Innovation spurs the Green, Low-carbon and High-quality Development of Steel Industry

Guodong Xiao, Chief Representative for Carbon Neutrality, China Baowu Steel Group Corporation Limited

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In 1987, he joined Bayi Iron and Steel Co., LTD. and successively served as the manager and director of Bayi Iron and Steel Co., LTD., Assistant General Manager of Bayi Iron and Steel Group (Director of Technology Development Center and Director of Steel Research Institute), deputy general manager, standing deputy general manager, general manager and chairman of the board of directors of Bayi Iron and Steel Group.

In 2019, he served as general representative of Urumqi Headquarters of China Baowu and chairman of Bayi Iron and Steel.

From 2021 to now, served as the general manager assistant and chief representative of China Baowu.
01 About BAOWU

02 Progress of Our Action
Steel output in 2021: 120 million tons

2022 Fortune Global 500: No. 44
**Corporate Strategy**

**Mission:** Jointly build an industrial ecosystem and promote the progress of human civilization

**Vision:** Become a leading company in the steel and advanced materials industry

**Position:** A high-tech enterprise providing comprehensive solution of steel and advanced materials and service for the industrial ecosystem.
Give full play to the advantages of green energy resources in Northwest China, implement the industrial layout along the highway and railway, form a coordinated spatial framework to match with the existing "bow and arrow" shape production layout along the Yangtze River and the coastal line.
Transformation and Upgrading: Highlighting the Technical Content of the Industry

Material: Accelerate the upgrading of steel to advanced materials with high technology.

Energy: Develop clean energy, optimize energy structure.

Information: Deepen the implementation of information technology to support manufacture and service.
Timetable and Road Map of Carbon Emission Reduction in China Baowu

2023
Optimize management and improve efficiency

2025
Possess the technology capability to cut CO2 emissions

2035
Technological innovation and process optimization

2050
Technological revolution and process reengineering
Green and low-carbon transformation is a subversive revolution to traditional steel production technology. Only through technological innovation can we accelerate the decarbonization of steel enterprises and truly realize the high-quality development of enterprises.
In October 2019, Chairman Chen Derong of China Baowu formally proposed to launch the "Global Low-Carbon Metallurgical Innovation Alliance" and set up a low-carbon metallurgy innovation center and a low-carbon metallurgy innovation fund at the Executive Committee's meeting of the World Steel Association held in Montreal, Mexico.
On November 18, 2019, under the guidance of the World Steel Association, the Global Low-Carbon Metallurgical Innovation Alliance was officially established. China Baowu took the lead in releasing the China Baowu Action Plan for Carbon Neutrality.
On November 18, 2021, China Baowu Low Carbon Metallurgy Innovation Fund project guide was officially released at the inaugural meeting of the Global Low Carbon Metallurgy Innovation Alliance. China Baowu has provided 38.75 million RMB yuan of financial support for 150 innovative project applications submitted by scientific and technical personnel from 42 research institutes.
01 About BAOWU

02 Progress of Our Action
China Baowu's Action towards Carbon Neutrality

Green runs through the whole process of manufacturing, service, operation and management
Green manufacturing explores innovative technology of low-carbon metallurgy

China Baowu’s Metallurgical Technology Roadmap for Carbon Neutrality
Green manufacturing explores innovative technology of low-carbon metallurgy

1. 极致能效
   Extreme energy efficiency

2. 富氢碳循环氧气高炉
   HyCROF™

3. 氢基竖炉
   Hydrogen shaft furnace

4. 近终形制造
   Near net-shap

5. 冶金资源循环利用
   Recycling metallurgical resources

6. 碳回收及利用
   CCUS
The improvement of energy efficiency in the whole process is the priority of carbon reduction in the iron and steel industry. It aims at the innovation and application of recycling of surplus heat and energy and improving interface energy efficiency, and realizes all receivable.
In July 2022, the world's first industrial-grade test project of all-oxygen hydrogen-enriched carbon cycling experimental blast furnace was officially ignited and put into operation at Bayi Steel Co., Ltd.
Hydrogen-based Shaft Furnace in Zhanjiang Steel Co., Ltd
--an EAF route Zero Carbon Plant

Possess the ability to develop and produce high-quality green products with ultra-low CO2 emissions by 2025

25 September 2020
Decision phase

15 February 2022
Ground breaking ceremony

December 2023
Planned completion time
Green products support the development of the green ecosystem

Advanced high strength steel promotes lightweight and low carbon move

Baosteel’s ultra-high grade non-oriented silicon steel serves Hydropower Station

Super-Weathering steel is the main solution for photovoltaic scaffolds
Steel materials promote energy conservation and emission reduction in construction industry.
China Baowu actively participates in the environmental product declaration and certification work of EPD platform of China Iron and Steel Association, orderly disclosure of product environmental information, quantified environmental performance to force production technology innovation, promote the supply of green products.
Plan for the layout of green energy sources such as hydrogen, wind and solar energy.

Focusing on the "green and low-carbon industrial chain", comprehensively improve the financial operation ability of the Fund.
Build an integrated green power development path of "source network, charge and storage"

Photovoltaic integrated energy project of Baowu Aluminum

Rooftop photovoltaic project of Baosteel Zhanjiang Iron and Steel
Strengthen the combination of capital operation and industrial finance, actively broaden green financing channels with market-oriented approaches, and initially build a green financial support system;

Established Baowu Green Carbon Equity Investment Fund, and successively released green trusts, green funds and green bonds;
New Green Steel Ecology Helps Achieve a Better Life for Mankind
Invitation to 2022 Global Low-carbon Metallurgy Innovation Forum

PLEASE STAY TUNED FOR THE ANNUAL CONFERENCE 2022 IN PREPARATION

筹备召开2022年度大会
敬请期待……

会议名称:
2022年全球低碳冶金创新论坛
暨第八届宝钢学术年会

会议时间:
2022年11月16-18日

会议主题:
重要性钢铁在人类可持续发展进程中的
关键地位

Title:
Global Low-Carbon Metallurgical Innovation Forum 2022
and the 8th Baosteel Biennial Academic Conference

Time:
November 16-18, 2022

Theme:
Repositioning the key position of steel in mankind's
sustainable development process
Explorer of the transformation and upgrading of the steel industry

Pioneer of low-carbon technological innovation

Implementer of cooperation and sharing across the industrial chain

Contributor for low-carbon steel, beautiful China and a harmonious world

绿色钢铁 美好生活
Greener Steel Better Life

2023年力争实现碳达峰 / 2050年力争实现碳中和
Strive to peak carbon dioxide emissions in 2023
Strive to achieve carbon neutrality in 2050