose of praising Baosteel's successful practice in implementation of the scientific development concept and adherence to the road of sustainable development. Up to now, Baosteel is the only enterprise that has won this honorable title domestically.

Ecological Society of China is a social association of public welfare and academic nature under CAS Eco-Environment Research Center. Experts from the society believe that Baosteel's ecological development level is not only in a leading position in China, but also very rare in the international community, playing a very good demonstrative role in the building of other ecological enterprise parks in the country.

## Environmental Costs and Investment in Environmental Protection

America

## **Environment Cost**

The current environment cost is to avoid an even higher environmental price in the future. Therefore, from 2003 on, Baosteel tried to launch the statistic work of environment cost, and now has initially set up a detailed composition of environment cost, as follows:

	Pollutant discharge fee
	System auditing fee
	Environment monitoring fee
	EP facility operation expense
	EP facility depreciation charge
Expense-based item	EP improvement charge
(environment cost)	Hazardous material transport cost
	Solid waste disposal charge
	Greening charge
	EP labor cost
	EP R&D expenses
	Other expenses, including publicity, etc.

After the add-issuance and aquisition in 2005, Baosteel Co., Ltd. has introduced the environment cost statistic work to all the branches (subsidiaries), and the annual environment cost was about RMB 2 billion yuan. In 2007, the cost rose to RMB 2.3 billion yuan. In 2008, the company will further refine and standardize the environment cost statistic work and its management of the branches (subsidiaries).

## Investment in Environmental Protection and Control and in Energy Saving Reconstruction

Every year Baosteel invests a large amount of funds to construct the energy saving and emission reduction projects and pollution control projects, and to enhance the technical level of the existing EP facilities. In 2007, the company put RMB 285 million yuan into the construction of 32 energy saving projects, and RMB 389 million yuan into the construction of 45 EP projects (exclusive of the investment for the construction of the supporting and auxiliary facilities of EP and energy saving related to the said projects). Among them, the main projects are as follows:

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ŝ	Unit	Project
		Waste heat boiler added to sintering machine #3 in the iron-making works Coal moisture control facility added to coking ovens in the iron-making works
		Overhaul of furnace #2 in 2050 hot-rolling sub-branch, and renovation of regenerative burner
S	Baosteel Branch Co.	Technical renovation of the regenerative burners of the primary rolling soaking furnace
5	Baosteer Branch eo.	Improvement of sprinkling and dust catching facility in the raw material yard
2		Desulphurization and disposal facility added to electric dedusting equip-
		ment of sintering machine #3 Renovation of the dry dedusting system of converters #4 and #5 in the
		steel-making plant Desulphurization facility added to the generation units #1 and #3 in the power plant
		Recovery of residual heat of the circular cooling system of sinter machines #2 and #3
		Renovation ad transformation of the frequency converter of the air blower in 2500m <sup>3</sup> blast furnace
	Stainless Steel Branch Co.	Transformation of sintering machine #1 and flue gas desulphurization facil- ity added
		Treatment of granulated slag of carbon steel and iron
1	Chemicals Co.	Technical reform of phenol-cyanogen wastewater system
	Meishan Iron & Steel Co.	Flue gas desulphurization facility added to sintering machine #3
	Meisnan Iron & Steel Co.	Expansion and reform of steel-making sludge treatment system

# **Business Status**

## General Business Status

- Operational Performance
- Status of sectors
- Status of products
- Major markets
- Status of major suppliers and customers
- Change of the composition of assets
- Change of periodic expenditures and income taxes
- Cash flow analysis
- Innovation of technology and investment in R&D
- Analysis of business and performances of holding companies and shari companies

## Abstract of Accounting and Business Data

- Major annual accounting data
- Major accounting and business data in the last three years
- Capital suppliers

Profit Appropriation Principle and Dividend Payout Plan Taxes and Duties

Financial Assistance from the Government Donation Lawful Operation



## **Operational Performance**

Since 2007 the steel industry of China with its structure adjusted and optimized under the guidance of Development Policies for the Iron and Steel Industry and the state's macro economic control policies focusing on controlling investment of fixed assets and oriented to energy conservation and environmental protection, has stepped into a new stage, in which its structure will be further adjusted and optimized and its development will be stabilized and speeded after China steel industry experienced a high-speed growth. Further strategic structure reform of the domestic steel industry and the cross-area competition of leading iron and steel companies have started. Tremendous demands both at home and abroad, as well as the continuous rise of the materials' prices are driving the price of steel to go up in China. In 2007 the price of imported iron ore went up by 9.5% in the wake of a rise of 19% in 2006. The price of marine transportation continued to go up dramatically, as did the prices of raw materials for stainless steel, coal, coke and alloy. A huge fluctuation in the price of nickel led stainless steel products to loose money. In response to these circumstances, the Company stood up to overcome disadvantages such as increasing costs of raw materials and fierce turbulence in the market, earnestly implemented a series of measures and made best efforts to improve the integrated coodination ability of all units, operational ability of the system, abilities of making profits from both manufacture and sales. By taking opportunities while facing challenges, it fulfilled production and operation tasks in an allround way.

In 2007, the Company firmly focused on the general business goal, made efforts to promote integrated synergistic activities and to cut down costs and increase efficiency. With the efforts of all employees it fully realized its production and operation goal. The sales of commodity products of the whole year reached 2.26 million tons, an increase of 6.5% compared with that of last year; Total business turnover reached RMB 191.56 billion

yuan, an increase of 18.0% compared with that of last year, created historic record. The gross profit reached RMB 19.31 billion Yuan, an increase of 0.5% compared with that of last year. The net profit reached RMB 13.42 billion Yuan (a net profit of RMB 12.72 billion Yuan was paid to shareholders of the listed company). At the end of 2007, the Company adjusted the assets and liabilities of deferred income tax, and accordingly increased the income tax by RMB 0.16 billion Yuan during this report period, leading to a net profit 1.3% less than that of last year, due to the influence of the new Enterprise Income Tax Law of the People Republic of China, that is to come into effect in 2008.

The growth rates of both the business turnover and production cost of 2007 exceeded 20 % compared with those of the annual operation plan, due to the influence of increased costs.

The following figure shows the quantities of sales, sales incomes and gross profits of commodity products of the Company in the last 3 years:



## Status of Sectors

						Unit: RIVIB million yuan
Sectors	Operation rev- enue (OR)	Operation cost (OC)	Gross profit rate	Growth rate of OR, compared with last year	Growth rate of OC, compared with last year	Growth rate of gross profit rate, compared with last year
Iron & steel	150,185	127,256	15.27%	20.50%	24.05%	-2.42%
Trading	156,112	152,195	2.51%	7.78%	8.37%	-0.53%
Others	9,148	6,702	26.74%	22.73%	22.90%	-0.11%
Offset	-123,251	-122,802	0.37%	7.71%	8.11%	-0.37%
Total	192,194	163,352	15.01%	18.27%	21.10%	-1.99%

#### Unit: RMR million vuan

# Operation

## Status Products



## **Carbon Steel**

Carbon steel includes hot rolled products such as hot rolled heavy plates, cold rolled products such as common cold rolled, hot dip galvanized, electro-galvanized, color-coated plates, tinplates, silicon steel products, as well as tubular, wire rods, and steel billet products.

#### Hot rolled products

Hot rolled products include pipeline steel, cold forming steel, ordinary structure steel & automobile structure steel, welding gas cylinder steel, corrosion-resistant structure steel, shipbuilding steel, boiler and pressure vessel steel and etc, which are used widely in industries such as in distribution of oil and gas, shipbuilding, automobile, bridge-building, construction, machinery and pressure vessels. The Company has completed the development of Grade X80 pipeline steel and has the ability of mass-production; it has succeeded in developing high-strength steel for automobiles, engineering machinery, a new generation of container plate B600GNQR, hydraulic structure steel and friction disc steel. In 2007, the total amount of sales of hot rolled products was up to 9.17 million tons, accounting for 43.8% of the total sales of carbon steel products of the Company, of which the amount of sales of pipeline steel (including heavy plates) was 0.925 million tons, accounting for 34.5 % of the domestic market share. The sales amount of steel used for engineering machinery was 0.21 million tons, accounting for 10.8% of the domestic market share.

#### Heavy plate products

Heavy plate products include steel plates for shipbuilding, pipeline, structure steel, mainly applied to industries such as shipbuilding, pressure vessel, distribution of oil and natural gas, machinery, bridge-building, and construction. With its X120 pipeline steel evaluated by the national authority institutions, Baosteel has become the first manufacturer able to manufacture X120 pipeline steel in China, and the fourth in the world. With its K70 pipeline steel meeting the technical requirement of "East Siberia-Pacific Oil Delivery Pipeline", it has also become the first manufacturer able to manufacture high-strength Level K70 pipeline plate in China. Baosteel has reached the goal for becoming the biggest domestic supplier to offer high-strength steel for oil tanks with B610E high-strength steel for 100 thousand m<sup>3</sup> and 150 thousand m<sup>3</sup> oil tanks exclusively produced by itself. Baosteel has succeeded in trial production of TMCP ship-plates, pipeline plates and TMCP high-strength steel has set foot in a phase of mass production. In 2007, the total amount of sales in heavy plate products was 1.444 million tons, accounting for 6.9% of total sales in carbon steel billets, with 0.674 million tons of sales of ship plates, accounting for 8.1% of domestic market share, and 0.119 million tons of sales in pressure vessel steel, accounting for 6.8% of domestic market share.

#### Cold rolled sheets and etc

The cold rolled products include common cold rolled, hot dip galvanized, electro-galvanized, color-coated paltes and tinplates, silicon steel products and full hard coils, etc., mainly used in industries such as automobile, home appliances, packaging and transformer manufacture. Baosteel vehicle-use plates have been used largely by joint venture automobile manufacturers and those with independent brands in China, and are increasingly being put into use in advanced cars manufactured by BMW and Benz. Baosteel appeared in the list of suppliers of automobile manufacturers and exports batches of products to well-known automobile manufacturers in the world. Moreover, based on Baosteel "synchro-concept" of automobile steel sheets - "Synchronization with Developing Speed, Greening, Technology Advance and Perfection", in 2007, the Company carried out its work under the guideline focusing on "passenger car • outer plate • hot dipped galvanization • high strength", unceasingly tried its best to create a most competitive supply-chain of vehicle-use plates, to meet the demands of automobile industry, and to keep pace with automobile industry. The steels for household appliances manufactured by Baosteel, are widely used in such areas as air-conditioner, fridge, washing machine, micro-wave stove, TV set, DVD player, and computer. With the development and appliance of High-tech and high-value-added steel products, products developed by Boasteel, such as panels and side plates of fridge, super high-strength weather-resisting plates, hot dip galvanized fingerprint resistant sheets, are increasingly meeting the demands of household appliance manufacturers both at home and abroad. The total amount of sales of cold rolled sheets in 2007 reached 7.704 million tons, accounting 36.8% of the total amount of carbon steel products. Of all the cold rolled sheets, the sales volume of cold rolled plates for automobiles was 2.566 million tons, accounting 50.3% of the domestic market share; the sales volume of household appliance plates, was 0.203 million tons, accounting for 36.8% of the domestic market share; while sales volume of non-oriented silicon steel products, was 0.908 million tons, accounting for 16.8% of the domestic market share, including 0.121 million tons of high-efficiency, high grade silicon steel products.

#### Tubular products

Tubular products fall into 2 types: seamless tube and HFW pipe, in which the major products include petroleum pipes, ship pipes, line pipes, boiler tubes, etc, mainly used in industries such as petroleum, petrochemistry and boiler building. Baosteel is always in pursuit of the goal - manufacturing and selling high-quality and high value-added products, and its quality in kind has been up to international standards. Of all tubular products, production of oil casings such as 13Cr and anti-corrosion petroleum pipe, special thread casing, has formed certain production scale; top products such as T91,T23 for high pressure boiler pipes remain the first choice of the domestic boiler manufacturers, while the Company has been successful in mass producing T92; JIS series ship pipes have become the first choice of the major vessel manufacturers; drill rod products have exceeded the conventional products of API. Petroleum companies all over the world are getting increasingly fond of the BG110T high pressure casing pipes. What's more, low-grade steel surface casings of Baosteel HFW pipes have been largely used in petroleum industry, and line pipes have successfully been put into use in long distant pipelines both at home and abroad. HFW product casings have been exported in large amounts to both the US and Middle East markets. In 2007, the sales volume of tubular products was 1.417 million tons, accounting for 6.8% of the total sales of carbon steel billet products, including 0.64 million tons of pipes for oil wells, which accounted for 20.9% of the domestic market share.

#### Wire rods

Wire rods, mainly including steel cord, high-quality spring steel, high-grade cold-forging steel, high-strength stranded wire, steel for bridge cables, micro alloy welding wires, etc., are widely used in fields such as automobile manufacture, radial car tire products, bridge-building, fastening pieces, machinery and so on. Of all the wire rod products, the high-strength stranded wire, developed by Baosteel independently, has been used in domestic bridges, such as Xihoumen Bridge, Siduhe Bridge, Sutong Bridge which is an inclined suspension bridge ranked first in the world, and Tianxingzhou Bridge. In addition, in 2007, it was also chosen to be used for the main-cable of San Francisco-Oakland Bay Bridge, the first single-tower, single-cable and self-anchored suspension bridge in the world, indicating that high-strength stranded wire produced by Baosteel successfully entered the international market. In 2007, the sales volume of wire rods reached 588,000 tons, accounting for 2.8% of the total sales of commercial products of carbon steel, including 96,000 tons of high-grade cold-forging steel, making up 17% of the domestic market share.

#### Steel Billets

Steel billet products mainly include high value-added products such as axle steel, oxygen cylinder steel and die steel. In China, the B series prehardened plastic mould steel developed by Baosteel, is playing a leading role in this field. In 2007, the sales volume of steel billets amounted to

612,000 tons, accounting for 2.9% of the whole carbon steel products of Baosteel.

Operation

## Hot rolled stainless steel

Hot rolled stainless steel is made up mainly by austenitic stainless steel. It also includes ferritic steel, martensitic steel, two-phase stainless steel, supermartensitic steel, extra mild steel, nitriding stainless steel, etc. It is mainly used as cold rolling base material and in manufacturing industry and article-making industry. In 2007, Baosteel met the demands of the customers by further developing stainless steel 301L for railway vehicles and stainless steel 439 for elevator panels as substitutes of imported steels. In 2007, the sales volume of hot rolled stainless steel was 559,000 tons, accounting for 55.3% of the total sales of stainless steels, making up 20.9% of the domestic market share.

#### Cold rolled stainless steel

With BA, grind, thin material products as its key products, cold rolled stainless steel is used in fields such as home appliances, articles, decoration, elevator, kitchen etc. In 2007, the sales volume of cold rolled stainless steel amounted to 436,000 tons, accounting for 43.1% of the total sales of stainless steel products, making up 6.5% of the domestic market share.

## **Special Steel**

**Stainless Steel** 

Special steel products consist of special metallurgy series, stainless steel series and structure steel series, including rods, seamless steels, wires, cakes, rings, discs and profile materials, applied widely in industries like spaceflight, aviation, energy, automobiles, railway, ship-building, machinery, electronic apparatus, power station, petroleum, chemical industry, etc. As an important base for R&D of new high-tech metal material in the country, Baosteel has developed a series of competitive products in the world, with intellectual property rights owned by Baosteel after years of research, development and technology innovation.

In 2007, the sales volume of total special steels was 934,000 tons, including: 134,000 tons of stainless series, making up 25% of the domestic market share; 55,000 tons of the special metallurgy series, making up 16% of the domestic market share; 745,000 tons of structure steel series, making up 15% of the domestic market share.

						Unit: million Yuan
Product	Operation Revenue (OR)	Operation Cost (OC)	Gross profit rate (GPR)	Growth rate of OR, compared with last year	Growth rate of OC,, compared with last year	Growth rate of GPR, compared with that of last year
Cold rolled carbon steel coils	32,454	25,201	22.35%	6.84%	6.32%	+0.38%
Hot rolled carbon steel coils	42,341	32,195	23.96%	39.23%	38.21%	+0.56%
Heavy plates	7,937	5,283	33.44%	59.21%	35.79%	+11.48%
Stainless steel plates	20,582	21,771	-5.78%	5.40%	25.99%	-17.29%
Special steels	10,561	10,756	-1.85%	21.41%	32.07%	-8.22%
Others	14,481	11,449	20.93%	-11.62%	-10.45%	-1.04%
Total	128,357	106,655	16.91%	16.28%	19.71%	-2.38%

The following table shows the incomes and costs of key iron and steel products of Baosteel:

Note: In 2007, according to "Business Enterprises Accounting Standards", the accounting report of Baosteel would no longer be proportionally consolidated with that of Baosteel-NSC Auto Sheets Co., Ltd., 22.6 millions tons of sales of Baosteel's steel products in 2007 included 1.53 million tons of hot rolled steel products, which were sold to Baosteel-NSC Automotive Steel Co., Ltd., but didn't include 1.81 million tons of cold rolled steel products sold by Baosteel-NSC Automotive Steel Co., Ltd. Peace of acquisition of 92.5% shares of Nantong Baosteel Nippon Co., Ltd. on Oct 1, 2007, the operation income resulting from 706,000 tons of sales of steel products of Nantong Baosteel Nippon's Co., Ltd. from January to September, amounting to RMB 2.22 billion Yuan, was not included in the operation income of the above table.

In 2007, due to large fluctuation of nickel price, the product price decrease was bigger than the extreme cost decrease. Therefore, the Company lost money in the sales of stailess steel products. In addition, it was lacking in experience of stainless steel production, technology accumulation, and quality control. And there was a higher product homogenization, and an insufficient ability to control the quality and tackle key problems. All these factors limited the product gross profit level. In response to this disadvantageous situation, Baosteel managed to reduce the costs and business risks, adjust the structure of products, and optimize the structure of metallurgical raw materials, increased the use of low-nickel pig irons and high-carbon ferrochrome irons as substitutes, speeded up the stock turnover, continuously optimized technical economic indexes, spared no effort to expand market, and kept the scale of stable production and selling, thus reduced the cost of stainless steel products and operation risk to a certain extent.

#### Unit: million Yuan

## Major Markets

The following table shows the operation revenues in different areas:

#### Unit: million Yuan

Products	Operation Revenue (OR)	Operation Cost (OC)	Gross Profit Rate(GPR)	,	Growth rate of OC, compared with that of last year	Growth rate of GPR, compared with that of last year
Domestic market	170,138	144,967	14.79%	16.70%	18.68%	-1.42%
International market	22,055	18,385	16.64%	31.89%	44.28%	-7.16%

The Company exported 3.64 million tons of steel products in 2007. The distribution of commercial products exported to various regions is shown in the following table:

Region	2007	2006
East Asia	43%	41%
Southeast Asia	19%	17%
America	15%	16%
Europe and Africa	22%	26%
Total	100%	100%

## Status of Major Suppliers and Customers

In 2007, the sum of procurement made by the Company in the first 5 major suppliers accounted for 25.5% of the total procurement sum.

In 2007, the income of sales of the Company from the first 5 major customers accounted for 8% of the total operation revenues.

## Change of the Composition of Assets

By the end of this report period, the total combined assets was RMB 188.34 billion yuan, an increase of RMB 23.49 billion yuan, compared with that at the beginning of the year; the total amount of liabilities was RMB 93.74 billion yuan, an increase of RMB 15.42, billion yuan, compared with that at the beginning of the year, shareholder equity amounted to RMB 94.6 billion yuan, an increase of RMB 8.07 billion yuan, compared with that at the beginning of this year; assetliability ratio was 49.8%, an increased of 2.3%, compared with that at the beginning of this year. For details, please refer to the following table:

						Unit:	million Yuan
Assets	End of 2007	End of 2006	Difference	Liabilities and stockholder's equities	End of 2007	End of 2006	Difference
Liquid assets	76,624	67,246	9,378	Current liabilities	75,885	66,832	9,053
Including: stock	39,069	31,236	7,832	Including: short-term loan	20,481	18,945	1,536
Accounts due	11,969	10,745	1,224	Non-Current liabilities	17,850	11,481	6,369
Long-term investments	3,754	3,104	650	Including: long-term loan	16,432	9,590	6,842
Fixed assets	81,552	76,541	5,011	Total amount of liabilities	93,735	78,313	15,422
Invisible assets and others	5,627	3,960	1,667	Stockholder's equities	94,601	86,534	8,067
Total	188,336	164,847	23,489	Total	188,336	164,847	23,489

Of liquid assets, the stock at the end of 2007 increased by RMB 7.83 billion Yuan, compared with that at the beginning of the year; mainly due to the rise in prices of raw materials such as iron ores, coal and scraps, and increase of purchasing, producing and selling scales, leading to an increasing stock of raw materials, semi-products and finished products, compared with that at the beginning of the year; on the other hand, given that prices of some materials were expected to go up, the company conducted some scale of strategic storage; meanwhile, the storage for putting into new production and for projects to reach production targets gave rise to the growth in storage of raw materials; in addition, trading units of the company took the initiative in increasing the storage of part of iron and steel products, in view of the expected risen prices in part of iron and steel products. Along with strategic storage, the company highly emphasized control and management of the reasonable stock and made great efforts to dynamically optimize the structure of stock, and to minimize the used capital for stock.

Of the total RMB 8.38 billion Yuan of loans, short-term loans increased by RMB 1.54 billion Yuan, and long-term loans, grew by RMB 6.84 billion Yuan, compared with that at the beginning of the same year, as there was more investments in fixed assets in 2007 than before, leading to more loans to make up the money required by these investments.

Except part of financial tools calculated by fair value, other asset items were calculated by cost mode. By the end of the report period, the total balances of both transaction monetary assets and financial assets available for sale amounted to RMB 3.24 billion Yuan, and the fair values thereof were estimated on a basis of market prices.

## Change of Periodic Expenditures and Income Taxes

## **Operation Costs, Administration Expensess**

			Unit:	RMB million Yuan
Items	2007	2006	Difference	Rate of difference
Operation costs	2,018	2,218	-200	-9.0%
Administration expenses	5,220	5,378	-158	-2.9%

Both operation costs and administration expenses of 2007 decreased, compared with that of the last year.

## **Financial Expenses**

1			Unit	: RMB million Yuan
Items	2007	2006	Difference	Rate of difference
Interest incomes	-81	-63	-18	27.8%
Interest expenditures	1,878	1,409	469	33.3%
Exchange gain or loss	-889	-383	-506	132.4%
Others	47	55	-8	-14.7%
Total	955	1,018	-63	-6.2%

As the company took advantage of appreciation of RMB in the world market, and took initiative in expanding the scale of financing in US Dollars, leading to a dramatic increase of RMB 0.51 billion Yuan in exchange gains, the total financial expenses decreased by RMB 0.06 billion Yuan, in spite of the dramatic growth in active debts, and impact from the sixth rate-lifting in 2007, resulting in more RMB 0.47 billion Yuan of interest expenditures than the last year.





## **Income Taxes**

			Unit	: RIVIB million Yuan
Items	2007	2006	Difference	Rate of difference
Total combined profits	19,308	19,204	104	0.5%
Combined income tax expense	5,885	5,604	281	5.0%
Actual rate of income tax	30.5%	29.2%	+1.3%	

The growth in income tax expense was mainly driven by the new taxation law - Enterprise Income Tax Law of the People Republic of China which came into effect in 2008. In 2007, the company adjusted the assets and liabilities of the deferred income tax, and accordingly increased the income tax by RMB 0.16 billion Yuan in this report period.

## Cash Flow Analysis

In 2007, the net inflow of cash resulting from business activities was RMB 19.51 billion Yuan, the outflow of cash resulting from investments was RMB 22.31 billion Yuan, and the net inflow of cash resulting from financing activities amounted to RMB 1.64 billion Yuan, and the details are as follows:

In 2007, the net inflow of cash resulting from business activities was RMB 19.51 billion Yuan, a decrease of RMB 5.71 billion yuan, compared with that of last year, of which RMB 2.36 billion Yuan was the net cash outflow in 2007 resulting from financial businesses such as deposits and loans, return and payment of interest of finance company, whereas the net cash inflow in the corresponding period of 2006 amounted to RMB 4.59 billion yuan; with a deduction of the above mentioned factors influencing the finance company, the net cash inflow from business activities of the Company in 2007 amounted to RMB 21.87 billion Yuan, an increase of RMB 1.24 billion yuan, compared with RMB 20.62 billion yuan in 2006. In 2007, the scales of both purchasing and selling increased, for both the cash volume gained from sales of products and providing services and the cash volume used to pay for purchasing commodities and services increased to a certain extent, resulting in an increase of RMB 5.7 billion yuan of cash inflow; the paid taxes and duties were RMB 4.12 billion Yuan more than that of last year, due to a larger scale of sales and a new algorithm of income taxes.

The net cash outflow resulting from investments in 2007 was RMB 22.31 billion Yuan, which was RMB 9.99 billion yuan more than that of 2006, where the net cash inflow from the return resulting from the transaction of financial assets liquidated by the finance company in 2007 was RMB 0.5 billion yuan, while the net cash inflow in 2006 was RMB 4.47 billion yuan. With a deduction of the above mentioned factors influencing the financial company, the net cash outflow resulting from investment activities in 2007 was RMB 22.81 billion Yuan, an increase of RMB 6.02 billion yuan, compared with RMB 16.79 billion yuan in 2006, an increase of RMB 5.44 billion yuan of investment in fixed-assets, intangible assets, and other long-term asset disbursements, resulting from the increased fixed investment of the projects of "the Eleventh Five-year Plan", such as the No. 5 Cold Rolling Strip Project and the Straight Welded Pipe Project specially for Oil and Nature Gas transportation, etc. in 2007.

The cash net inflow of 2007 resulting from financing activities amounted to 1.64 billion, an increase of RMB 5.3 billion yuan, compared with that of 3.66 billion in 2006. This is mainly due to the large scale of investment in fixed-assets in 2007, which resulted in an increase of loan for making up the money required by the investment activities. Comparing with last year, the cash gained from loan increased by RMB 14.16 billion yuan, the cash paid for liabilities increased by RMB 9.6 billion yuan, and the total net cash gained from loans of the whole year in 2007 increased by RMB 4.57 billion yuan. In 2007, the cash gained from sales of products and service-providing amounted to RMB 221.13 billion Yuan, while the amount of payment for the purchased products and the service was RMB 172.42 billion yuan. The cash flow in the last 3 years is shown in the following figure:



The cash volume paid to/ for the employees amounted to RMB 6.54 billion Yuan in 2007. It tends to increase year by year with the speedy growth of the Company. In addition, the scientific and technological rewards, allowances to directors and supervisors and payments for peripheral cooperations were unified and brought into cash columns. The Company increased the amount of compensation for laying off according to the new " Enterprises Accounting Standard ". The following figure shows the status of the recent 3 years:



Meanwhile, the received cash from gains on investment in 2007, amounted to RMB 1.11 billion Yuan, and the cash gained from liquidations of fixed-assets, intangible assets, and other long-term assets, was RMB 0.16 billion yuan, as shown in the following figure:



## Innovation of Technology and Investment in R&D

With focuse on the "Baosteel Development Programs on Technical Innovation System" and innovative enterprise Experimental Scheme, the Company has been advancing the development of technical innovation system, improving the efficiency and performance of technical innovation. The R&D input rate in the whole year of 2007 was 1.05%, reaching the highest level in its history. There were 800 patents which were applied, including 350 invention patents, and 1,962 know-how, thus bringing about an increased improvement of capability of independent innovation and self- integration. Not only the technical innovation of the Company was affirmed by the government and the industry, but also increasingly praised outside the industry. A new safe and Environment-friendly "Reclamation Slag Granulation Technology" and "High Strength Hermetically-Sealed Backup Roll Tchnology for Finishing Straightener" were awarded the second prize of "the National Science and Technology Inventions" and the second prize of "the National Technology Progress" respectively. The 2006 evaluation made by National Affirmation Enterprise Technical Center indicted that Baosteel Tchnical Center was ranked the 2nd place in China, and the number of patents possessed by it ranked No.4 amongst the state-owned enterprises. The Company was also granted the "Special Award of Scientific and Technical Innovation" by the State-owned Assets Supervision and Administration Commission of the State Council and the title of "the first place of self-innovative competenenc in the industry" for 2 consecutive years.

With focus on the strategy for development of products, Baosteel has developed a series of new products, meeting the demand of growth in automobiles, light-industry and household appliances, energies, transportation, engineering and machinery, etc. by continually increasing investment in R&D. Having passed the certification, its heat stamping and shaping steel for automobiles has promoted the construction project of the heat stamping and shaping steel production line. After being checked and accepted by Shanghai Municipality, isotropic steel B220/260ZE has become a substitute for the imported material. With increasing growth of high grade non-orientation silicon steel products researched and developed by Baosteel some of the products have been successfully introduced to both domestic and international markets in large batches. It marked a breakthrough of technology of silicon steel manufacturing in Baosteel. The applications of B610E oil storage tank steel kept being expanded, making Baosteel the biggest supplier of high-strength steel for large oil storage tanks in China. The Company has realized supplying hydraulic power steel B610CF to key projects. It, for the first time, has succeeded in trial-producing nickel-base alloy oil casting products, which are up to the advanced level in the world and meeting the requirement of using under stringent conditions. The SA738B plates for AP-1000 containments, have been successfully trial-produced and have passed certification, mading Baosteel the only supplier of steel plates for containments of nuclear power stations in China. TMCP ship-building plates have been accepted by 9 Associations of Classification Society in the world and successfully supplied in large batches. Industrial tests of ferritic stainless steel for automotive exhaust system has been completed, and the brands like B409M etc, have been certificated. Ferritic stainless steel for railway building has been successfully and stably supplied in batches. The new type valve steel LF6, with selfowned intellectual property right, has passed customers' tests and assessment and reached the advanced level of the products of this kind in the world.

With focus on speeding up the research and development in the key fields, efforts are being made to bring about and applying innovation results, and to further expand core technical chain. The company continues to conduct the technical researches, including mixing coal and ores at a lower cost and using blast furnace in a longer lifetime, in pursuit of production technology of high-efficiency and low-cost. It conducted researches on clean stainless steel smelting, mold flux of stainless steel continuous casting, width control of ferritic stainless steel slabs, in order to continually improve the technological level of stainless steel production process level. With focus on the No. 3 hot rolling project, silicon steel line of the No. 5 cold rolling, the bloom project, the stainless steel cold rolling steel project, etc, the company has carried out related consistent system and supporting process researches. Progress has been made in researches on thin strip casting industrialization and technology in strip surface inspection and test, shape control, IF steel low temperature annealing process technology, etc.

As for energy-saving and emission reduction, aiming at building "the First Class Clean Iron and Steel Works in the World", taking energy-saving and emission reduction as the core, the company actively promoted the modern management and technology in 2007. With focus on energy-saving and environmental protection and green production, the Company has developed such processes and technology as "desulfurization technology of flue gas of sintering", and "processing slag with high viscosity". In 2007 the Company spared no effort to promote the R&D of the environment-friendly technology, such as synthesis of wear resistant materials by the mixture of slag and waste refractory materials, the use of stainless steel scraps into cement industry, using steel scraps for absorption of carbon oxide, evaluation of iron and steel's life cycles, waste plastics jetted into the blast furnace, the dioxin laboratory, etc.

Operation

## Analysis of Business and Performances of Major Holding Companies and Sharing Companies

## Shanghai Meishan Iron & Steel Co., Ltd

By the end of 2007, Baosteel held 74.01% of the capital stock of this company with a registered capital amounted to RMB 6.26 billion Yuan. This company is mainly engaged in smelting of ferrous metal and rolling process and sales, etc. And the asset scale of this company reached RMB 13.85 billion Yuan, with RMB 1.09 billion Yuan of net profit realized by the end of 2007.

## Ningbo Baoxin Stainless Steel Co. Ltd

By the end of 2007, Baosteel held 54 % of the capital stock of this company with a registered capital of RMB 2.85 billion Yuan. It mainly engaged in manufacturing and processing of stainless plates, as well as offering instruction and consulting services about the relative technology, etc. And the asset scale of this company reached RMB 7.66 billion Yuan, with RMB -0.13 billion Yuan of net profit realized by the end of 2007.

## BNA Automotive Steel Sheet Co., Ltd.

By the end of 2007, Baosteel held 50% of the capital stock of this company with a registered capital of RMB 3 billion Yuan. It is mainly engaged in manufacturing and sales of cold rolled plates for automobiles and spare parts, hot dip galvanized sheets, and electro-galvanized sheets, as well as the in different business related to the above-mentioned business, etc. And the asset scale of this company reached RMB 5.6 billion Yuan, with RMB 0.64 billion Yuan of net profit realized by the end of 2007.

## Yantai Lubao Steel Pipe Ltd.

By the end of 2007, Baosteel held 79.82% of the capital stock of this company with a registered capital of 0.1 RMB billion Yuan. It is mainly engaged in processing and sales of seamless steel pipes, including seamless steel pipes for structures, medium/low-pressure boilers, fluid delivery, hydraulic pillars, high-pressure boilers and petroleum equipments, pipes for geologic drilling, plain pipes for petroleum industry, pipes for oxygen cylinder, etc. And its asset scale reached RMB 1.15 billion Yuan, with RMB 0.19 billion Yuan of net profit realized by the end of 2007.

## Baosteel Huangshi Coated and Galvanized Sheet Co., Ltd

By the end of 2007, Baosteel held 39.37% of the capital stock of this company with a registered capital of 8 RMB million Yuan. It is engaged in manufacturing and sales of cold rolled plates, zinc-coating plates, color-coating plates, as well as the related zinc-plating products. And its asset scale reached RMB 0.27 billion Yuan, with 20 million Yuan of net profit realized by the end of 2007.

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

By the end of 2007, Baosteel held 100% of the capital stock of this company with a registered capital amounting to RMB 2.25 billion Yuan. This company is engaged in self-operation and agency services of exporting & importing commercial items and technologies approved by the government, importation of steel products and steel scraps, as well as processing

with imported materials and compensation trade. And the asset scale of it reached RMB 30.34 billion Yuan, with 1.01 billion Yuan of net profit realized by the end of 2007.

## Shanghai Baosight Software Co., Ltd.

By the end of 2007, Baosteel held 55.5% of the capital stock of this company with a registered capital of RMB 0.26 billion Yuan. It is engaged in research, design, development, manufacture and integration of computers, automation, network communication systems, hardware and software. And the asset scale of it reached RMB 1.4 billion Yuan, with RMB 1.4 billion Yuan of net profit realized by the end of 2007.

### Baosteel Chemical Co., Ltd

On Sep. 1, 2007, the Company repealed Chemical Branch and halted the application for the cancellation registration of Shanghai Baosteel Chemical Co., and Chemical Co. restored operation in the form of a legal person. By the end of 2007 Baosteel held 100 % of the capital stock of this company with a registered capital of RMB 2.1 billion Yuan. It is engaged in manufacturing and sales of chemical raw materials and products, and providing services of so-called ''4 technologies'' within chemical industrial fields, and export of the products manufactured by itself. And the asset scale of it reached RMB 4.22 billion Yuan, with RMB 0.2 billion Yuan of net profit realized in last year (from Sep.to Dec.); it produced RMB 0.865 billion Yuan of net profit in a whole year, if it is taken as a complete company.

## Nantong Baosteel Iron & Steel Co., Ltd

Nantong Baosteel Iron & Steel Co.,Ltd was a subsidiary company owned by Baosteel Group. With a registered capital of RMB 0.346 billion Yuan, this company was engaged in manufacturing and sales of reinforced bars, round steels, section steels, semi-finished steel products (including steel billets, steel ingots, etc) as well as other steel products and by-products. On Aug 6, 2007, Baosteel Group publicly stated 92.5 % of its holding capital stock of Nantong Baosteel Iron & Steel Co., Ltd was to be transferred at Shanghai Union Asset and Equity Exchange. In September 2007, the Company (Baosteel Co., Ltd.) took the offer and became qualified for acquiring the transferred capital stock. And the transfer of the abovementioned capital stock was completed on Oct 1, 2007.

By the end of 2007, the asset scale of it reached RMB 1.66 billion Yuan, with RMB 0.55 billion of net asset and RMB 0.02 billion Yuan of net profit realized in that year. According to the plan, Nantong Baosteel Iron & Steel Co., Ltd will start technological transform of its smelting process, and build big size round continuous casting machines, mainly aiming at producing big diameter, high alloy tubular billets, and becoming the Company's base of quality billets supply, thus greatly improving the Company's competitiveness of steel tube products.

## **Overseas Subsidiaries**

By the end of 2007, Baosteel Co., Ltd. has set up 8 overseas subsidiaries, which are located in such countries or regions as US, Japan, Germany, Singapore, Hong Kong, Australia, etc. These subsidiaries play an important role in expanding the network of both procurement and sales, as well as improving the company's competitiveness around the world. Note: From January 1 st, 2007, the Company started implementing the new version of "Enterprise Accounting Standard", and made retroactive adjustments on the comparison report in accordance with the regulations of the "Enterprise Accounting Standard No.38 - Implementing New Accounting Standards for the First Time".

## Major Annual Accounting Data

Unit: RMB million yuan

ltem	Amount
Business profit	19,478
Total profit	19,308
Net profit belongs to the shareholders	12,718
Net profit belongs to the shareholders after deducting the recurring profit and loss	12,545
Net amount of cash flow generated in the business	19,506

#### Recurring profit and loss deducted

## Unit: RMB million yuan

Amount
(166)
17
145
(39)
324
(107)
174
-

## Major Accounting and Business Data in the Last Three Years

## Unit: RMB million yuan

						-
		Year 2006		Increase/decrease	Year 2005	
ltem	Year 2007	After adjustment	Before adjustment	compared to last year (%)	After adjustment	Before adjustment
Business income	191,559	162,326	157,791	18.01	124,192	126,608
Total profit	19,308	19,204	19,008	0.54	18,560	18,311
Net profit belongs to the shareholders	12,718	13,077	13,010	-2.75	12,785	12,666
Net profit belongs to the shareholders after deducting the recurring profit and loss	12,545	13,400	13,247	-6.38	12,898	12,743
Net amount of cash flow generated in the business	19,506	25,213	21,596	-22.64	31,327	22,722
Net amount of cash flow generated in each line of business (RMB)	1.11	1.44	1.23	-22.92	1.79	1.30
Basic earnings per share (RMB)	0.73	0.75	0.74	-2.67	0.73	0.72
Diluted earnings per share (RMB)	0.73	0.75	0.74	-2.67	0.73	0.72
Yield rate of net asset (%) (diluted)	14.37	16.09	15.87	1.72% decreased	17.38	17.01
Yield rate of net asset (%) (weighted)	15.22	17.13	16.84	1.91% decreased	20.80	20.63
Return of net asset after deducting the recurring profit and loss (%) (diluted)	14.17	16.49	16.16	2.32% decreased	17.54	17.11
Return of net asset after deducting the recurring profit and loss (%) (Weighted)	15.01	17.55	17.15	2.54% decreased	20.99	20.75

		End of 2006		Increase/	End of 2005	
ltem	End of 2007	After	Before adjustment	decrease compared to last year (%)	After	Before adjustment
Total asset	188,336	164,847	151,060		151,713	
Owners' equity (shareholders' equity) that belongs to the shareholders	88,504	81,286	81,961	8.88	73,544	74,475
Net asset per share (RMB) that belongs to the shareholders	5.05	4.64	4.68	8.84	4.2	4.25

With focus on a capital structure that conforms to the requirements and goals of strategic development, the Company spares no effort in building a diversified financing system. By laying great emphasis on cooperation with banks, signing bank-enterprise cooperation agreements and prompt repayment agreements with major financial institutions, the Company has strengthened indirect financing channels, ensured capital supply for business and production, and dynamically adjusted the types, time limits, and currency structures of the loans, thus enjoying a relatively lower financing cost. The company also actively explores direct financing channel in the capital market, executes direct financing channels that comply with the features of the Company, so as to guarantee the capital need of strategic development.

The Company makes full use of the advantage of the centralized fund management, enhances group-type credit-granting system, where the affiliates can obtain the same bank credit support and services as the headquarter does if it is assured that the headquarter has been granted adequate bank credit and rich variety of bank credits.

At present the Company's main co-partners are: China Construction Bank, China Industrial and Commercial Bank, China Bank, Communication Bank, China Development Bank, China Ex-import Bank, Baosteel Group Finance Company, and Hong Kong and Shanghai Banking Corporation, etc. According to the Articles of Association of the Company, the allocation order of the after-tax profit is as follows: making up losses, drawing statutory common reserve fund, drawing optional common reserve fund and paying the dividend of common stocks. The statutory common reserve fund equals to 10 percent of the Company's after-tax profit and may not be drawn when it's accumulated amount reaches 50 percent of the Company's registered capital. In accordance with the national laws, administrative regulations and the Company's operation performance and development needs, the Board of Directors shall decide the specific proportions of the statutory common reserve fund to be drawn and the dividend of common stocks to be paid, and submit them to the shareholders' general meeting for approval. The Company shall not allocate dividend before the loss is made up and the statutory common reserve fund is withdrawn.

In 2007, RMB 9.948 billion yuan of net profit (not combined) was realized. To achieve the goal of a long and sustainable development, and to better implement the operational concept of "Maximization of Shareholders' Value", the Board of Directors proposed that the cash dividend per share for 2007 was RMB 0.35 yuan after drawing optional common reserve fund (10 percent of the Company's after-tax profit), according to the Corporation Law and the Articles of Association of Baoshan Iron & Steel Co., Ltd.

The number of shares and the cash dividends per share for the past years in the Company's history are shown below:





Thanks to its honest operation and outstanding performances, the Company has been able to give back to society. Since it was founded in 2000, the accumulative taxes and duties of various kinds paid to the State amounted to RMB 69.359 billion.

Good tax paying credit rate has enabled the Company to achieve "Grade A of Shanghai Tax Paying Credit Rate" in the successive years, while in 2006, the Company also got "A grade of taxpayer credit in Shanghai".



Tax payment in the last three years is showed in the diagram:

Note: the above tax paid is the total amount of Baosteel group Co., ltd (combined)

- By enjoying tax-exempt enterprise income policy for the project of comprehensive utilization of resource, the Company was exempted RMB 29 million yuan from enterprise income tax in 2006, and RMB 34 million yuan from enterprise income tax in 2007.
- 2. By enjoying the deduction policy of research expenses, RMB 133 million yuan was offset from enterprise income tax in 2006; and RMB 200 million yuan was offset from enterprise income tax in 2007.
- 3. By enjoying the tax refund policy for projects transferred from new and hi-tech achievements;

## Donation

With focus on honesty, cooperation, creation, and pursuing maximum enterprise value, the Company takes "Building up Harmony of the Society" as its own duty, concerns about the society and shoulders social responsibilities. It donated RMB 59.69 million yuan in total in 2007, an increase of 156.3% compared with that in 2006, which includes RMB 8.15 million yuan in payments for poverty alleviation, RMB 1.13 million yuan for endowment, RMB 0.41 million yuan for sponsorship, and RMB 50 million yuan for establishing the China's environmental protection foundation.

## Legal Operation

The company fully respects employees' freedom of association and freedom of belief, no violation of human rights such as discrimination against employees and nonnative personnel, child laborer employment, forced labor occurred during the reporting period.

The company actively participates in the researching of public policy, making and insisting on an operating policy of honesty, equity, cooperation, and win-win. The Company is against monopoly behaviors in any form, false advertisement, and protects the privacy of the beneficiaries. No severe behavioral violation occurred during this reporting period.

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## Appendix



## Introduction of Major Branches and Subsidiaries

## **Baosteel Branch**

Founded in May 2005, Baosteel Branch is one of the most important steel manufacturers of the Baosteel group, Project Phase I broke ground on December 23rd, 1978, and was put into production in September 15th 1985. Project Phase II was put into production in an all round way in June 1991. Project Phase III was completed at the end of 2000. Construction of projects of the 10th Five Year Plan were completed and put into production in April 2005. Located in the northeast of Shanghai, Baosteel Branch covers an area around 20 square kilometers. It is located in Yangtze River delta which has the most developed and dynamic economy in China.

Baosteel Branch has become the largest and most advanced steel complex in China, also one of the largest integrated steel production bases in the world. Specialized in the production of world top-grade, high-tech and high value-added products, including CR, HR steel and seamless pipe steel, etc., the Branch saw its annual output of 14.5218 million tons of steel in 2006. With wide applications to the international and domestic industries of automobile, household appliances, oil fields, pipelines, shipbuilding and construction, its products have been exported to over forty countries are certified by international institutions. To be specific, oil casting pipes and drilling pipes are applicable to the logo of API; its HR and CR sheets are certified by JIS; its HR & CR plates for ship building are accepted by seven Associations of Classification Society, namely, China Classification Societies Bureau Veritas, American Bureau of Shipping, Lloyds Register of Shipping Germanischer LLOY, DET NORSKE VERITAS, and RINA.

Baosteel Branch enjoys a wide range of products, including norma cold rolled, hot-dip galvanized, electro-galvanized and color coated sheets silicon steel, electro-tinned, hot rolled pickled strips, damper plates and hot rolled strips, heavy plates, seamless pipes, rods and slabs, etc.

Address: Administrative Center, Fujin Road, Baoshan, Shanghai Postcode: 201900 Tel: 0086-21-6646114 Fax: 0086-21-26648046

## Stainless Steel Branch

Stainless Steel Branch grew out of Shanghai No. 1 Steel Works. Ltd (No.1 Steel Corporation), which was founded in 1938. Through 70 years it has grown from a steel workshop into one of the most important stainless steel bases in China. Located in Baoshan District, Shanghai, it covers an area of 3.53 square meters.

Major equipment: 2500mP3P BF I set /750mP3P BF I set; 100 t electric furnace, 2 sets; 120t stainless steel converter; 2sets; 120t ladle refining furnace, 2 sets; 150 t dephosphorizing & desulphurizing duplex converter; 2 sets; I×I strand slab continuous casting machine, 4 sets; 1780 m hot-strip mill, I unit; bell type furnace, 9 sets; stainless steel hot strip continuous annealing & pickling line, I set; carbon steel continuous pickling line, I set.

Designed annual production capacity: 3.406 million tons of molten steel (including 1.5 million tons of stainless molten steel); 3.289 million tons of continuous casting slabs (including 1.44 million tons of stainless steel slabs); 3.097 million tons of HR strip (including 1.285 million tons of stainless steel coils); 0.7 million tons of annealed & pickled hot rolled stainless steel coils; 1.4 million tons of hot rolled & pickled carbon steel coils

In addition to its principal austenite stainless steel production, Stainless Steel Branch is capable of producing other stainless steel products like ferrite, martensite, super-martensite, two-phase steel, super-low-carbon, and nitrogen steel, which have been successfully developed in the world. The carbon steel line produces high-quality carbon steel, corrosionresistant steel, high-strength low or micro-alloy steel, weld structural steel, pipeline steel, etc. With the wide applications to various fields, including kitchenware, tableware, household appliance, transportation, architecture and decoration, petro-chemical, environment protection, medicals, water tank, the Branch's products are warmly accepted by their consumers and enjoy promising sales not only in the domestic market but also in the overseas market

Stainless Steel Branch is building a follow-up project of stainless steel CR. In the new round of development, all the employees of Stainless Steel Branch will strive to be self-improved, try their best to create a top-class enterprise, a culture of honesty and cooperation, produce first-class products, provide excellent service for the customers, and walk into the glorious future with you hand in hand.

Address: No. 580 Changjiang Road, Baoshan District Shanghai Postcode: 200431 Tel: 0086-21-26034567 Fax: 0086-21-26034364

## Special Steel Branch

Located in Wusong Industry Area of Baoshan District, Special Steel Branch grew out of former Shanghai No.5 Steel Works, which was established in September 1958 as one of the earliest special steel production bases in China. Merged into Baosteel Group in 1998, it was renamed as Baosteel Group Shanghai No.5 Co., Ltd. Its core assets were purchased by Baosteel Co., Ltd. and became one of its subsidiaries in 2005. At present, the Branch has been developed into a high-quality special steel manufacturing center of Baosteel and the largest special steel production base of the nation.

Equipped with world class special metallurgical equipment, such as 100-ton ultra high power DC electrical arc furnace, 60-ton AC electrical arc furnace as well as the world's leading production lines for stainless steel long profile products, alloy bar steel, module, silver steel and so on, the Branch has formed it's production and sale system with focus on the main products as high temperature alloy, Titanium alloy, special steel, special alloy materials, as well as automobile steel, bearing steel, stainless steel, tool and die steel and others. It has adopted advanced, applicable information technology to speed up the modernization of its traditional process. With it's products ranging from long profile bars, pipe and wire, to strips and forged products, which are widely used in various fields such as aviation, space industry, nuclear power, automobile, machinery, electronics, instruments, petro-chemical industry, etc., the Branch has become a key production base of raw material for industrial and military use, as well as a R&D base for new metal material.

Address: No. 1269 Shui chan Road, Baoshan District, Shanghai Postcode: 200940 Tel: 86-21-56679080 Fax: 86-21-56670867 Website: www.baosteel-specialsteel.com

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

Located in the southwest suburb of Nanjing city, Jiangsu, Shanghai Meishan Iron & Steel Co., Ltd. (Mei Iron&Steel for short), covers an area of 4 square kilometers. With its north adjacent to Yangtze golden waterway, east near Ningma expressway, Nanjing Yangtze River No.3 Bridge, and Ningwu railway, it secures a perfect place for land and water transport.

Established in April 1969, it was a pig iron base of Shanghai built in Nanjing, HR and CC project were put into production separately in 1996 and 1999, which formed a steel manufacturing complex with a whole technological process of steel manufacturing. In November, 1998, Baosteel, Shanghai steel, plus Mei Iron & Steel, were reconstructed strategically. Mei Iron & Steel became a wholly-owned subsidiary of Meishan Corporation that affiliated to Baosteel Group, and was reorganized as Shanghai Meishan Iron&Steel Co., Ltd. After the block of Baosteel Group was listed as a whole entity, Baosteel Co., Ltd. was established and Mei Iron&Steel became a subsidiary of Baosteel Co., Ltd.

Since Baosteel, Shanghai Steel, and Mei Steel were reconstructed in 1998, through technical reforms of its BFs, steelmaking, and HR system, Mei Steel has modernized its major production equipment, technical equipment and self-controlling system, and has achieved an advanced level both domestically and internationally. It has an annual output capacity of 3 million tons of steel. Its major production equipment is as follows: 2 units of 1250m<sup>3</sup> BFs and I unit of I280 m<sup>3</sup> BF, 2 units of I30 m<sup>3</sup> sintering machine and I unit of I80 m<sup>3</sup> sintering machine, 3 sets of compound 4.3 m batteries with 65 coke ovens, 2 sets of I50 t top-bottom combined blowing converters, I unit of LF refining furnace and RF vacuum refining fumace, I set of 2×2 strand continuous casting machine and I set of I ×I strand continuous casting machine, 3 sets of slab reheating furnace and I set of I422 mm hot rolling and continuous casting machine.

Its major products are 1.2~12.7mm×800~1300mm HR coils, and it has developed and produced 8 series and 100 types of products, such as coldformed steel, structural steel, automobile structural steel, corrosion-resistant structural steel, welded gas cylinders steel, NG pipeline steel, straight welded sleeve steel, checkered slab. Products like deep drawing steel, tin plate steel, climate resistant plate steel, hot rolled pickled steel are widely applied to various fields such as automobile steel, natural gas pipeline, pressure vessel, construction of road bridge, etc. Its products not only takes up a certain market share at home, but are also exported to countries such as Korea, USA, Japan, Italy, etc.

With advanced production equipment, technical equipment and strong product development capacity, Mei Steel, as one of the few high-end manufacturers of pipeline steel, has became a supplier of many famous enterprises like China National Petroleum Corporation, and its products are widely applied to many key natural gas/electricity projects in many cities like Shanghai, Suzhou, and Nanjing, etc. H2S corrosion resistant pipeline steel is exported aboard and supplied to Kuwait national pipeline project; with automobile structural steel applied to the manufacturing of automobiles like Changan, VW, AUTO, etc.. It is capable of supplying automobile industry by package. Hot-rolled low-carbon bainite steel, with proprietary intellectual property, is applied to national key projects like construction of Donghai bridge, which reduces up to 20% of the weight of some bridge related components, thus achieving significant economic and social benefits. Hot rolled coil was appraised as one of the top ten steel products in China; hot rolled coils, slab, pig iron were appraised as "Product of Stable Quality in China", carbon-structure steel, low-carbon steel, hot rolled steel slab and strip for welded gas cylinders, automobile frames, pipelines, containers were awarded the prize of "Golden Cup" by China Iron & Steel Association. The quality of these products is up to international standards.

Mei Steel passed ISO9001 quality control system in 1999, was awarded "Shanghai Quality Management award" in 2003, passed the certification of ISO14001 environmental management system and OHSAS 18001 occupational health and safety management system and comprehensive management system after integration in 2006, and ISO10012 measurement management system in 2007. At present, Mei Steel, in accordance with its strategic orientation of being a "first-rate green iron & steel manufacturer in China", is conducting its production and development in line with the theory of scientific outlook on development, to further improve and implement its development projects in the 10th Five Year Plan. Through structure adjustment and technical reforms, Mei Steel, is conducting clean production and developing recycle economy actively. It is enhancing its core competence comprehensively, so as to build up a premium steel plate base in China and strive to built a harmonious and green Mei Steel.

Address: Xinjian, Outside Zhonghuamen, Nanjing, Jiangsu Prov-

Postcode: 210039 Tel: 0086-25-86702918 Fax: 0086-25-86701540

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## Nantong Baosteel Iron & Steel Co., Ltd

Established in September 2006, Nantong Baosteel Co., Ltd, the former Nantong Steel Works (established in 1987), joined Baosteel Group in 1992, with a total asset of RMB1.385 billion yuan. In 1994, a joint venture, Nantong Baoshan & Nippon Steel Co., Ltd was established. In 2006 the Japanese shareholder retreated from the company, and Baosteel Group Co., Ltd acquired all the stock capital held by the Japanese shareholder. In October2007, Baosteel Co., Ltd aquired all the stock capital (92.5% of the total) held by Baosteel Group Co., Ltd, andBaotong steel became a subsidiary held by the listed company.

The company maintains an annual output of 1 million tons of steel the products of which are mainly pig iron, billet of variety steel (tube billets and square billets), hot rolled ribbed barsand billets and  $\emptyset 10 \sim \emptyset$  50 hot rolled ribbed bar.

The company passed ISO9002 quality system certification in 2000, and the certification of new version of ISO9002 in 2002, ISO10012Measurement Assurance confirmation& Management System Certification in 2004, and the certification of comprehensive management system of quality, environment, and safety in 2006. It has been awarded the titles and prizes, such as "State Inspection-exempted Products", "In Kind Golden Cup Prize", "Famous Brand Product of Jangsu Province", "Excellent Product of Building Material Industry", "State Stable Quality Product", " Brand Product of Good Quality and Excellent Service", "Famous Brand Product of Nantong City", etc. It has won titles of honor, such as "Model Unit of Customer Service", "National Top 500 Informatization Enterprises ". It has been elected "Advanced Unit of Safe Operation", "Model Unit of Labor Security and Credit" and "Major Taxpayer of the City" by Nantong city.

Address: No.161, Tangzha River Dongbei Road, Nantong Postcode: 226002 Tel: 0513-85549470 Fax: 0513-85545771 Website: http://www.baori.cn

## Chemical Co., Ltd

Chemical Co., Ltd is the core coal-chemistry branch of Baosteel with focus on the production, sales, R&D of metallurgical and chemical products, specialized in non-steel manufacturing sector in Baosteel. In addition to its two major production bases in Baoshan, Shanghai and Meishan, Nanjing, It is entrusted by Baosteel Co., Ltd. to manage Suzhou Baohua Carbon Black Co., Ltd. With an annual processing capacity of 2.9 billion cubic meters of COG, 600 thousand tons of tar, 152 thousand tons of crude benzene and 910 thousand tons of output for various chemical products, and a registered capital of RMB 2.11 billion yuan, it is rated as No. 1 in coal chemical industry in China.

Its principle products amount to more than 50 kinds, including refined gas, benzene, naphthalene, phenols, quinoline, oils, coumarone resin, ammonium sulfate, carbazole, anthraquinone, pitch coke, carbon black, etc., which are widely applied in the areas like architecture, pharmaceutical, pesticide, plastics, tire and dyeing. Baosteel products like pure benzene, coking phenol, refined naphthalene, ammonium sulfate, pitch coke, etc, are awarded famous brand products in Shanghai. To be specific, pure benzene is awarded consecutively famous brand products in Shanghai for 7 consecutive years.

The strategic orientation of Baosteel Chemical Co. is to produce refined gas and chemicals to complete steelmaking industry, the major business of Baosteel Co., Ltd., Based on gas and chemical industry, it will explore high-tech and high value-added coal chemical downstream product area, optimize and deepen its production processes, so as to increase the scale and benefits. Under the principle of starting at a higher platform, adopting high technologies and manufacturing high quality products, it will give full play to its own advantages, make full use of the resources, and try to explore new profit increase points. Through integrating its business, optimizing the layout and resources of chemical industry, it will greatly expand Baosteel's chemical industry. It is trying to be elected one of the top three enterprises in the world gas and chemical industry through overall planning and step-by-step implementation.

Address: Baosteel Wei 3 Road, Shengqiao, Baoshan District, Shanghai Postcode: 200942 Tel: 0086-21-26648409 Fax: 0086-21-56196149 Website: www.baochem.com

## Ningbo Baoxin Stainless Steel Co. Ltd

Invested jointly by Baosteel Group Co., Ltd, Zheyong Steel Investing (Ningbo) Co., Ltd, Nisshin Steel Co., Ltd., Mitsui & Co., Ltd, and Hanwa Co., Ltd., Ningbo Baoxin Stainless Steel Co. Ltd ("Ningbo Baoxin" for short), which was established in march, 1996, is a cold-rolled stainless steel manufacturer. Thanks to its favorable location in Ningbo Economic & Technical Development Zone, which is close to Beilun port, one of China's four deepwater ports, and is within 35 kilometers from Ningbo city, the Company enjoys a convenient logistic and transportation advantage.

Covering an area of around 740 thousand square meters, the Company sees a designed annual output of 600,000 tons. The newly built stainless steel welded pipe project will be put into production by the end of 2008, with an annual design output of 10 thousand tons of stainless steel welded pipe.

The company has introduced advanced technology and equipment from Germany, France and Japan, etc, and has absorbed the stainless steelmaking process and technology of Nisshin Steel Co., Ltd. It is also following the modern enterprise management experience of Baosteel. In addition, its raw material is supplied by renowned manufacturers such as Baosteel Stainless Steel Branch Co. and Nisshin Steel Co., Ltd. Therefore, the Company plays a leading role in terms of product variety, product quality and credibility.

Its principal products include cold rolled stainless steel in 300 and 400 series with surface finish grade of 2B, 2D, No.3, No.4, HL, BA, etc., and thickness ranging from 0.20-5.0mm, width from 40-1320mm. They are mainly used in industries such as elevator; automobile, household appliance, kitchen utensils and construction decorations, etc.

Managerial policy: with focus on the needs of the customers; carrying out precise management; constantly reducing pollutant emission and preventing potential hazards; manufacturing high quality stainless steel; achieving the goal of win-win. The Company executes a quality management system, environmental management system, occupational health and safety management system and a comprehensive management system after integration, all certificates are reviewed and approved by certificating authorities in accordance with the regulations.

The company persistently sticks to the following market orientation during its development: first-rate equipment, excellent management method, talent first, top quality product. It will strive to build an advanced stainless steel manufacturer domestically, which is respected by our peer companies, to create greater value for the shareholders, employees, and society.

Address: Economic & Technology Development Zone, Zhejlang Province (Beilun-Xiapu) Postcode: 315807 Tel: 0086-574-86718888 Fax: 0086-574-86907128 Website: www.baoxins.com

## BNA Automotive Steel Sheet Co., Ltd

Established in July 30th, 2004, BNA Automotive Steel Sheet Co., Ltd ("BNA Sheet" for short), jointly invested by Baosteel Group Co., Ltd, Nippon Steel Corporation and Arcelor Mittal Corporation after being approved by related state departments, is a professional auto sheet seller and manufacturer.

With a registered capital of RMB 3 billion yuan, the total investment amount of it is RMB 6.5 billion yuan, of which, Baosteel Co., Ltd. contributed 50%, Nippon Steel 38%, Arcelor Mittal Corporation 12%. The time limit of the joint venture is 20 years.

BNA Sheet integrates all the advantages of the three world famous enterprises, namely, Baosteel, Nippon Steel and Arcelor Mittal in terms of management, technology, resource, and cost, etc. As world top 500 enterprises, the three enterprises, wich are of comprehensive competitiveness, will lay, through cooperation, a solid foundation for BNA Sheet to enhance its international competitiveness in high-end auto sheet market as well to enter the threshold of being a world top-rate auto sheet manufacturer.

Located in the plant of Baosteel Branch, the company has an annual output capacity of around 1.70 million tons, among which 0.9 million tons are cold-rolled sheets and 0.8 million tons are hot dipped galvanized sheets. Its principal production equipment and key technology represent the world's top level of steelmaking industry. It started construction in September 2002, its first production line was put into operation in December 2004, and all the 4 major lines successfully achieved monthly production targets in September 2005.

As a professional producer of automotive sheets, it enjoys the comprehensive advantages in management, technology, resources and cost from its three investors, namely, Baosteel, Nippon Steel Corporation and Arcelor With the ambition to become the world's top producer; it dedicates itself to the R&D of automotive sheets and provides the auto companies with world first-class cold rolled and galvanized auto sheets and services.

Address: Cold-rolled Comprehensive Building, #5 Neiwei Road, Plant area of Baosteel branch, Shanghai Baoshan Iron & Steel Co., Ltd Postcode: 201900 Tel: 0086-21-26643519

## Yantai Lubao Steel Pipe Co., Ltd.,

Yantai Lubao Steel Pipe Co.,Ltd ('Lubao Steel Pipe'' for short) is a holding subsidiary BaosteelCO, Ltd.With its location in Yantai, a port city of Shangdong Province, it enjoys convenient water and land transportation.

As the largest manufacturer of seamless steel pipes in Shangdong Province, it now owns a high-precision Adv. Accu-Roll hot-rolling seamless pipe production line with an annual production capacity of 300,000 tons of seamless pipes of more than 400 specifications and over 20 types. These products, with diameters ranging from 114mm to 325mm, include seamless steel pipes for fluid transmission, hydraulic pillar, boiler, oxygen tank, and rolling stock, etc, and are widely applied in various fields and trades like oil, chemistry, boiler, architecture, coal, pipe machining, etc. The company enjoys a good market in over 20 countries and regions in 5 continents. It has passed certification of ISO9001 Quality Control System, ISO14001 Environmental Management System and GB/T28001 Occupational Safety and Health Management System. Its principal products have been affirmed by international authoritative organizations. To be specific, pipeline steel has been authorized to apply API emblem; ship-building pipes have been certificated by CCS, ABS, and DNV.

Adhering to the concept of "first-rate quality, honest operation", the company takes customers' satisfaction as the utmost goal, promotes Baosteel's modern management mode, and tries to be innovative constantly, the company has been elected "Trustworthy Enterprise of Shandong Province" and "Inspection-exempted product Enterprise of the State".

Address: 185 Middle Xingfu Road, Ya, Shangdong Province Postcode: 264002 Tel: 0086-535-6843034, 6843244 Fax: 0086-035-6843727, 6842245 Website: www.lubaosteelpipe.com

# Baosteel Huangshi Coated and Galvanized Sheet Co., Ltd

Baosteel Huangshi Coated and Galvanized Sheet Co., Ltd ("Huangshi Company" for short) locates in the Development Zone of Huangshi City, an opening city along the Yangtze River in Hubei Province. Merged into Baosteel Co., Ltd in 2004, it was renamed as Baosteel Huangshi Coated and Galvanized Sheet Co., Ltd in June 2004, which is invested by Baosteel Co., Ltd, Huangshi Stated-owned Asset Operation Co., Ltd, and Zhende Enterprise Co., Ltd. of Hongkong.

The Company possesses one 150,000-ton zinc-plating production line and one 70,000-ton color-coating production line, with high equipment automation level. Its employees are less than 300 in total, the productivity of employees and their income are both among the front row in Huangshi city.

The company studies and adsorbs Baosteel's modern management method, gives priority to talents and advanced technology, assimilates new ideas, manufactures high-quality products, builds up brand image of Baosteel Huangshi and seeks value maximization, and effectively plays a bridgehead role in the western region for Baosteel. Products like zinc-plating sheets and color-coating sheets are applied to key state projects like Zhengzhou International Exhibition Center; Research Institute of China Petrochemical Corporation, Shanxi Yuci Power Station, buildings of Tai Steel Co. and Handan Steel Co., Lanzhou Petrochemical Co., Yanan oil field, etc.

The Company has passed combined certification of Quality Control system, Environmental Control System and Occupational Health and Safety Management System. In recent years, the Company has been successively awarded the titles of "National Dual-Excellence Foreign Invested Company", "National Model Harmonious Labor Relationship Enterprise", "China Industrial Leading Company", "Advanced Foreign Invested Technology Company of Hubei Province", "Occupational Sanitary Model Enterprise of Hubei Province", etc. Both the zinc-plated sheets and colorcoated sheets of the company are elected the famous brand products and best seller of Hubei province.

Taking advantage of Baosteel's brand, resource, and management, it has not only made steady progress in operation, but also enhanced its popularity and influence greatly. At present, through promoting Baosteel's modern management, the company, by integrating enterprise culture, will go all out to fulfill its goal and strive to maintain rapid development.

Address: 18 Hangzhou (W) Road, Huangshi City, Hubei Province Postcode: 435003 Tel: (0086 714) 6356725 Fax: (0086 714) 6351726

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

As a subsidiary completely owned by BaosteelCo., Ltd, Shanghai Baosteel International Economic & Trading Co., Ltd ("Baosteel international" for short), with a registered capital of RMB 2.249 billion yuan, achieved an annual sales volume of RMB 129.5 billion yuan in 2007, and the total profit was RMB 1.36 billion yuan.

Since its establishment in 1996, Baosteel international emerged from the economic tide rapidly and experienced a leapfrog process of starting from scratch and weakness to existence and mightiness, built up a marketing net which spread across the whole country and provided service for customers, established long-term extensive and stable businesscooperation and strategic partner relationship with the customers. On January 1st, 2007, complying with the Baosteel's development plan of "Making the dominent businessthe strongest, developing related diversified businesses to a proper extent" and the overall arrangement, it reorganized its business, and improved its existing service system of steel trading, process and distribution. Its 5 affiliated regional trading companies, 3 specialized trading branches as well as 30cutting, processing and logistic centers cover all over 21 provinces, autonomous regions and municipalities of the country. The companyhas an annual sales capacity of 22 million tons of steel, cutting and distributing capacity of 4.8 million tons of steel, as well as a production capacity of 10 million pieces of laser tailor welded products. The company has also explored other business such as e-commerce, packing strips, and freight forwarding, and so on, which greatly facilitates the expansion of Baosteel's overall business scale and enhancement of Baosteel's core competitiveness.

Address: Baosteel Building, 370 Pudian Road, Pudong New Area, Shanghai Postcode: 200122 Tel: 0086-21-58350000

Fax: 0086-21-50623344 Website: www.baointl.com

## Shanghai Baosight Software Co., Ltd.

Shanghai Baosight Software Co., Ltd. (Baosight Software for short) was established in April, 2000 and listed in April 2001. Its headquarters is located in Shanghai Pudong Zhangjiang High-Tech Park. As a listed software enterprise held by Baosteel, the company's registered capital reaches RMB 260 million yuan.

The company's main business units include 11 operation departments, 12 branches and 6 subsidiaries. The company has been making solid efforts to build up an "engineering-product-service" industrial chain and achieved a sales revenue of RMB 1.829 billion yuan in 2007.

Based on Baosteel's 20-year experience in information application, the Company is capable of combining information technology with modern management technique, project planning and consulting with engineering implementation, and software component design with customized design. It is in possession of the network building technology with the best cost-performance ratio, the software technology of setting up the decisionmaking platform system, the integrated technology of managing information isolated island problem, as well as supporting technology to provide professional service to customers. Its products and services are applied in numerous industries including metallurgy, petrol-chemistry, power, transportation, finance, retail, media, government, medical health, and so on. The company has its leading advantages in such fields as enterprise information application, process automation and city information application.

Address: 515 Guoshoujing Road, Zhangjiang High-tech Park, Pudong New District, Shanghai Postcode: 201203 Tel: 086-21-50801155 Fax: 086-21-50800701 Website: www.baosight.com

## Overseas Subsidiaries

### Howa Trading Co., Ltd.

Address: 102-0082, Howa Building, 15 Banchi, Ichiban-Cho, Chiyoda-Ku, Tokyo Japan Tel: 81-3-3237 9121 Fax: 81-3-3237-9203

### Baosteel Hong Kong Trading Company Limited

Address: Room 2901, 29/F. Office Tower, Convention Plaza, 1 Harbour Road, Wanchai, HONGKONG Tel: 852-2827 7773 Fax: 852-2879 4811

#### Bao-Trans Enterprises Ltd.

Address: 29/F. Office Tower, Convention Plaza, 1 Harbour Road, Wanchai, HONGKONG Tel: 852-2528-5766 Fax: 852-2529-5117

## **Bao-Island Enterprises Limited**

Address: 29/F., Harbour Centre, 25 Harbour Road, HONGKONG Tel: 852-2833 3223 Fax: 852-2827 0001

#### Baosteel Singapore PTE LTD.

Address: 6 Temasek Boulevars #25-02 Suntec Tower Four SINGAPORE 038986 Tel: 65-6333 6818-101 Fax: 65-6333 6819

#### Baosteel America INC.

Address: Continental Plaza 1, 1/F 401 Hackensack Ave Hackensack, NJ 07601, USA Tel: 1-201-457 1144 Fax: 1-201-457 0909 / 001-201-457 1777

#### BAOVALE MINERACAO S.A.

Address: Rua Lauro Muller 116, Sala 3103 CEP 22299-900, Rio De Janeiro RJ BRASIL Tel: 55-21-2531 1363 Fax: 55-21-2531 0298

### BAOSTEEL TRADING EUROPE GMBH

Address: 1 Nonnenstieg Avenue, Hamburg, Germany Tel: 49-40-4199 4101 Fax: 49-40-4199 4120



## Appendix



## Readers' Feedback Information Form

Baosteel is greatly concerned about your comments to this Sustainable Development Report. Your comments and opinions will be highly appreciated.

Please fax the form to us after filling the questionary. (Fax: 86-21-2664 3433)

You may also visit our website (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. In which part of this report are you most interested?

#### Personal information (optional):

Name	 Occupation	
Organization	 Address	
Post Code	 e-mail	
Phone	 Fax	

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Follow the fold line (1)





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