

*Strive for
Excellence*

2024

China Baowu Steel Group Corporation Limited

Corporate Social Responsibility Report



**Strive for
Excellence**

The Book of Rites·The Great Learning: "What the Great Learning teaches, is to illustrate illustrious virtue; to renovate the people; and to rest in the highest excellence." With scientific and technological innovation as its core driving force, China Baowu prioritizes fulfilling social responsibilities and contributing to the well-being of humanity. Pursuing quality through innovation and advancing with integrity, China Baowu is forging the "iron and steel backbone" of a world-class enterprise through greater self-reliance and strength in science and technology.

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About the Report

Reporting System

This is the ninth Corporate Social Responsibility (CSR) Report released to the public by China Baowu Steel Group Corporation Limited (hereinafter referred to as "China Baowu," "Baowu," "the Group," "the Company," or "we") since 2016. It also serves as the core report the "1" in China Baowu's "1+N+M" CSR report release system.

China Baowu's "1+N+M" CSR Report Release System



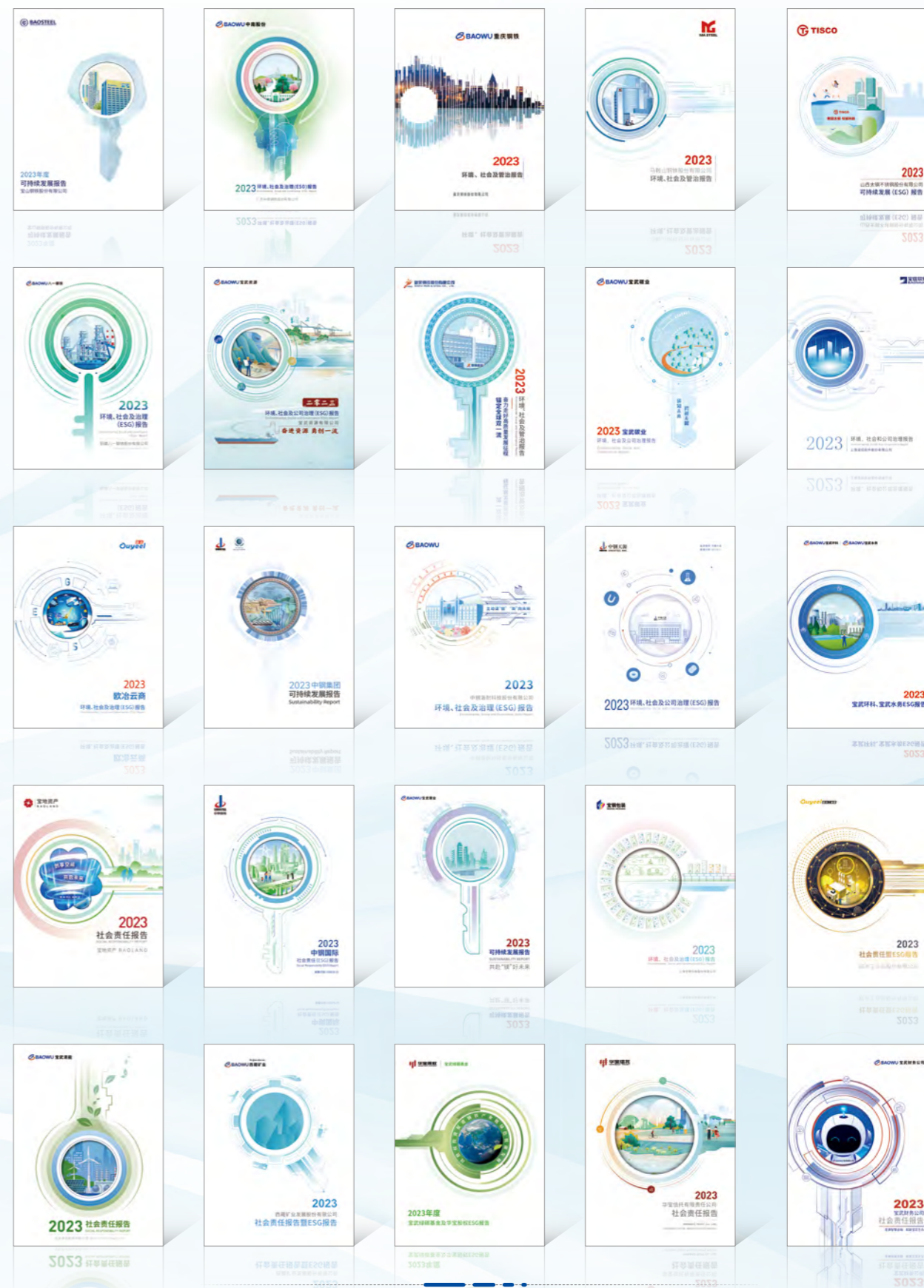
"1" – 2023 CSR Report



"N" – 2023 Green and Low-Carbon Development Report, Overseas Development Report (2024)



"M" – 2023 Green and Low-Carbon Development Report of a Subsidiary



"M" – 2023 CSR/ESG/Sustainability Reports of Subsidiaries

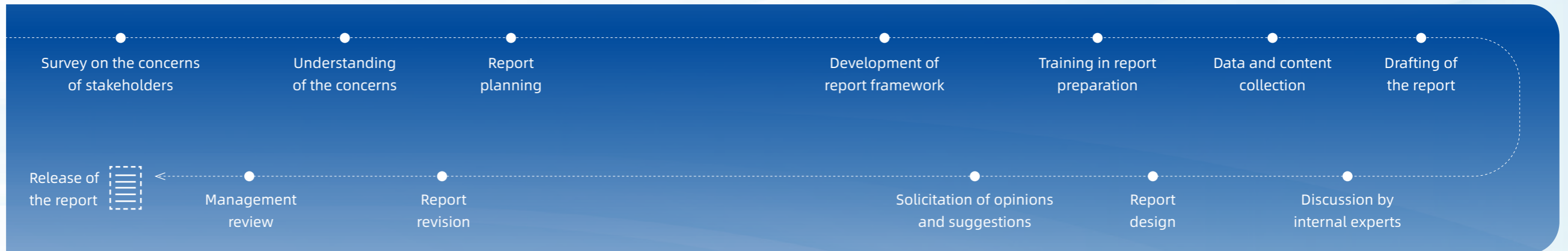
➤ Quality Assurance

The information and data disclosed in this report are sourced from the Company's internal statistical reports and official documents, and have been reviewed by relevant departments. The Company declares that there are no false records or misleading statements in this report, and assumes full responsibility for the authenticity, accuracy, and completeness of its contents.

➤ Reporting Principles

The preparation of this report follows *Guidelines on Better Fulfillment of Corporate Social Responsibility* by State-owned Enterprises (GZFYJ [2016] No. 105), United Nations Sustainable Development Goals (SDGs), *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises* (CASS-CSR 4.0) issued by the Chinese Academy of Social Sciences, *China Baowu Social Responsibility Work Management System* (2024), and *China Baowu Social Responsibility Indicator System* (2024). The report takes into full account the expectations and concerns of stakeholders, and draws upon China Baowu's unique understanding and practices in fulfilling its social responsibilities.

➤ Reporting Process



➤ Reporting Scope

Unless otherwise stated, this report primarily covers the period from January 1, 2024 to December 31, 2024 (with some content extending beyond this time frame). It outlines China Baowu's efforts and performance in fulfilling its social responsibilities in the areas of integrity in operations, innovation-driven growth, green development, employee well-being, community contributions, ecosystem co-building, and international operations. The report covers Baowu's main business sectors, including steel manufacturing, green resources, advanced materials, intelligent services, industrial real estate, and industrial finance.

➤ Text language

The report is published in both Chinese and English. In the event of discrepancies, the Chinese version shall prevail.

➤ Release Form

The report is available in both printed and electronic formats. The digital version can be downloaded from China Baowu's official website (www.baowugroup.com). To minimize environmental impact from printing, we encourage readers to access the digital version whenever possible.

Message from Chairman



China Baowu Steel Group Corporation Limited
Secretary of CPC, Chairman Hu Wangming

胡望明

In 2024, China's economy remained generally stable while making steady progress, with solid steps taken toward high-quality development. Amid the steel industry's long-term trend toward output reduction and structural adjustment, China Baowu confronted challenges head-on, fully embraced its responsibilities, and continued to be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. We stayed focused on the strategic direction of advancing "high-end, intelligent, green, and high-efficiency" development, and further strengthened the foundation for high-quality growth. By embedding high-standard fulfillment of corporate social responsibilities into the entire process of our business operations, we are building a model of sustainable development on the path to becoming a world-class enterprise. China Baowu is now the only central SOE that holds all four prestigious titles: a bellwether in the modern industry chain of new-type, low-carbon metallurgy, a source of original technologies, a state-owned capital investment company, and one of the ten central SOEs to successfully reach world-class enterprise status.

Guided by the management principle—emphasizing "order-driven production, margin-limited output, profit-driven revenue, and cash flow-generating profit"—we took a methodical and well-reasoned approach to assessing the external environment and focused on improving our value creation capabilities. In parallel, we deepened the integration of account-based management and synergistic consolidation, continuously improving efficiency and benefits, with our key production and operational indicators remaining at the forefront of the industry. Moreover, we actively implemented the Global Development Initiative and the philosophy of building a community with a shared future for mankind. Through alignment with the development strategies of countries along the Belt and Road, we achieved major breakthroughs in our global iron ore resource layout and steel manufacturing footprint.

As a bellwether in the modern industry chain of new-type, low-carbon metallurgy, we explored multiple pathways in cutting-edge low-carbon metallurgical technologies. Our hydrogen-enriched carbonic oxide recycling oxygenate furnace (HyCROF) commercial demonstration project received the 15th "Steelie Awards" from the World Steel Association for excellence in low-carbon steel production. We launched our green low-carbon steel brand, BeyondECO, debuting six low-carbon steel products to strongly support the green transition of sectors such as transportation, energy, construction, and power. As an industry trendsetter, we supported the China Iron and Steel Association in publishing the group standard *Evaluation Method for Low-Carbon Steel*. We established a product full-lifecycle carbon accounting system and built and currently operate China's first environmental product declaration (EPD) platform in the industrial sector—now the most influential environmental performance disclosure system in China, leading the country in the number of EPDs issued. The platform is driving progress toward international mutual recognition of EPDs. Additionally, we explored the green furnace materials industry layout, continued to expand our presence in renewable energy and resources with a focus on green electricity, and advanced R&D in hydrogen-based, large-scale energy supply technologies and the industrial application of energy storage solutions for metallurgical scenarios.

Following the guiding principles of the national sci-tech conference, we fully embraced the enterprise's role as the main driver of scientific and technological innovation. To this end, we proposed a new innovation culture concept—"Learn and Innovate, Strive for Excellence"—and accelerated the creation of a new sci-tech innovation framework driven by independent leadership and open collaboration. As part of our innovation-driven development strategy, we intensified efforts to address core technologies in key areas. A range of remarkable innovation accomplishments have emerged, such as domestically produced high-temperature alloys for commercial jet engines. Baosteel and Baowu Special Metallurgy were named responsible units for products under the National Science and Technology Major Project. We advanced the upgrading of traditional industries and launched key innovation initiatives in "AI + metallurgy." In collaboration with Huawei to promote digital-real economy integration, we successfully rolled out a large-scale AI solution for the steel industry developed independently. Turin Robotics and another subsidiary were selected for the list of "Set Sail" program led by the State-owned Assets Supervision and Administration Commission (SASAC).

We remained firmly committed to fulfilling our responsibilities to high standards in order to drive high-quality development. We were recognized as the first "ESG-Benchmark Demonstration Base." We empower employees to grow and thrive by creating opportunities for personal development and strengthening care and support initiatives. Building on our industrial strengths and tailoring efforts to local conditions, we fully leveraged regional resources and cost advantages to promote industrial support—shifting from one-time aid to long-term self-sufficiency. These efforts have effectively consolidated and expanded the achievements of poverty alleviation, providing strong momentum for rural revitalization.

Our original aspiration—to serve the country with steel and to strengthen the country with steel—remains unchanged. Reform and innovation, as well as staying abreast of the times, are consistent hallmarks of Baowu's spirit. As we step into a new stage of high-quality development, we will always bear in mind President Xi Jinping's earnest expectations, stay committed to "the grand vision of building a stronger, better, and larger world-class enterprise", and adhere to the principles of "marketization, rule of law, and internationalization". By pursuing the path of "strengthening through innovation, excelling through value creation, and expanding through entrepreneurship," we will continuously enhance our core functions and competitiveness, forge ahead with resolve and tenacity, and contribute Baowu's strength to building a great modern socialist country in all respects and achieving national rejuvenation through the Chinese path to modernization.



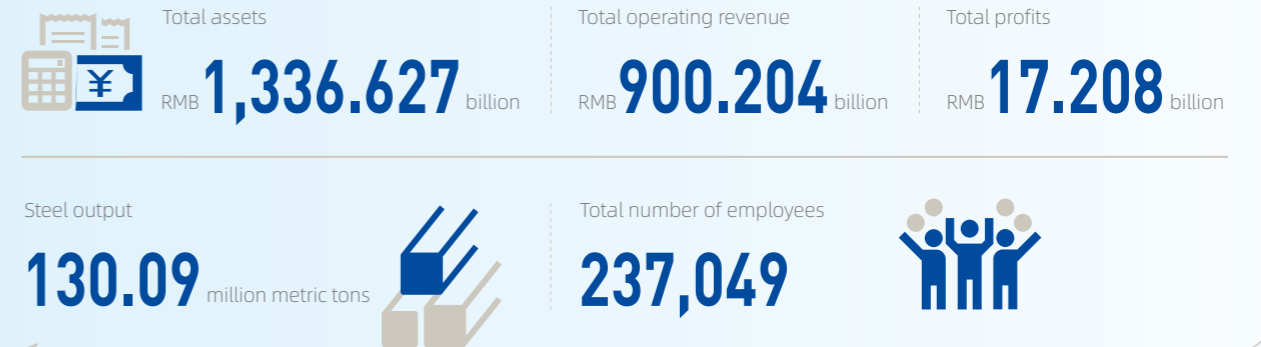
About Baowu

➤ Company Profile

China Baowu Steel Group Corporation Limited is a state-owned enterprise, headquartered in Shanghai. In June 2022, it officially transitioned into a state-owned capital investment company. In November 2024, it was recognized as one of the ten central SOEs to successfully reach world-class enterprise status. Ranked 44th on the 2024 *Fortune* Global 500 for the third consecutive year, China Baowu continues to lead the global steel industry.



Key Figures for China Baowu in 2024



China Baowu's ranking on the *Fortune* Global 500 over the past eight years

2017	2018	2019	2020	2021	2022	2023	2024
Ranking 162 th	Ranking 162 th	Ranking 149 th	Ranking 111 th	Ranking 72 th	Ranking 44 th	Ranking 44 th	Ranking 44 th

2017-2019 Ranking **second** in Steel industry 2020-2023 Ranking **first** in Steel industry



China Baowu's ranking on the lists published by a global brand rating agency over the past three years

Year	World Brand Laboratory		
	World's 500 Most Influential Brands	Asia's 500 Most Influential Brands	China's 500 Most Valuable Brands
2022	343	105	40
2023	334	94	37
2024	334*	93	33

*On the list of "2024 World's 500 Most Influential Brands" published by World Brand Laboratory, an international brand rating agency, China Baowu ranked No. 334 overall and No. 2 among steel industry brands globally.

Corporate Orientation

A comprehensive solution provider for steel and light metal materials

Corporate Cultural Philosophy Framework

Mission

To jointly build a steel ecosystem and create a new green future



Vision

To become a world-class enterprise in the steel and light metal materials industry

Values

Integrity, Innovation, Green and Collaboration

Corporate Spirits

Dedication, Integration, Perfection and Greatness

Development Strategy

One Overarching Goal

To build a stronger, better, and larger world-class enterprise

Five Pillars of Support

- Uphold the leadership of the CPC and strengthen modern governance
- Advance innovation-driven development to strengthen talent foundation
- Continue reform and opening-up to strengthen market competitiveness
- Promote ecological synergy to strengthen value creation
- Comply with laws and regulations to strengthen risk management



Two Core Drivers

Reform and innovation

Four Development Directions

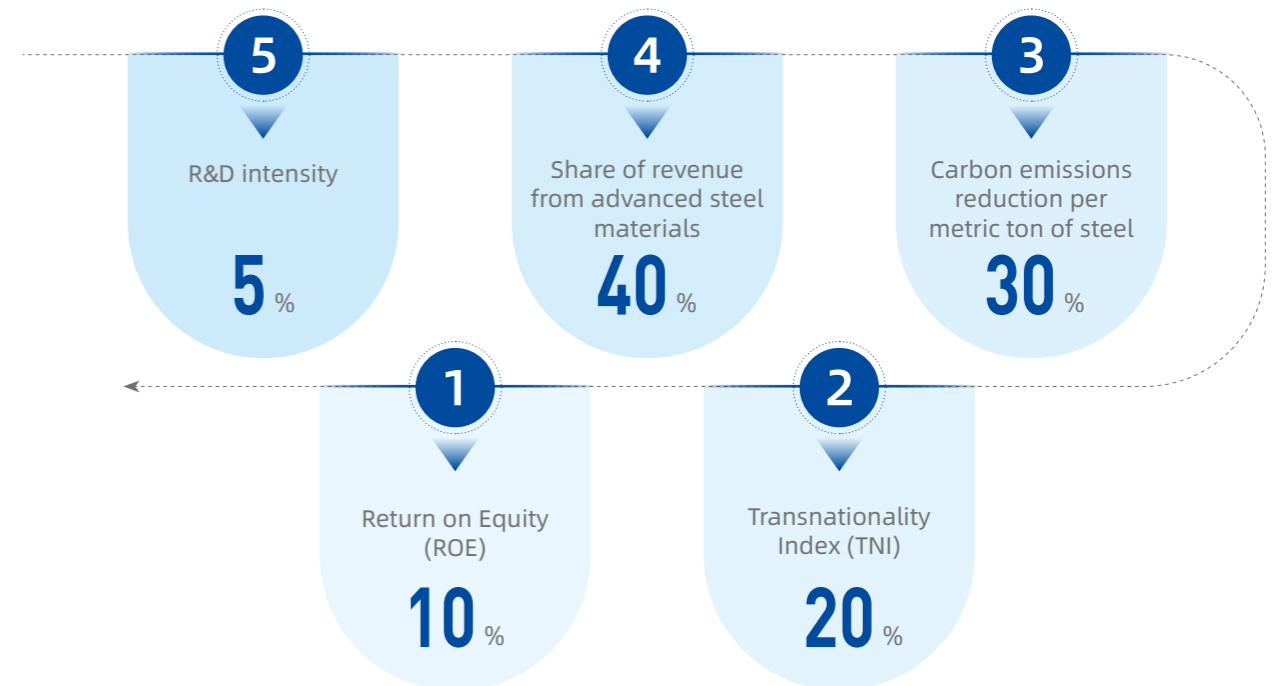
High-end, intelligent, green, and high-efficiency development

Three Strategic Priorities

Build a resilient steel backbone, drive coordinated innovation, and expand overseas presence

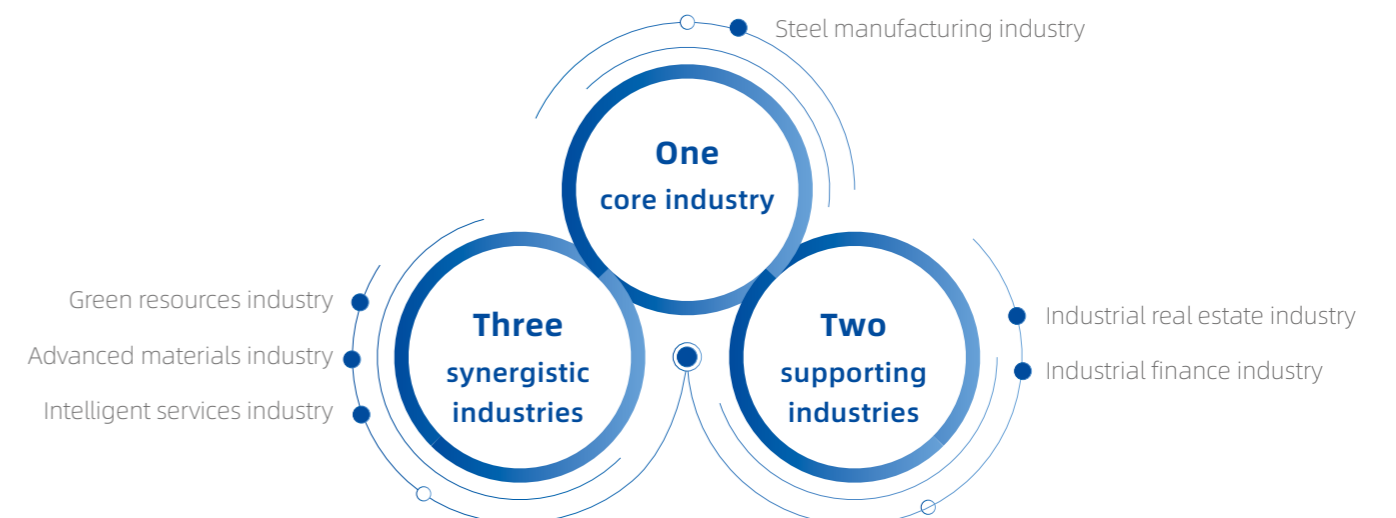
Strategic Objectives

"54321" Quantitative Strategic Objectives for 2035

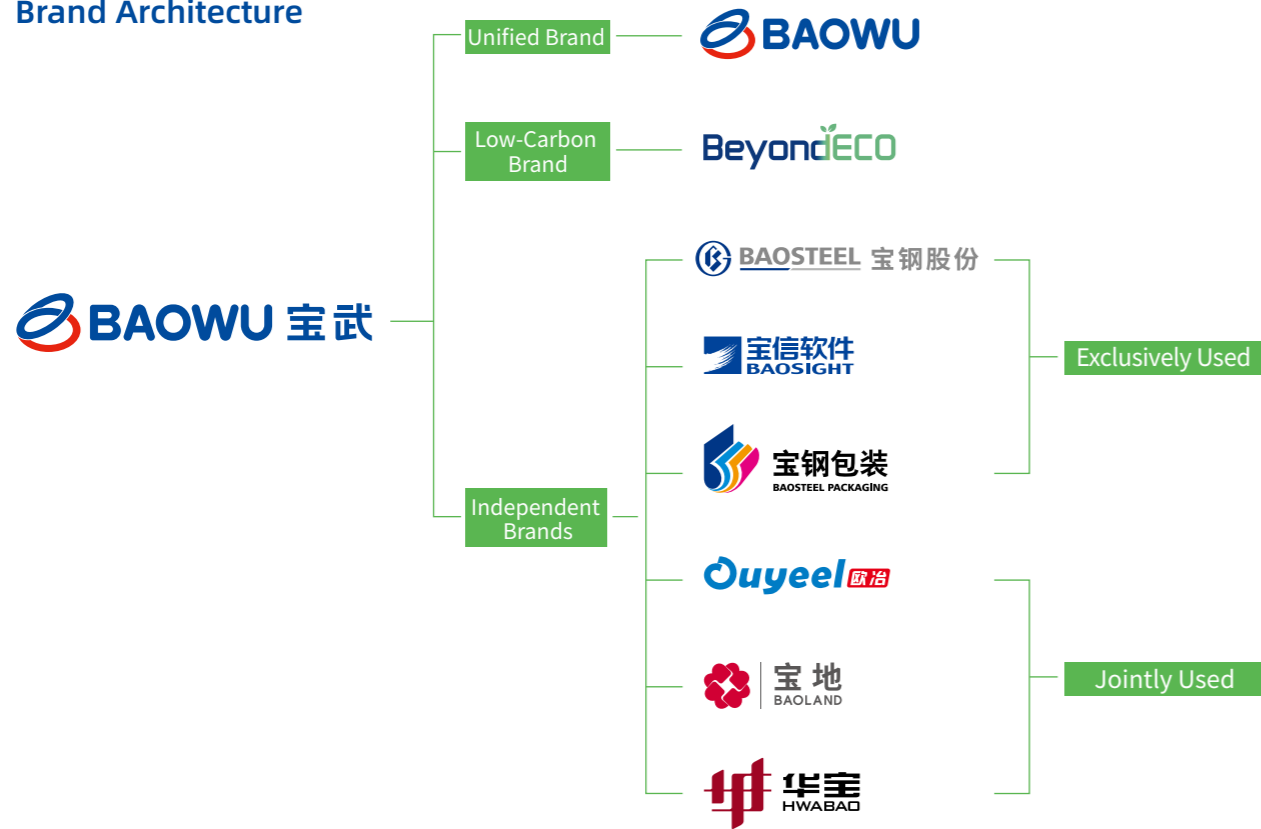


Industrial Portfolio

"1+3+2" Industrial System



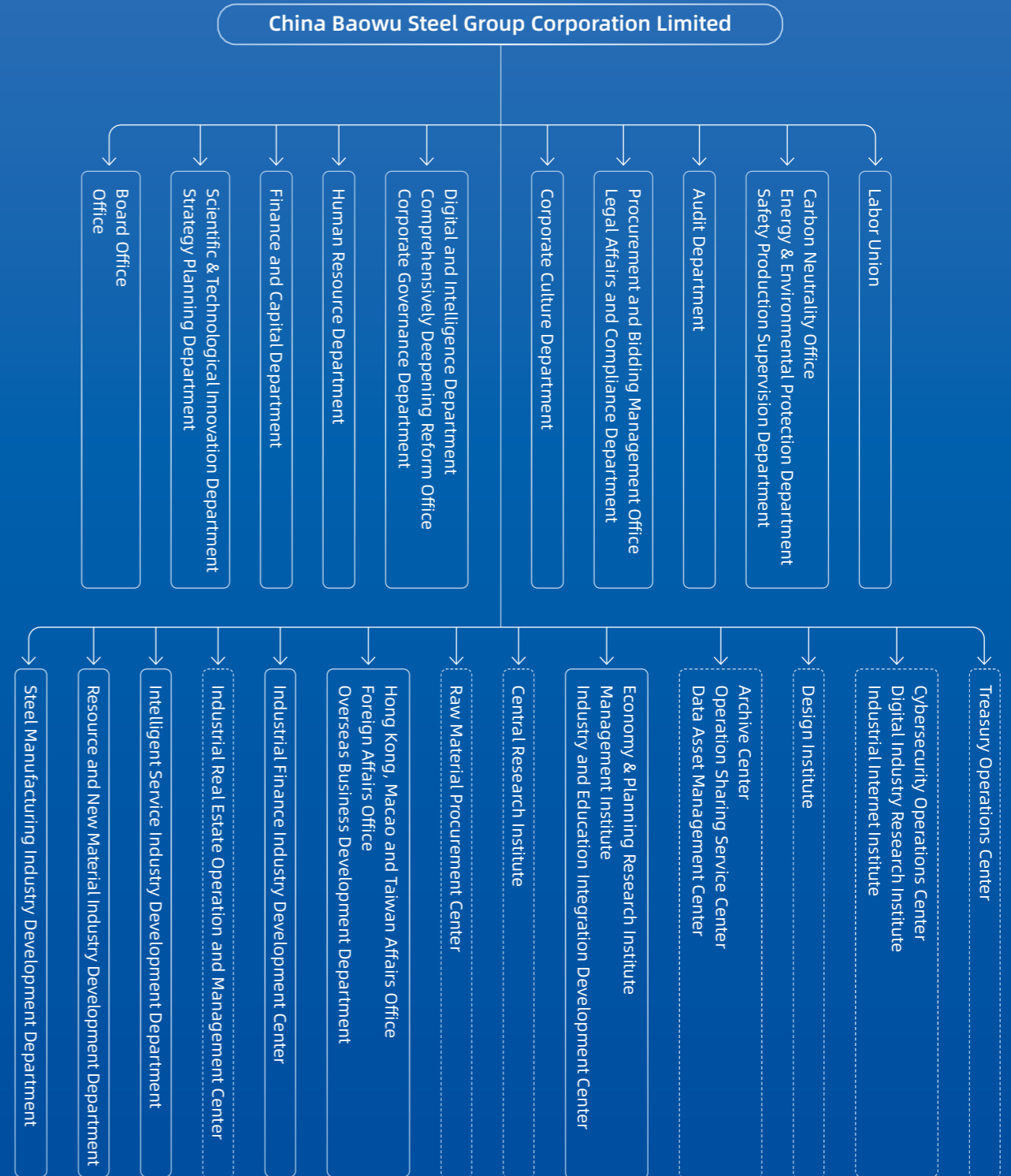
Brand Architecture



Corporate Brands (Subsidiaries)

Steel manufacturing	Green resources	Advanced materials	Intelligent services	Industrial real estate	Industrial finance
BAOSTEEL 宝钢股份	BAOWU 宝武资源	BAOWU 宝武碳业	宝信软件 BAOSIGHT	BAOWU 武钢集团	华宝投资 HWABAO INVESTMENT
BAOWU 中南钢铁	BAOWU 中钢集团	BAOWU 宝钢金属	Ouyeel 欧冶	宝地资产 BAOLAND	华宝信托 HWABAO TRUST
BAOWU 马钢集团	BAOWU 宝武环科	BAOWU 宝武镁业	BAOWU 中钢国际		华宝基金 Huabao WP Fund
BAOWU 太钢集团	BAOWU 宝武水务	宝钢包装 BAOSTEEL PACKAGING	BAOWU 宝武智维		华宝证券 HWABAO SECURITIES
BAOWU 八一钢铁	BAOWU 宝武清能	BAOWU 宝武特冶	BAOWU 宝武重工		BAOWU 宝武财务公司
BAOWU 新钢集团	BAOWU 西藏矿业		Ouyeel 欧冶工业园		华宝股份 HWABAO HOLDING
			BAOWU 宝武共享		

Organizational Structure



Source: Official website of China Baowu Steel Group Corporation Limited (<http://www.baowugroup.com>), as of June 2025

➤ Board of Directors



Hu Wangming

Secretary of CPC, Chairman



Hou Angui

Director, President, and Deputy Secretary of CPC



Wang Xuxiang

Director, Deputy Secretary of CPC



Deng Jianling

Outside Director



Luo Jianchuan

Outside Director



Cheng Daoran

Outside Director



Hu Zhanghong

Outside Director



Yang Ya

Outside Director



Zhang Helei

Chairman of the Labor Union,
Employee Director

➤ Management Team



Hu Wangming

Secretary of CPC, Chairman



Hou Angui

Director, President, and Deputy Secretary of CPC



Wang Xuxiang

Director, Deputy Secretary of CPC



Zou Jixin

Standing Committee Member of CPC



Meng Qingyang

Standing Committee Member of CPC,
Secretary of Committee for Discipline Inspection, and Inspector of the State Supervisory Commission in China Baowu



Gao Jianbing

Vice President, Standing Committee Member of CPC



Wang Jiming

Vice President, Standing Committee Member of CPC



Fei Peng

Vice President, Standing Committee Member of CPC



Li Lina

Chief Accountant and Standing Committee Member of CPC

Key Performance Indicators

Business Performance

Indicator	Unit	2022	2023	2024
Total assets	RMB 100 million	12,398.41	13,625.22	13,366.27
Total operating revenue	RMB 100 million	10,877.07	11,129.72	9,002.04
Total operating cost	RMB 100 million	10,725.62	11,035.67	9,024.60
Total profits	RMB 100 million	301.56	316.20	172.08
Total tax	RMB 100 million	415.45	393.00	309.51
Owners' equity	RMB 100 million	5,849.70	5,782.39	5,701.25
Debt-to-asset ratio	%	52.82	57.56	57.35
Steel output	10,000 metric tons	13,184	13,077	13,009

Environmental Performance

Indicator	Unit	2022	2023	2024
Investment in environmental protection ¹	RMB 100 million	151.36	155.97	45.77
Comprehensive energy consumption per RMB 10,000 of output value/revenue (comparable price) ²	TCE/RMB 10,000	0.99	0.92	0.94
Fresh water consumption per metric ton of steel	m ³ /metric ton of steel	2.35	2.30	2.28
Water reuse rate	%	98.27	98.23	98.59
Wastewater discharge volume ^{3,4}	10,000 metric tons	8,895	8,235	10,293
Chemical oxygen demand emissions ⁴	metric tons	1,696	1,440	1,420
Sulfur dioxide emissions ⁴	metric tons	24,020	20,948	19,338
Nitrogen oxides emissions ⁴	metric tons	56,647	51,056	47,488
Comprehensive utilization rate of solid waste	%	99.75	99.90	99.60
Hazardous waste disposal compliance rate	%	100	100	100
Reduction rate of CO ₂ emissions per metric ton of steel	%	0.15	1.35	0.82
Electricity consumption for office use at Baowu Building	kwh	427,032.41	415,681.82	397,826.00

Social Performance

Indicator	Unit	2022	2023	2024
Total number of employees ⁵	Person	262,283	257,912	237,049
Proportion of female executives	%	10.60	10.60	11.10
Total jobs created	Person	4,789	6,256	4,636
Labor contract signing rate	%	100	100	100
Employee turnover rate	%	0.65	1.70	1.20
Collective agreement coverage rate	%	100	100	100
Proportion of local employees in overseas subsidiaries	%	97.90	98.30	95.05
Number of beneficiaries of employee support and care programs	Person-times	119,565	163,870	106,352
Investment in employee support and care programs	RMB 10,000	6,779.37	8,244.83	6,634.26
Employee satisfaction	%	94.22	95.12	96.00

Social Performance

Indicator	Unit	2022	2023	2024
Social insurance coverage rate	%	100	100	100
Investment in vocational training	RMB 10,000	19,500	32,700	26,800
Total vocational training hours	Hours	28,188,234.12	29,472,988.25	28,039,041.42
Average vocational training hours per employee	Hours	128.36	133.06	134.65
Number of employees participating in vocational training	Person	219,610	221,494	208,235
Investment in workplace safety	RMB 10,000	263,298	343,764	288,768
Number of participants in safety training	Person-times	467,771	779,510	522,149
Safety training coverage rate	%	100	100	100
Number of workplace accidents ⁶	Cases	74	73	61
Number of work-related injuries ⁷	Person	44	40	44
Injury rate per 1,000 employees	%	0.19	0.15	0.18
Lost Time Injury Frequency Rate (LTIFR)	Number of work-related injuries per million work hours	0.09	0.08	0.09
R&D investment	RMB 100 million	379	409	447
R&D investment ratio	%	3.24	3.67	4.95
Proportion of R&D personnel	%	10.23	13.83	10.7
Number of patent applications filed	PCS	5,717	6,419	5,921
Number of patents granted	PCS	4,062	3,154	2,833
Contract fulfillment rate	%	100	100	100
Total number of suppliers ⁸	Suppliers	7,568	8,131	9,054
Number of audited suppliers ⁹	Suppliers	7,568	8,131	9,054
Suppliers disqualified due to non-compliance ¹⁰	Suppliers	7	13	14
Potential suppliers rejected due to non-compliance	Suppliers	0	0	0
ESG training sessions for suppliers ¹¹	Times	2	1	1
Number of supplier participants in ESG training ¹²	Person	2,975	1,240	359
ESG training hours for suppliers ¹³	Hours	2	4	5
Total public welfare donations	RMB 10,000	25,133	21,754	19,487
Number of volunteers	Person	12,054	12,947	15,183
Number of volunteer projects	NOS	2,368	2,403	561
Number of participants in volunteer service activities	Person-times	26,785	28,769	27,671
CSR training hours ¹⁴	Hours	1,111.5	1,728	1,888
Number of participants in CSR training ¹⁵	Person-times	276	216	311
Online CSR training hours	Hours	37,896	52,829.5	28,532
Number of participants in online CSR training	Person-times	12,048	51,496	20,241

¹ All steel mills under China Baowu have been engaged in ultra-low emission upgrades. As most of the upgrading efforts were completed in 2024, the Group's investment in environmental protection for the year decreased significantly.

² Total revenue declined due to the divestment of certain subsidiaries during internal consolidation and restructuring. After adjusting for these changes, revenue for 2024 decreased by over 5% year-on-year.

³ Starting in 2024, China Baowu's environmental performance reporting includes water volumes directly supplied by TISCO to external users for resource utilization.

⁴ Starting in 2023, China Baowu's environmental performance reporting includes that of Sinosteel. The 2022 data has been retrospectively adjusted to reflect this change.

⁵ Data for 2022 and 2023 have been revised.

⁶ Includes accidents involving suppliers.

⁷ Number of injuries involving full-time employees.

⁸ Data for 2022 and 2023 have been revised.

⁹ Data for 2022 and 2023 have been revised.

¹⁰ Data for 2022 and 2023 have been revised.

¹¹ Number of ESG training sessions conducted by China Baowu for suppliers.

¹² Number of participants in ESG-specific training sessions for suppliers organized by China Baowu.

¹³ Total duration of ESG-specific training sessions for suppliers organized by China Baowu.

¹⁴ The 2024 data reflects training sessions organized by the Group headquarters.

¹⁵ The 2024 data reflects training sessions organized by the Group headquarters.

CSR Highlights

Accelerating the Deep Integration of AI and the Steel Industry

Artificial intelligence (AI) is a strategic technology driving the new wave of technological revolution and industrial transformation. Guided by President Xi Jinping's important directives on AI development, China Baowu has innovatively responded to the evolving trends and demands of technological change and industrial reform, elevating intelligence to a strategic priority. The Group has launched its "2526" Project to accelerate deep integration between AI and both industrial technologies and corporate management. Leveraging national initiatives to foster strategic emerging industries as a key opportunity, the Group has expedited AI and big data technology empowerment across the steel sector. Through focused model-tackling efforts and iterative technological upgrades, Baowu has achieved innovative breakthroughs in the R&D of large-scale AI models for the steel industry and the reconstruction of traditional continuous casting models—resulting in replicable and scalable solutions for the industry. Through these initiatives, the Group continues to advance the deep integration of "AI + Steel," jointly shaping a new chapter in Baowu's intelligent transformation and upgrading.

Milestones in Baowu's "AI + Steel" Journey

2024

April

Baosteel held a strategy launch event themed "AI Empowers the Future of Steel," officially unveiling its AI transformation strategy. Phase I of Baosteel's AI Computing Center was officially commissioned. It now stands as the largest and most technologically sophisticated AI computing center in China's steel industry. Five large-scale AI model demonstration projects, jointly planned and developed by Baosteel and Huawei, were officially launched. A comprehensive cooperation agreement between the two parties was subsequently signed.



May



Baosteel and Huawei jointly inaugurated the "Steel + AI" Joint Innovation Center, envisioned as both an "incubator" for innovative R&D of large-scale AI models in the steel industry and an "accelerator" for upgrades in AI-powered application scenarios.

August

The AI-powered intelligent blast furnace inspection robot was deployed at Xinsteel, effectively easing the workload of front-line furnace operators, reducing inspection safety risks, and enhancing inspection efficiency and accuracy.



October

China Baowu officially launched its independently developed large-scale AI model for the steel industry—xin³Plat Steel Industry Large Model—at the Global Low-Carbon Metallurgy Innovation Forum 2024 & the 9th Baosteel Biennial Academic Conference, delivering an integrated "AI + Steel" solution to the steel industry.



December



The Baowu-Huawei Cooperation Promotion Meeting was held at Baosteel, where both parties reviewed the phased achievements of "Steel + AI" and outlined the strategic roadmap for "AI + Steel" upgrades.

Jointly developed by Baosteel, Baosteel Engineering, and Huawei, multiple AI models for key continuous casting scenarios—based on Huawei's Pangu Large Models (PanguLM) and open-source models—were finalized and put into operation on Baosteel's No. 2 continuous caster.

2025

February

China Baowu held the "2526" Project Kick-Off & DeepSeek Empowerment and Transformation Advancement Conference, where pilot applications such as the Baowu Steel Large Model and the generative assistant integrated with DeepSeek were unveiled—marking a pivotal moment in the Group's "AI + Steel" transformation campaign in the new era.



April

Baosteel hosted the "Redefining Steel with AI" Theme Day event. In 2024 alone, Baosteel launched and put into operation 125 AI application scenarios, increased its data assetization rate to 69.9%, and certified 403 BCDA digital intelligence engineers—successfully achieving the first-year objectives of its AI transformation strategy.



Creating a Model of Sustainable Development at Simandou

While steadily strengthening its control over domestic iron ore resources, China Baowu has also expanded its global footprint by actively securing a leading role in the development of the Simandou Project. In the project's development and construction, China Baowu focuses on the intelligent upgrade of high-end equipment and fosters the development of new quality productive forces suited to local conditions. The Group implements lean management across the entire value chain to ensure compliance management and effective risk control. It has established a dynamic safety and environmental hazard investigation mechanism to strengthen ecological protection. Adhering to the principles of building green mines, Baowu has defined clear environmental control measures during construction. With a strong commitment to fulfilling its corporate social responsibility in Guinea, the Group focuses on community co-development initiatives and local livelihood programs—closely aligning resource development with sustainable practices to build a model for responsible overseas operations.



On June 19, 2024, China Baowu completed the equity transaction of the Simandou Iron Mine Project, officially becoming a major shareholder. This milestone marked the beginning of the project's accelerated development phase.



On April 11, 2024, Hu Wangming, head of the Simandou Project Advancement Leadership Group, led a delegation to conduct an on-site inspection of the project. He emphasized aligning with the high-end, intelligent, green, and high-efficiency development directions, strengthening collaborative innovation with partners, promoting new quality productive forces based on local conditions, and injecting momentum into the project through scientific and technological innovation.

Compliance Management: Reinforcing the Risk Defense Line

China Baowu has continued to enhance the ESG governance system for its overseas mining projects by establishing a "1+N" ESG management framework. By the end of 2024, the *General Guidelines for ESG Management Practices* (the "1") were completed in draft form, and the development of several "N" documents—such as the *Simandou Northern Block Project Management Guidelines*—was underway. In parallel, the Group has consistently strengthened ESG risk identification, assessment, and mitigation measures to ensure the project's risk control and compliance management throughout its life cycle.

In line with compliance management requirements, Baowu Resources West Africa SARLU (hereinafter referred to as "Baowu Resources West Africa") has staffed dedicated legal and compliance commissioners and technical professionals. Three internal regulations, including the *Compliance Management System*, were issued to establish a preliminary legal and compliance management framework for the Simandou Project and strengthen the project's compliance management. A delegated training program was carried out to support legal personnel from Baowu Resources West Africa, covering project briefings and pre-deployment training for the Simandou Project.

Located in Kérouané Prefecture in southeastern Guinea, Simandou is the world's largest and highest-quality undeveloped iron ore deposit. Its development involves the construction of critical infrastructure—including a railway over 600 kilometers long spanning the eastern and western parts of Guinea and a port on the western coast. The Simandou Iron Mine is expected to have an annual production capacity of 120 million metric tons of high-quality iron ore in its initial phase. The development of the Simandou Project will further advance Guinea's industrialization and economic growth, while providing a green, low-carbon metallurgical furnace material option to support the high-quality development of the steel industry in China and around the world.



China Baowu conducted pre-deployment training and held symposiums on integrity and anti-corruption, foreign-related confidentiality, legal affairs and compliance, safety and environmental protection, and information security for personnel involved in the Simandou Project.



Taking Rio Tinto as a benchmarking reference, China Baowu established a regular communication mechanism and conducted extensive activities under the "Baowu-Rio Tinto ESG Exchange & Dialogue Initiative." The advancement of the cooperation mechanism between the Simandou Project and Rio Tinto aims to jointly identify and address ESG-related risks, and improve ESG governance.

Hazard Inspection and Risk Control: Strengthening the Pillars of Safety

While ensuring steady progress in construction, China Baowu always places employee safety and health as a top priority. The Group upholds high standards and stringent requirements for education and training to foster safety and environmental awareness among all employees. It also continues to invest resources in improving employees' working and living conditions, and in enhancing the safety management system. Baowu Resources West Africa developed several contingency plans, including the *Emergency Plan for Security Incidents* and the *Emergency Plan for Public Health Incidents and Medical Evacuation*, covering the emergency medical transport route from the mine site to Conakry, the capital city of Guinea. In partnership with Aluminum Corporation of China (Chinalco) and other entities, the company established the Sino-Guinean Friendship Hospital and an on-site medical center to provide medical consultations and checkups—effectively reducing the time required for employee treatment. Fire drills were further conducted in collaboration with external agencies to improve emergency preparedness and employee response capacity.



Baowu Resources West Africa invited the 30th cohort of China's medical aid team to Guinea to provide free medical treatment at the Simandou construction site, providing comprehensive and professional consultation, diagnosis, and treatment services to on-site employees.



In 2024, Baowu Resources reached agreements with the Sino-Guinean Friendship Hospital and the Beijing Municipal Health Commission, committing USD 2 million to the improvement of local medical facilities and public health services. Phased results are expected by the first half of 2025, benefiting both local communities and Baowu employees working in Guinea.

Green Development: Strengthening the Ecological Foundation

China Baowu is committed to advancing green mine development and establishing a comprehensive environmental governance system. Through dynamic monitoring of air, water, noise, and other indicators, the Group ensures pollutant emissions remain within compliance thresholds. Focusing on the prevention and control of soil and water erosion, the Group implemented an innovative management model that combines source control with grid-based accountability. Comprehensive treatment measures, including slope protection, flood interception engineering, and ecological reclamation, have been taken to systematically reduce the environmental disturbance caused by mine exploitation. In strict adherence to international environmental protection standards, the Group strikes a balance between resource development and ecological preservation through green infrastructure practices.

Simandou Port Company

The company periodically monitors air quality, surface water turbidity, noise pollution, and vibration-related parameters. The quality measurements for air, soil, water, noise, and vibration all yielded favorable results, indicating no major pollution and full compliance with both local and international environmental standards.

Simandou Railway Company

To avoid, mitigate, and compensate for the potential negative impacts of the project, the company has made efforts across three key areas, including environmental monitoring, waste management, and erosion control. In 2024, the company exceeded its environmental monitoring targets, with all test results in full compliance with international laws and standards.

Case Baowu Resources advances green mine development in the Simandou Project

Adhering to the principle of green development, the development team of Simandou Iron Mine Blocks I and II focused on early-stage planning, problem identification, targeted measures, and rectification tracking to ensure stable and orderly mine construction.

Emphasizing both the source and the lead responsibilities

Erosion management has been incorporated into source control efforts, with a clear designation of lead responsible units. Each construction team is assigned specific responsibilities, supported by a grid-based management system.

Taking actions targeting the starting point, critical focus point, and final objective

The team considers erosion risk identification as the starting point. It organized on-site investigations by technical personnel from relevant departments to detect erosion risks. Treating erosion risk prevention and control as the critical focus point, the team formulated targeted mitigation measures with a particular focus on key areas. With erosion risk response as the final objective, the team ensured timely rectification, adequate stockpiling of materials for rectification, and full implementation of countermeasures before the rainy season.



To minimize ecological impact, the project team constructed flood diversion and drainage systems, as well as rainwater sedimentation ponds in the D and CS mining areas of the Simandou Iron Mine.

Biodiversity and ecological protection

Upholding the principles of respecting nature, sustainable development, and fairness and justice, China Baowu actively participates in ecological restoration and environmental protection initiatives, taking concrete actions to protect biodiversity and habitats. Protective measures such as laying geotextiles and dust-proof nets along roadside and riverbank slopes have been implemented to prevent soil erosion and protect vegetation. Meanwhile, the Group has strengthened the promotion of biodiversity concepts, safeguarded green ecosystems, and taken effective measures to restore the ecological environment. In 2024, the Simandou Iron Mine Project completed reforestation across 42.8 hectares, planting a total of 64,775 trees. Hydroseeding was also conducted on road slopes, waste dumps, and other areas as part of the revegetation efforts, covering approximately 43,000 m², with slope revegetation totaling around 65,000 m².

Case Simandou Mining Company's biodiversity protection efforts across the board

In accordance with a range of plans and policies, such as the Biodiversity Action Plan (BAP) and Biodiversity Management Plan (BMP), Simandou Mining Company complies with international biodiversity standards and laws and regulations in Guinea, integrating biodiversity practices into project operations.

Key initiatives to enhance biodiversity protection include orientation training on environmental protection for new employees, biodiversity surveys prior to construction, community engagement in biodiversity management, and involvement of botanists to guide biodiversity protection and identify endangered species. In 2024, pre-construction biodiversity surveys identified 55 critical habitats, relocated 114 animals, replanted 912 individual plants, and documented 16 local species.

Community Co-Building: Enhancing People's Livelihood and Well-Being

Stimulating local economic development

China Baowu ensures that the benefits of development are shared with local communities. As the project advances, it generates substantial employment opportunities and revitalizes the local economy. By the end of 2024, the Simandou Iron Ore Project had hired over 32,000 Guinean employees, significantly boosting local employment and skill development; Simandou Port Company had recruited 1,253 workers, 404 of whom were from surrounding communities.



By the end of 2024

The Simandou Iron Ore Project had hired
32,000
over
Guinean employees



Chinese language training for local employees



Specialized training for mine haul truck operators



Case Simandou Mining Company deepens local talent development

Simandou Mining Company currently employs over 1,500 Guinean staff across diverse roles including laboratory technicians, drivers, warehouse keepers, drillers, mechanics, electricians, firefighters, doctors, and translators. A total of 64 local employees have been promoted to management positions, 22 of whom now hold mid-to-senior-level managerial roles. Throughout the year, the company delivered 42 types of specialized training and implemented a program to help develop the management capabilities of local employees. Efforts are also underway to establish a vocational education center. Through cultural training, curriculum development, exchange programs, and initiatives such as the "Cultural Mentorship," the company has promoted cross-cultural communication between Chinese and Guinean employees, providing a powerful talent reserve for the Simandou Project.

Simandou Mining Company currently employs

over **1,500** Guinean staff



Community dialogue and well-being

Proactively fulfilling its social responsibility in Guinea, the Simandou Iron Mine Project prioritizes community dialogue and local concerns. The project team has launched a variety of livelihood improvement initiatives, tailored to local conditions, covering public utility infrastructure, social and material assistance, sports activities, and community agriculture, thereby enhancing the well-being of the host communities.

In their commitment to supporting local infrastructure in Guinea, Simandou Port Company and Simandou Railway Company have formulated annual community development plans. Simandou Port Company has undertaken initiatives such as maintaining community roads, repairing wellheads, constructing wells, providing fishing gear, assisting vulnerable groups, and distributing charitable goods during festive seasons. It also supports the enhancement of local agricultural practices. Meanwhile, Simandou Railway Company has provided support through initiatives such as supplying drinking water, repairing bridges, constructing sanitation and educational facilities, and upgrading community roads.



In April 2024, Simandou Port Company organized a football friendly match in the Senguelen community, featuring eight teams composed of community members, Guinean employees, and local government representatives. Trophies and cash prizes were awarded to the winning teams.



Case Simandou Port Company strengthening stakeholder communication

In 2024, Simandou Port Company's community relations team organized 344 stakeholder engagement sessions covering land acquisition, community development, environmental protection, and livelihood restoration. These sessions helped the company understand the local community's demands, and align its management plans and compensation packages with stakeholders' expectations to the fullest extent possible. Additionally, Simandou Port Company's Public Affairs and Community Relations Department conducted community surveys across three counties affected by the project to identify community development projects and provide timely support.

Resettlement and compensation

Focusing on potential resettlement and compensation issues in the process of mining development, China Baowu is committed to developing scientifically sound compensation strategies that protect the rights of affected individuals.

- Simandou Railway Company conducted land acquisition and compensation assessments in several local communities, including Forécariah. In strict adherence to international standards, surveys were carried out by third-party partners under the supervision of the community relations team. As of 2024, 1,299 PAPs* had been registered, with 97% having already received compensation.
- Simandou Port Company engaged consultants and, in collaboration with community relations officers, organized a series of social engagement activities. After verifying compensation data related to crops, land, and fruit trees, a comprehensive database was established to support the development of a compensation plan. The company also worked closely with locally elected officials to ensure the smooth implementation of resettlement and compensation efforts.



Key Facts

* PAPs: Project-Affected Persons.

CSR Highlights

Spearheading a Full-Chain Sustainability Ecosystem

Chain Bellwether: Building a Digital and Intelligent Industrial Ecosystem Featuring Green Practices

To effectively fulfill its role as a "chain bellwether" that provides systematic support and integration across sectors, China Baowu has established a Chain Bellwether Expert Advisory Committee and a systematic development mechanism. Acting as the principal force in jointly building industrial chains and ecosystems, the Group has continuously updated its strategic partnership map to guide industrial development in core technologies, critical resources, and talent pipelines. By innovating its supply chain management system, the Group leverages its strengths in the large-scale and specialized procurement of industrial goods to guide and optimize the industrial chain ecosystem through new materials, equipment, products, and technologies.

Case China Baowu hosted 2024 Digital and Intelligent Supply Chain Conference for Green Development

The 2024 Digital and Intelligent Supply Chain Conference for Green Development, hosted by China Baowu and organized by Ouyeel, was successfully held on October 18. The event marked the launch of the group standard *Evaluation Method for Low-Carbon Steel*. Developed using robust carbon emissions data from approximately 350 million metric tons of crude steel, the group standard offers both depth and scale, setting a new benchmark for the formulation of low-carbon steel standards in China. The event also witnessed the debut of Ouyeel's ICM carbon footprint calculation and management platform. The platform features fully autonomous life cycle assessment (LCA) capabilities and incorporates real-world and background data across major steel product categories and production processes. This represents a significant step forward in the digital and intelligent carbon footprint management in the steel industry, playing a crucial role in enhancing LCA capabilities across the entire industry chain and in building a localized, full-industry-chain carbon emissions database tailored to China's steel industry.



China Baowu takes on the responsibilities of a bellwether in the modern industry chain, driving industrial upgrades and high-quality development for a new green future. The Group also steps up the development of green platforms to empower the industry's coordinated transformation and upgrading toward digital, intelligent, and green development. By fostering new competitive advantages and growth drivers, the Group aims to drive sustainable development across the entire value chain. Further, Baowu is dedicated to building a green "circle of friends" and providing comprehensive carbon reduction solutions, contributing to the achievement of carbon neutrality goals.

Case

China Baowu held the 2024 New Low Carbon Metallurgy Modern Industry Co-Chain Action and China Baowu Industrial Products Supply Chain Ecosystem Partners Conference

On December 6, 2024, China Baowu, with Obei as the organizer, hosted the 2024 New Low Carbon Metallurgy Modern Industry Co-Chain Action and China Baowu Industrial Products Supply Chain Ecosystem Partners Conference themed "Integrated Chains for a Shared Future." The event aimed to promote the incubation of technological innovations and support the development of a strongly competitive green, low-carbon, and intelligent steel industry cluster. During the conference, China Baowu launched the *China Baowu Industrial Products Supply Co-Chain Responsibility Initiative*, which focuses on five aspects including strengthening co-chain development, practicing co-building efforts, promoting shared success, and fulfilling common responsibilities. These collective actions are designed to foster new competitive advantages and growth drivers for the sustainable development of the entire supply chain. Meanwhile, China Baowu presented awards to 78 outstanding suppliers in recognition of their exceptional contributions, including the Service Excellence Award, Value Contribution Award, Innovation Leadership Award, Low-Carbon Pioneer Award, and Outstanding Contribution Award. This demonstrates the collective strength of the supply chain and advances high-quality development.



China Baowu Industrial Products Supply Co-Chain Responsibility Initiative

As an industry leader, China Baowu recognizes its responsibility and mission in ensuring a safe and stable supply chain and driving the green transformation. To better fulfill our role as a bellwether in the modern industry chain of new-type, low-carbon metallurgy, we propose the following co-chain responsibility commitments, aiming for higher-quality, more efficient, fairer, and more sustainable development in partnership with all stakeholders.

- Strengthening co-chain development**

Advance innovation-driven and integrated development to jointly build a resilient and reliable supply chain that ensures security for the sustainable development of the industrial ecosystem.
- Practicing co-building efforts**

Increase the supply of green, low-carbon products and services, and establish long-term, stable, close, and fair cooperative relationships to promote orderly competition, cooperation, and complementary strengths.
- Collaborating for co-creation**

Focus on R&D of new materials, products, equipment, and technologies, and deepen digital and intelligent empowerment to lead the supply chain's green, low-carbon transformation.
- Promoting shared success**

Uphold the principle of mutual benefit, work together to overcome challenges, balance interests and obligations, forge ahead together through thick and thin, and foster a shared view of mutual interests.
- Fulfilling common responsibilities**

Comply with laws and regulations and adhere to integrity management to foster a clean and transparent business environment and market order.



China Baowu was among the first companies to join the CN100 Green and Low-Carbon Supply Chain Alliance.



China Baowu held the 2024 Green and Low-Carbon Supply Chain Development Conference themed "Integrating New Green Growth Drivers within the Supply Chain to Empower New Quality Productive Forces."

Green Chain Foundation: Advancing the Construction of Low-Carbon Service Platform

To address key pain points in the steel industry—such as complex emission sources, limited recognition of accounting models, and challenges in evaluating carbon emission data—China Baowu has explored the development models and pathways for a public service platform for green and low-carbon supply chains. In 2024, Ouyeel, entrusted by the Shanghai Municipal People's Government and the People's Government of Baoshan District, undertook the development, operation, and maintenance of the public service platform for green and low-carbon supply chains. Meanwhile, the steel industry's EPD platform, developed, operated, and maintained by Ouyeel, was also included in a curated case collection featuring best practices in the development of green and low-carbon supply chains at the 2024 Shanghai International Carbon Neutrality Expo in Technologies, Products and Achievements.

To support its green and low-carbon development strategy, China Baowu has tasked Ouyeel with spearheading its EPD initiatives and applied to the China Iron and Steel Association (CISA) to take on the development and operation of the national EPD platform for the steel industry. The platform was initiated in November 2021 and officially went live in May 2022. In 2023, the platform introduced Version 2.0 of the General Programme Instructions (GPI). The same year, it achieved ISO 27001 certification for its secure and efficient information security management system, which leverages technologies such as blockchain. In 2024, the platform released China's first *Blue Book of the EPD Platform for the Steel Industry*. Since its launch, it has developed 14 Product Category Rules (PCRs), offering technical guidelines for environmental performance disclosures in the steel industry. To date, the platform has published 219 EPD reports, gained over 6,000 registered users, and recorded more than 50,000 report downloads.

Case Ouyeel to develop and operate the public service platform for green and low-carbon supply chains

On January 26, 2024, Ouyeel signed a cooperation agreement with the People's Government of Baoshan District in Shanghai to assume the responsibility for developing and operating the public service platform for green and low-carbon supply chains. The platform is designed for a product carbon footprint management system that reflects both national and municipal priorities while aligning with international standards. Key objectives include enhancing standardized measurement and data collection, and implementing a product carbon labeling and certification system. Through unified management rules and shared data, the platform will support a diverse range of carbon footprint applications and drive green and low-carbon transformation across critical links in the supply chain. It also seeks to foster mutual recognition between domestic and international carbon footprint accounting systems, with the overarching goal of building a carbon management network that spans the entire industry chain, reaches across the Yangtze River Delta, and serves the broader national market.



On April 3, 2024, Ouyeel, a subsidiary of China Baowu, jointly signed a *Joint Development Agreement for the Public Service Platform for Green and Low-Carbon Supply Chains* together with platform co-developers.

Chain Partnership: Strengthening Low-Carbon Collaborations Together

Positioning green transformation as a strategic direction, China Baowu is actively building a green and low-carbon "circle of friends." Key initiatives include deepening supply chain cooperation with Haier Group, signing a strategic cooperation agreement with Shanghai Electric, and actively participating in events such as the 2024 Shanghai International Carbon Neutrality Expo on Technologies, Products, and Achievements (2024 Shanghai International Carbon Neutrality Expo for short) and its Parallel Forum on Product Carbon Footprint of Green and Low-Carbon Supply Chains. These efforts contribute Baowu's wisdom to the realization of green development goals.

On December 31, 2024, China Baowu signed a strategic cooperation framework agreement with Shanghai Electric, aiming to deepen collaboration in mutual product supply, green and low-carbon development, technological innovation, and internationalization for mutual benefit.



On September 11, 2024, China Baowu visited Haier Group to strengthen communication and cooperation between the two parties in areas such as intelligent manufacturing, green and low-carbon transformation, and supply chain coordination, with the ultimate goal of promoting sustained and healthy corporate growth.



On June 7, 2024, China Baowu showcased its innovative green and low-carbon supply chain practices at the keynote forum of the Shanghai International Carbon Neutrality Expo, contributing Baowu's wisdom to achieving carbon neutrality goals.



On June 6, 2024, the Parallel Forum on Product Carbon Footprint of Green and Low-Carbon Supply Chains—co-hosted by China Baowu and co-organized by Ouyeel—was held in Shanghai as part of the 2024 Shanghai International Carbon Neutrality Expo. At the forum, China Baowu, together with representatives from the government, academic institutions, industry-leading enterprises, and financial institutions, engaged in in-depth discussions on building green and low-carbon supply chains and advancing product carbon footprint methodologies.



Case

China's EPD platform across the entire steel industry chain signed MOUs with Sweden's international EPD system and Italy's EPD platform

In September 2024, China's EPD platform across the entire steel industry chain signed two memoranda of understanding (MOUs)—one with Sweden's international EPD system and another with Italy's EPD platform, focusing on platform cooperation and mutual recognition. This marks a significant step toward the international mutual recognition of this full-chain EPD platform in China's steel sector. This initiative not only provides Chinese steel enterprises with more convenient access to global environmental certifications, but also contributes to the harmonization of environmental protection standards across the global steel industry and jointly promotes global environmental sustainability goals.



With Sincerity and Dedication

Leading High-Quality Development across the Industry

Serving National Strategies and Building a Powerful Steel Ecosystem

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Optimizing Corporate Governance and Enhancing Core Competitiveness

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Prioritizing Risk Control and Enforcing Strict Safety Boundaries

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Advancing Quality Management and Improving Service Effectiveness

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Response to the United Nations Sustainable Development Goals (SDGs)



Our Understanding

With high morale and firm confidence, we are accelerating the journey toward becoming a world-class enterprise. We clearly defined our "12345" development strategy, "54321" quantitative strategic objectives, the development directions of high-end, intelligent, green, and efficient growth, the development principles of "marketization, rule of law, and internationalization," and the development path of "strengthening through innovation, excelling through value creation, and expanding through entrepreneurship." These strategic deployments not only chart a grand blueprint for China Baowu's advancement toward new industrialization but also sound the clarion call for a new stage of high-quality development.

Our Practices

In the face of complex domestic and international environments and the steel industry's long-term trend toward output reduction and structural adjustment, we have continuously enhanced our core competitiveness—not only persistently growing in size but also unwaveringly striving for greater strength and excellence. In close alignment with major national strategies, we reinforce account-based operations, advance lean management, and strive to build an optimal production and operation system based on market-oriented and customer-centered principles. Moreover, we deepen synergy and integration, and drive connotative growth. Through these efforts, our business performance continues to lead the industry, and all aspects of our work are progressing in a steady and orderly manner.

Our Performance



Key Facts



*Overall Labor Productivity:

The ratio of gross domestic product to the average number of employees.

> Profitability and Efficiency



Key Figures for China Baowu in 2024:

Profit per metric ton of steel

RMB **132** /metric ton

Debt-to-asset ratio

57.35 %

Overall labor productivity*

RMB **670,000** /person

> Implementing national strategies

- ▶ We achieved a **98.2%** completion rate for our annual responsibilities as a chain bellwether, meeting the requirement of $\geq 95\%$ set by the SASAC.
- ▶ We achieved breakthroughs in **15** "bottleneck" products, providing strong support for material security in key national sectors.
- ▶ Our self-sufficiency rate in iron ore reached **38.9%**.
- ▶ Our Transnationality Index (TNI) for overseas industrial layout reached **11.4%**.
- ▶ Our steel exports accounted for **7.5%** of total output.



China Baowu's Honors in 2024:

- ▶ We were recognized as one of the ten central SOEs to successfully reach world-class enterprise status by the SASAC and the China Enterprise Confederation.
- ▶ We maintained 44th in the 2024 *Fortune* Global 500, topping the global steel industry.
- ▶ We were named the first "ESG-Benchmark Demonstration Base" by the China Enterprise Reform and Development Society and China Media Group.
- ▶ We have consistently received the highest credit ratings among global integrated steel enterprises from the three major international rating agencies.

> China Customer Satisfaction

Subsidiary	Unit	2022	2023	2024
Baosteel	%	92.8	92.94	92.89
Zhongnan Iron & Steel	%	93.5	94.61	94.13
TISCO	%	90.1	86.8	87.9
Bayi Iron & Steel	%	91.5	91.36	92.51
Xinsteel	%	98.16	96.24	92.78
Baoland Real Estate Asset Management	%	91.27	90.23	94.87
Sinosteel Engineering & Technology	%	91.14	91.58	90.57
Hwabao Securities	%	99	98.84	96.52
Baowu Resources	%	92.9	95.9	96.5

> Complaint Resolution Rate

Subsidiary	Unit	2022	2023	2024
Zhongnan Iron & Steel	%	100	100	100
TISCO	%	89	98.8	98.9
Bayi Iron & Steel	%	100	100	100
Xinsteel	%	100	100	96.6
Baoland Real Estate Asset Management	%	100	100	100
Sinosteel Engineering & Technology	%	100	100	100
Baosteel Packaging	%	100	100	100
Baowu Clean Energy	%	100	100	100
Hwabao WP Fund Management	%	100	100	100
Baowu Resources	%	100	100	100

Serving National Strategies and Building a Powerful Steel Ecosystem

Rooted in national needs, industrial trends, and challenges faced by industrial and supply chains, China Baowu actively serve key national strategies by developing "pillars of the nation." Through deepened integration and synergy, the Group empowers supply chain development and injects the strength of Baowu's steel into the advancement of the industry.

Forging Pillars of the Nation

China Baowu takes on national strategic missions with determination. Focusing on sectors vital to national strategy and security—such as energy and power, transportation, and construction—the Group constantly expands application fields and scenarios, positioning itself as a provider of high-end strategic material solutions. These efforts contribute to enhancing the competitiveness of China's machinery and equipment and safeguarding national security.

Energy and Power

China Baowu promotes the adjustment of energy mix, improves the green energy supply rate, and supports technological upgrades in fields like photovoltaic power generation and nuclear power. These efforts aim to meet the demands of new quality productive forces and inject green momentum into industrial transformation and high-quality economic development.

Nuclear power



Case

Joining forces to support the localization of critical materials for Hualong One

Hualong One, China's third-generation nuclear power technology with proprietary intellectual property, has become a symbol of remarkable national progress in the nuclear power sector—marking the country's rise from nothing to something, from small beginnings to global strength.

Baosteel

Baoshan Base supplied approximately 1,500 metric tons of thick plates for the safety injection tanks of the Hualong One reactor, successfully replacing imported materials. In addition, Wuhan Iron & Steel provided around 2,600 metric tons of high-grade grain-oriented silicon steel for the stator cores of generators used in Hualong One's Fuqing 5 and San'ao 1 to 4, effectively replacing imported materials while serving as a model for material localization.

TISCO

Since 2016, TISCO has delivered over 10,000 metric tons of stainless steel plates for the internal components of the Hualong One reactor. Meeting the most stringent technical and quality assurance standards required in nuclear power applications, these nuclear-grade stainless steel plates are among TISCO's flagship solutions in overcoming critical technology chokepoints.

Baowu Special Metallurgy

Hualong One's nuclear steam generators make extensive use of nickel-based alloy U-shaped heat transfer tubes, water chamber baffles, and stainless steel support plates. Baowu Special Metallurgy is the sole domestic supplier of the hot-rolled plates used in both the water chamber baffles and support plates, and remains the only company in the world capable of producing and supplying all three categories of these critical nuclear island materials at an industrial scale.

With Sincerity and Dedication

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Toward a More Sustainable Future

Setting an Example for Green and Low-Carbon Transition

Driven by Innovation

Pioneering Original Innovation in Enterprise Development

Friendly and Inclusive

Building a Harmonious Society through Concrete Actions



TISCO supplies nuclear-grade Class I stainless steel plates for Linglong One, used in the manufacturing of its most critical and essential in-core components.



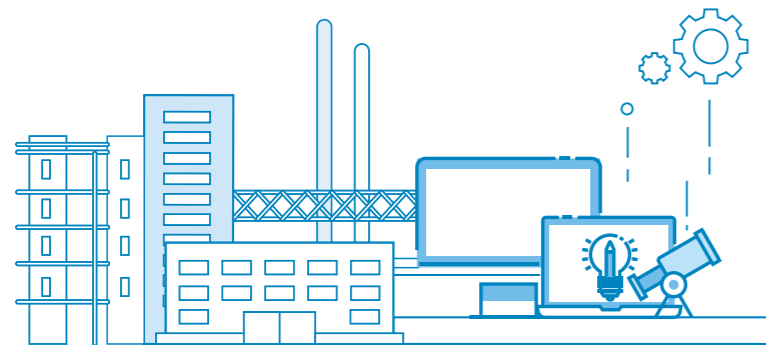
The thick plate of Baosteel Baoshan Base, the high quality oriented silicon steel of Wuhan Iron & Steel, the stainless steel plate of TISCO, and the U-shaped heat transfer tube, water chamber partition and stainless steel support plate of nickel-based alloy of Baowu Special Metallurgy are applied in the world's first "Hualong One" reactor.



Case

Localization of the world's first commercial high-temperature gas-cooled reactor nickel-based welding materials
2024 Benchmark Case

Nickel-based alloy ERNiCrMo-3 welding materials are vital to localizing nuclear power components. Facing extremely high technical barriers in the materials' R&D process, Baowu Special Metallurgy—through technological breakthroughs and laboratory trials—overcame key technical challenges such as stringent alloy grade requirements and the difficulty of ensuring uniform performance in March 2024. By the end of November, it successfully passed on-site acceptance testing and user re-validation by relevant parties. All indicators of the product met ultra-stringent design standards, with several indicators leading the industry. It supports the construction of the world's first 600 MW commercial high-temperature gas-cooled reactor, enabling China's leap from follower to forerunner in nuclear technology.



- 各项指标均达到超严设计品质级
- 支撑首台商业化 60 万千瓦高温气冷堆机组建设
- 预计年提供工业蒸汽 3250 万吨, 发电超过 110 亿千瓦时
- 减排二氧化碳 1960 万吨
- 推动我国核电技术实现从跟跑到领跑的跨越

Hydropower



Case

Successful batch application of Baosteel's 1,000-MPa high-strength hydropower steel plates in the world's highest-head pumped storage power station

In September 2024, a bifurcated steel pipe prototype made with Baosteel's 1,000-MPa high-strength hydropower steel plates successfully passed an on-site hydroburst test at the Tiantai Pumped Storage Power Station in Zhejiang Province. By December, a total of 1,638 metric tons of these plates were delivered for use in the penstocks of the world's highest-head pumped storage power station.

The Tiantai Pumped Storage Power Station is currently the largest of its kind under construction in China, featuring the country's highest single-unit capacity and longest single-stage inclined shaft, as well as the world's highest rated water head. With an HD value* of 5,000 m·m, the station's first generating unit is scheduled to begin operation by the end of 2025. The project also marks the first successful large-scale application of 1,000-MPa high-strength steel plates in China's hydropower sector, laying a solid technical foundation for the broader use of this material in future large-scale hydropower projects, ultra-high-head pumped storage stations, and critical pressure-bearing components of large-capacity impulse turbine units.



Key Facts

*HD value:

The product of a pipe's inner diameter (D, in meters) and the corresponding water head (H, in meters), which is a key indicator of the scale and technical complexity of pressure pipelines.



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Natural gas



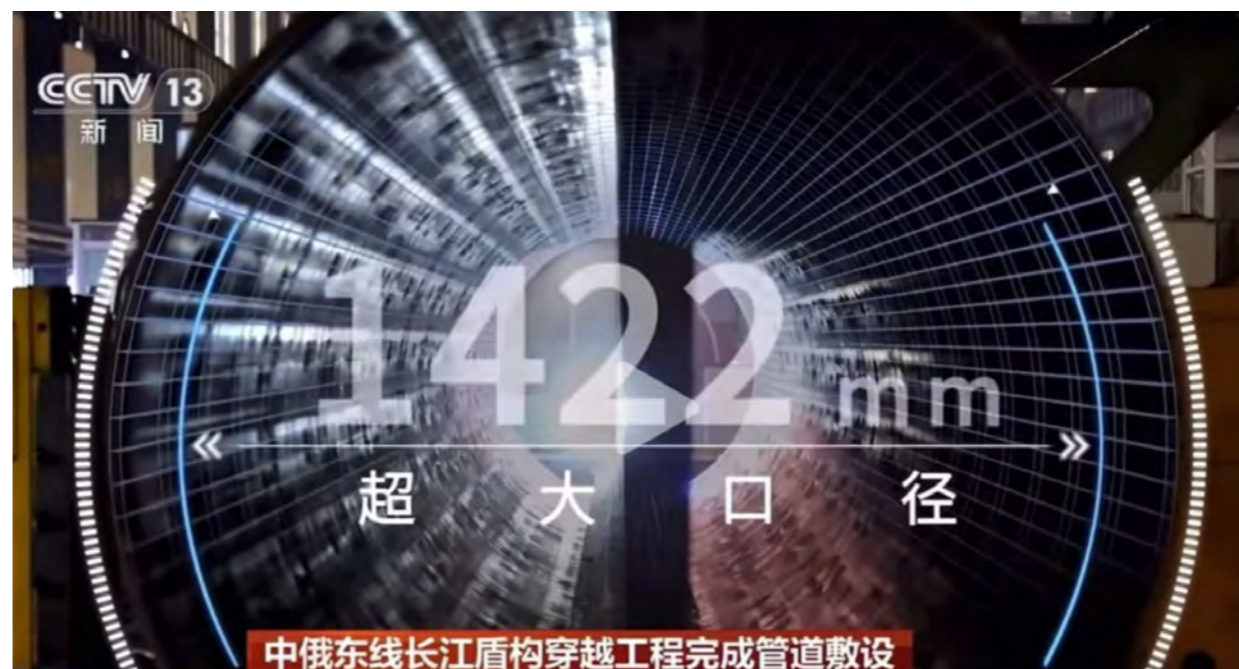
Case

TISCO independently developed ultra-low temperature steel for LNG storage tanks
2024 Benchmark Case



- 自主开发特大型LNG储罐用超低温钢关键技术
- 成功应用于全球最大 27 万立方米 LNG 储罐工程建设
- 节约了大量贵重镍资源 吨钢降本增效 3000 元

In 2024, in response to the growing scale of LNG storage tanks and a more competitive market, TISCO's carbon steel team launched 06Ni9DR—a steel product with lower cost, ultra-high cleanliness, and exceptional crack-arrest performance. This innovation reduced unit steel costs by RMB 3,000 per metric ton and significantly conserved valuable nickel resources. The product was adopted for Phase III of CNOOC's Zhejiang LNG Project, home to the world's largest 270,000-m³ ultra-large LNG storage tank. With its superior product performance and service quality, TISCO outperformed two other suppliers and was exclusively awarded the title of "Outstanding Material Supply and Service Provider for the Zhejiang LNG Project Phase III Receiving Terminal Project in 2024" by CNOOC Green Energy Port Zhejiang Ningbo Energy Co., Ltd. Holding the leading market share in ultra-low temperature steel used for 270,000-m³ ultra-large LNG storage tanks, TISCO is shifting China's role from follower to frontrunner in ultra-large LNG tank construction, making a meaningful contribution to the country's energy security strategy.



Baosteel's X80M 18-m extended pipes used in the Yangtze River shield tunneling section of the China-Russia east-route natural gas pipeline set new records for the largest diameter, thickest wall, and heaviest single pipe used along the entire route.

Transportation

China Baowu is fully committed to tackling critical technical challenges in transportation and providing solid support for coordinated development across the upstream and downstream sectors. These efforts demonstrate Baowu's contribution to building a modern industry system.

Shipbuilding

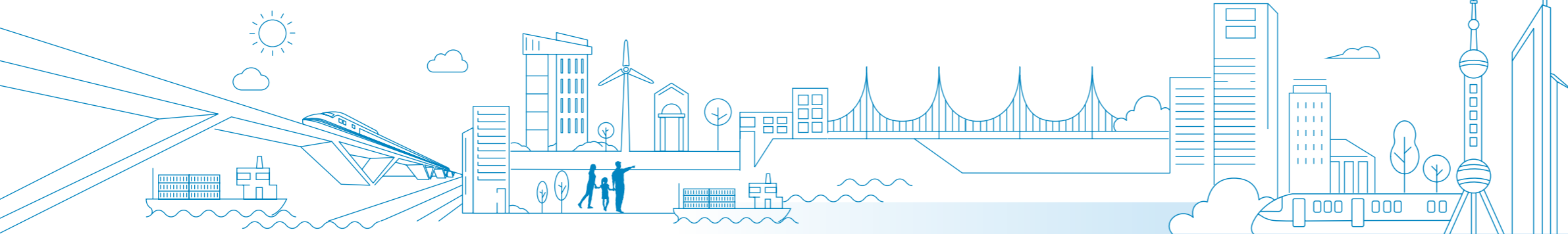


Baosteel

Baosteel successfully developed corrosion- and wear-resistant polar steel for use in repairs of the "Xuelong" icebreaker and the construction of the "Xuelong 2" polar research icebreaker.

Baowu Special Metallurgy

Baowu Special Metallurgy localized wide-format Invar alloy precision strip, a critical material for the cargo tank of large membrane-type LNG carriers, which also passed France's GTT certification.



Bridge



Baosteel

Zhanjiang Iron & Steel supplied nearly 270,000 metric tons of bridge steel for the Shenzhen-Zhongshan Link, including steel shells for immersed tubes as well as steel box girders and other core parts of the Lingdingyang Bridge and Zhongshan Bridge.

Zhongnan Iron & Steel

Echeng Iron & Steel successfully developed China's highest-grade high-strength weathering bridge steel, achieving full coverage across high-end weathering bridge steel categories.

Xinsteel

Xinsteel supplied 12,000 metric tons of bridge steel plates for the Longlihe Bridge project in Guizhou, serving as the exclusive steel supplier for the bridge's main structural components.

Baosteel Metal

Baosteel Metal's high-strength galvanized aluminum steel wires have been applied in the construction of several grand bridges in China, including the Su-Tong Yangtze River Highway Bridge, Wuhan Tianxingzhou Bridge, and the Fourth Nanjing Yangtze Bridge. Additionally, 2,060 MPa zinc-aluminum-magnesium alloy-coated steel wires, independently developed by Baosteel Group Nantong Wire Products Co., Ltd., are now widely used in the Lingdingyang Bridge section of the Shenzhen-Zhongshan Link.

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High-speed rail



Case

Magang's full set of high-speed rail wheels completed 600,000-km safe service on Fuxing bullet trains

2024 Benchmark Case

Magang Group successfully developed high-speed wheels and axles for high-speed trains operating at 200-250 km/h and 350 km/h. These domestically produced wheels successfully replaced imports and have completed 600,000 km of safe operation. At 21:17 on July 24, 2024, the G6410 Fuxing bullet train arrived at Changsha South Station, marking the first full trainset equipped entirely with Magang's high-speed rail wheels to complete 600,000 km of safe operation—an important milestone toward full-scale market adoption.



Building and Construction

Accelerating the industrialization and intelligent transformation of construction, China Baowu is committed to supplying the sector with green, low-carbon building materials. The Group strives to create a new paradigm of green development in the construction sector characterized by intensive use of resources, low-carbon and environmentally-friendly practices, and exceptional quality.

Baosteel

High-strength, high-toughness, and corrosion-resistant casing supported the successful drilling of Shenditake 1, which exceeded a depth of 10,000 meters and set a new record as the deepest onshore well in Asia.

Magang Group

Magang Group ranks among the world's top players in the R&D and production capacity of heavy H-beams, having broken long-standing foreign monopolies. In April 2024, Magang was selected for the list of the eighth batch of national-level manufacturing single-item champion enterprises announced by the Ministry of Industry and Information Technology (MIIT), in recognition of its leading position and innovation capabilities in heavy H-beam production.

TISCO

TISCO's TJ-series stainless steel for construction has advanced the intelligent selection and application of enclosure system materials in large-scale public and industrial buildings across China.

Bayi Iron & Steel

Bayi Iron & Steel successfully rolled HRB600 MPa-grade high-strength hot-rolled ribbed rebar. The product, characterized by high strength, excellent plasticity, and superior seismic performance, aligns closely with the stringent requirements of high-rise, super high-rise buildings and large-scale structural frameworks for large-diameter reinforcement bars.



Structural steel produced by Baosteel Zhanjiang Iron & Steel was used in the Airport Road Renovation Project of the Guizhou Shuanglong Airport Economic Zone, a national-level airport economic demonstration zone.



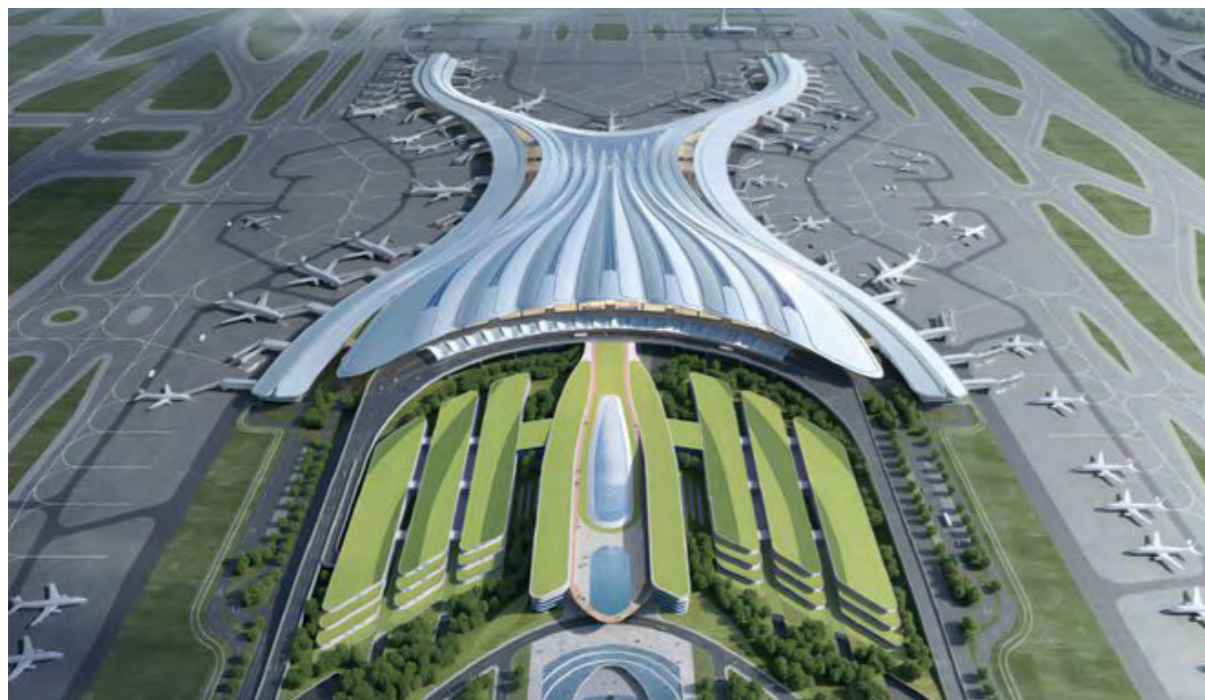
Casing steel from Baosteel was successfully deployed in Shenditake 1 at CNPC's Tarim Oilfield, supporting successful downhole installation at extreme depths.



Case

TISCO's green architectural stainless steel won bid for Guangzhou Baiyun International Airport Phase III Expansion

In January 2024, TISCO's TTS445J2/TJ22 architectural stainless steel, known for its high corrosion resistance, long service life, zero maintenance, and environmental sustainability, won the bid for the roofing construction of Terminal 3 in the Guangzhou Baiyun International Airport Phase III Expansion Project. This marked a new milestone in applying TISCO's architectural stainless steel to building enclosure systems in the transportation sector, significantly elevating the quality standards of metal roofing for large-scale public buildings in China.



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Deepening Integration and Synergy

Following the approach of "holistic planning, targeted breakthroughs, quick wins, and dynamic optimization," China Baowu continues to deepen integration and synergy across all fronts to enhance its value creation capabilities. A total of 46 integration projects and 15 corporate-level synergy initiatives are being advanced in alignment with established goals and tasks, fully unlocking collaborative potential.

Continuous Optimization of Specialized Integration

In advancing specialized integration, China Baowu stays committed to pursuing the strategy of "building a resilient steel backbone, empowering through five diversified segments, taking a market-driven approach, and converging outward." Adhering to the "four combinations" principle—combining top-level design with grassroots practices, coordinated management with mutual benefit and voluntary participation, overall interests with local priorities, and long-term development with current objectives—the Group has optimized and adjusted existing integration projects based on the principle of "three benefits," effectively enhancing management efficiency. Moreover, the Group has initiated the consolidation of its competitive businesses in the steel and non-coal mining sectors and achieved substantial progress. Integrated operations between Sinosteel Engineering & Technology and Baosteel Engineering, Baowu Environment and Resource Technology and Baowu Water Technology, as well as Baowu Equipment Intelligent Technology and Baowu Heavy Industries, have all delivered positive results.

"Three benefits" principle

Benefits that enhance the competitiveness of the core steel business, promote market-oriented development of diversified industries, and maximize the overall interests of China Baowu.



Case

China Baowu launched an action learning program focused on deepening specialized integration

On June 6, 2024, China Baowu initiated an action learning program focused on deepening specialized integration. This initiative gathers collective insights to strengthen coordinated integration planning. Through early-stage field research, intensive discussions, and unified understanding of tools and methodologies, a coherent implementation plan was formulated to effectively address challenges and difficulties in integration. The specialized integration implementation plan will be formally executed following internal approval procedures.



Coordinated Development across the Steel Industry Value Chain

Focusing on building cluster-based competitive advantages, China Baowu has initiated 15 corporate-level synergy projects across six key areas to promote intra-industry and cross-sector collaboration across the steel industry value chain. The blast furnace stability project has ensured stable operations across all bases, with overall molten iron costs continuously reduced. The coal procurement project saved RMB 345 million annually across steel bases. Additionally, the Group collaborated with Shandong Iron & Steel Group Rizhao Co., Ltd., yielding RMB 1.36 billion in synergy benefits, while providing integrated support for the Laiwu Branch of Shandong Iron and Steel Co., Ltd., yielding RMB 399 million in benefits.

Bayi Iron & Steel

Bayi Iron & Steel established the Northwest Technical Center under China Baowu Central Research Institute to accelerate product iteration and upgrades. Leveraging Baowu trains, the company has aligned closely with downstream industrial chains through its portfolio of high-quality products, advanced low-carbon metallurgical technologies, and diversified services, forming competitive product lines.

Baowu Resources

Baowu Resources has advanced its "Cornerstone Plan" through the substantive integration of various regional resources, pushing toward achieving zero auxiliary operations, unmanned underground mining, zero tailings, and the integration of operations, inspection, and maintenance. The ultimate goal is to achieve efficiency maximization and create benchmarks of the highest efficiency across domestic mines.

Baowu Carbon

Capitalizing on its resource and technological strengths, Baowu Carbon has stepped up innovation efforts to produce high-end asphalt, fine chemicals, and carbon black products. It aims to achieve intensive manufacturing of carbon black and benzene hydrogenation while diversifying raw material sources.

Sinosteel

Focused on strengthening and optimizing its chromium-based foundation, Sinosteel has sharpened its expertise in the two core pillars of manganese and fluorite, while advancing the coordinated development of resources like nickel, molybdenum, and silicon. With a firm commitment to serving Baowu's strategic needs, it strives to create greater value through synergy and collaboration.

Collaborative Growth in Overseas Operations

By the end of 2024, China Baowu had established 134 wholly-owned or majority-owned subsidiaries outside the Chinese mainland, operating across 39 countries and regions. The total overseas assets reached RMB 98.769 billion, with a workforce of over 11,000 employees.

By the end of 2024

Total overseas assets (outside the Chinese mainland)

RMB **98.769** billion



Total overseas employees

11,000+

* For more details on the Simandou Project, please see CSR Highlights "Creating a Model of Sustainable Development at Simandou."

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Major progress in overseas key projects*

China Baowu actively participates in high-quality Belt and Road cooperation. Significant progress has been made in the Simandou Project, with 57.9% completion in the Northern Block. The Saudi thick plate project received antitrust clearance across global jurisdictions and completed the incorporation of its joint venture. In South Africa, Samancor expanded its underground mining operations, producing 6.16 million metric tons of chrome ore in 2024, a year-on-year increase of 27%.

Coordinated development of diversified overseas businesses

Overseas deployment of diversified industries, including engineering services, green energy, and industrial packaging, continues to improve. Sinosteel Engineering & Technology secured over 50% of its annual new contracts from international markets. Its EPC-built Phase IV 2.5-million-metric-ton direct reduced iron (DRI) production line at the Algeria Green and Low-Carbon Steel Complex was successfully commissioned. Sinosteel's first solar PV project in South Africa broke ground. Baosteel Packaging has rapidly expanded its presence in Southeast Asia, with production, sales, and profit from its two-piece can business growing by 30%, 35%, and 21% respectively compared to 2023.

Continuous enhancement of international marketing capabilities

China Baowu has been unlocking the full potential of its overseas marketing system and platform, while continuously exploring and optimizing its shared "Embassy System" model. Steel exports have steadily increased. In 2024, steel exports totaled 9.4876 million metric tons, accounting for 7.48% of total sales—an increase of 1.58 percentage points from 2023.



In 2024

Steel exports **9.4876** million metric tons

Baowu Resources

2024 Benchmark Case

Baowu Resources has accelerated the development of overseas mining projects and actively explored a full-process supply chain model from mining abroad to transportation by the logistics center, and then to sales by the marketing center. The company has actively built a comprehensive marketing network to ensure a stable "return journey" for its overseas ore resources. In 2024, Baowu Resources sold 3.5 million metric tons of self-owned overseas ore.



Empowering the Supply Chain in Fulfilling Responsibilities*

Having earnestly fulfilled its role as a bellwether of the supply chain, China Baowu has improved its supplier management systems and strengthened efforts in supplier oversight, evaluation, and training. The concept of "upholding business ethics and sharing social responsibility" has been embedded into the full lifecycle of supplier management. These efforts ensure stable resource supply chains and facilitate coordinated development of industries, injecting Baowu's momentum into high-quality development across the industry chain.

* For more details on green supply chains, please see CSR Highlights "Spearheading a Full-Chain Sustainability Ecosystem."

Securing Mineral Supply to Strengthen Chain Foundations

Major progress in the overseas Simandou Iron Ore Project

In line with the national resource security strategy, China Baowu has vigorously advanced the development of the Simandou Iron Ore Project in Guinea, actively engaged with the Guinean government and project partners, and successfully completed the equity transfer process.

Discovering more untapped reserves and increasing the production of domestic mines

Following the national call to "promote domestic mineral exploration, discover more untapped reserves, and increase production," key milestones have been achieved, including the completion and acceptance of all infrastructure for the Gushan Mine open-pit shaft construction project in Anhui Province, and multiple core facilities were completed under the national intelligent manufacturing mine construction demonstration project at the Zhongjiu Iron Mine.

Accelerating the development of a modern iron ore logistics supply chain

Efforts continue to enhance international maritime transport capacity and strategically deploy key domestic and overseas ports. The Majishan Blending Processing Center and the Zhenjiang Ore Processing Center have been completed and put into operation. A preliminary end-to-end domestic logistics supply chain based on the Majishan Blending Processing Center has now taken shape.



Case

Advancing mine construction to support the "Cornerstone Plan"

In January 2025, as a key iron ore project under the national "Cornerstone Plan," the 10 million metric tons/year vanadium-titanium magnetite mining and beneficiation expansion project of Chongqing Iron & Steel Group Mining Company's Xichang Mining has entered the critical sprint stage after years of construction. Based on the original capacity of 3 million metric tons/year, the project will expand the raw ore processing capacity to 10 million metric tons/year. The product scale includes an annual output of 3.6 million metric tons of iron ore concentrates, 400,000 metric tons of titanium concentrates, and 65,000 metric tons of sulfur concentrates. The project's total estimated investment exceeds RMB 5 billion.



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In January 2024, the No. 7 submerged arc furnace at Zimasco (Pvt) Ltd, a subsidiary of Sinosteel in Zimbabwe, was officially ignited and put into operation, expanding the company's annual high-carbon ferrochrome production capacity to 280,000 metric tons. This milestone marks a significant upgrade in Zimasco's ferrochrome production capacity and a new step forward in high-quality development, contributing further to Baowu's strategic mineral resource security system.

Deepening Ecosystem Collaboration

Leveraging the synergy of aggregated resources, China Baowu has deepened scientific and technological cooperation with partners across domestic and international innovation ecosystems. Through a wide range of activities—such as field studies, technical exchanges, advisory support, training lectures, and regional industrial chain investment promotion conferences—Baowu promotes win-win collaboration with supply chain enterprises, drives the high-quality development of industrial clusters, and strives to solve key technological challenges facing the industry.

Strategic cooperation is being systematically advanced with partners such as local governments, upstream and downstream industry players, financial institutions, and colleges and universities. China Baowu signed or renewed strategic cooperation agreements with Shandong Port Group, Sinomach, China Resources Group, China Merchants Group, CNOOC, China Huadian Corporation, Haier Group, and Shanghai Electric. It also signed comprehensive cooperation and exchange agreements with four leading international companies—JFE, VALE, Linde, and Mitsui & Co.—and entered into a strategic partnership with Northeastern University. The Group's case titled "Actively Engaging in the Integrated Development of the Yangtze River Delta and Promoting Central-Local Synergistic Development" was selected as an Outstanding Case of Central-Local Cooperation for 2024 by the China Enterprise Reform and Development Society.

Since its establishment, China Baowu has signed or renewed over 50 strategic cooperation agreements with domestic upstream and downstream partners, more than 10 with overseas enterprises, over 10 with financial institutions at home and abroad, and several with domestic colleges and universities.

Building a Responsible Supply Chain

Supplier management

China Baowu has established a full-process ESG supplier management system covering supplier admission, contract performance, and performance evaluation. Institutional documents such as the *Supplier Management Measures*, the *Supplier Audit Standards*, and the *Supplier Performance Evaluation Standards* have been continuously refined to make ESG management more concrete and scenario-based. Companies with integrity breaches, such as failure to fulfill payment obligations, are precisely identified and denied entry. Using the big data supervision model and other tools, the Group has improved its misconduct investigation mechanisms and maintained stringent oversight. Special attention has been given to reinforcing relevant requirements for responsible mineral management, requiring relevant suppliers to pass third-party audits by RBA or RMI to further strengthen risk control in responsible minerals.

Supplier ESG evaluation

Through second-party audits and negative performance reviews, ESG evaluations for suppliers have been steadily advanced. In 2024, Baowu assessed 175 suppliers across 147 criteria—focusing on carbon emissions, business ethics, and labor rights protection. Suppliers lagging in carbon reduction were provided with targeted guidance and technical support, including carbon accounting assistance. A supplier negative performance review feature was launched to address misconduct such as bid rigging and collusion, falsification of qualifications, and quality fraud. Disciplinary actions—ranging from business restrictions and warnings to blacklisting—are imposed based on severity, promoting the thorough implementation of ESG reviews.

Supplier ESG training

Focusing on suppliers in key industries and critical categories, Baowu has established a diversified ESG training system incorporating business exchanges, thematic seminars, second-party audits, and supply chain conferences. This multi-channel approach ensures more timely, comprehensive, and in-depth transmission of ESG concepts, fostering alignment and shared values. The Third China Baowu Industrial Products Supply Chain Ecosystem Partners Conference in 2024 attracted 360 participants from nearly 200 suppliers, further enhancing the influence and cohesion of the supply chain, and fostering a more competitive supply chain ecosystem.

Supplier carbon accounting

In 2024, Baowu guided 944 suppliers to carry out carbon accounting, resulting in the release of 2,209 carbon footprint reports. Among them, the Obei Zero-Carbon Team independently calculated and published 605 reports.

In 2024



Suppliers guided in carbon accounting

944

Total carbon footprint reports issued

2,209

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Participating in Industry Standards Development

In 2024, the Group and its subsidiaries actively led or participated in the formulation of national, industry, and group standards in areas such as green and low-carbon metallurgy, intelligent manufacturing, mine evaluation, and ESG disclosure, contributing to the standardized development of the industry.

Baowu Resources

As the lead unit of the Green and Low-Carbon Standardization Working Group under the Technical Committee on Iron ore and Direct Reduced Iron of Standardization Administration of China, Baowu Resources released a white paper titled "China Iron Ore Standardization Strategy 2034" and led the drafting of seven national and industry standards, including the *Evaluation Standard for Low-Carbon Enterprises in Metallurgical and Mining Industries*.

Baosight

Baosight undertook major national R&D initiatives and assumed 20 new government-funded projects throughout the year. It joined the Steel Application Subgroup of the Artificial Intelligence Subcommittee of the National Information Technology Standardization Technical Committee (SAC/TC 28/SC 42) and served as co-leader, while also participating in the TC28 Digital Transformation Working Group and the development of related national and industry standards.

Hwabao WP Fund Management

As a signatory of the Principles for Responsible Investment (PRI), a member of the First Council of the Green Finance Committee (GFC) of China Society for Finance and Banking, and a member of the Green and Sustainable Investment Committee of the Asset Management Association of China (AMAC), Hwabao WP Fund Management contributed to the drafting and revision of AMAC's *Guidelines for Green Investment (Trial)* and the initial draft of AMAC's *Guidelines for Sustainable Investment (Stocks)*. It also participated in AMAC's research on sustainable investment standards and specifications, and provided feedback on International Financial Reporting Standards (IFRS) S1 *General Requirements for Disclosure of Sustainability-related Financial Information* and IFRS S2 *Climate-related Disclosures* (Exposure Draft). Additionally, the company was invited to serve as a "Partnership for Early Awareness of Sustainability-Disclosure Today (P4EAST)" by the IFRS Foundation Beijing Office, and jointly worked with the Group to develop ESG group standards for the steel industry.



At the Conference on Technological Innovation and Standardization Leadership in Metallurgy and Mining Industries held on April 2, 2024, the Green and Low-Carbon Standardization Working Group under the Technical Committee on Iron ore and Direct Reduced Iron of Standardization Administration of China was officially established. A joint research institute and an unmanned mining technology R&D center, co-founded by Baowu Resources and the Institute of Mineral Resources of the University of Science and Technology Beijing, were inaugurated. Baowu Resources also signed a strategic cooperation agreement with the China Metallurgical Information and Standardization Institute to launch a research project on the China Iron Ore Standardization Strategy 2034.



Optimizing Corporate Governance and Enhancing Core Competitiveness

China Baowu strictly standardizes its corporate governance system to improve governance efficiency, deepen the reform of state-owned enterprises (SOEs), and inject strong momentum into corporate development. The Group continuously strengthens audit and supervisory functions, identifies, and mitigates various risks in a timely manner, and consolidates the foundation for sound development—ensuring steady and sustained progress along the path of high-quality growth.

Deepening SOE Reform

China Baowu remains focused on key reform areas, further advancing the reform of market-oriented operating mechanisms. It has implemented the three system reforms (labor, personnel, and distribution systems) based on the principle that "only those who create value are entitled to share in value." Efforts have also been intensified to incentivize technological innovation and solidify the foundation for high-quality development.

Interim results achieved in the reform deepening and enhancement initiative

Using the business plan as a vehicle, China Baowu has coordinated reform and operations through a "single ledger" approach to ensure alignment of objectives, seamless execution across all levels, and synergistic advancement. The overall completion rate for Baowu's reform deepening and enhancement initiative has reached 87%, surpassing the 70% benchmark set by the SASAC. China Baowu has received an A rating in SASAC's annual reform assessment for three consecutive years.



From July 4 to 5, 2024, China Baowu held a thematic training session on its reform deepening and enhancement initiative.

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Organizational, institutional, and long-term implementation of the new operational responsibility system

Emphasizing a performance-oriented approach of "outdoing ourselves, outperforming in the overall market, and striving for excellence," China Baowu fully leverages performance assessments as a guiding instrument. Term-based and annual business performance accountability agreements have been signed with subsidiaries to solidify operational responsibilities. Moreover, the Group has strengthened alignment between organizational and individual performance, expanding and enhancing tenure-based and contract-based management for executive teams, thereby ensuring that operational pressure is effectively transmitted to frontline managers.

Advancing the modernization of the corporate governance system and capacity

China Baowu continuously improves the modern enterprise system with Chinese characteristics. By refining its "1+5+N" Board governance framework, it has provided support for the Board of Directors to perform its duties and exercise its powers in a standardized manner across multiple dimensions and levels. Moreover, the Group has revised its *Articles of Association* and *Rules of Procedure for the Board of Directors*, laying a stronger institutional foundation for standardized and efficient board operations. Additionally, the Group adheres to and improves the core functions of the Board—formulating strategies, making decisions, managing risks—while strengthening supervisory responsibilities, thereby transforming institutional advantages into governance effectiveness.



In 2024, the Group



Board of Directors was composed of **9** members

including

5 external directors

All internal directors are experts in the steel industry, while external directors come from diverse sectors including energy, non-ferrous metals, automotive, and finance. This has fostered a diversified and cross-sector governance structure featuring complementary expertise and synergy in strengths. The Board's performance has been rated excellent for **6** consecutive years.

12

Board meetings

1

strategic Board seminar

1

retreat for external directors

3

communication meetings for external directors

66

agenda items reviewed and discussed

including

21

meetings held by specialized committees

8

meetings by the Strategy and Investment Committee

1

meeting by the Nomination Committee



4

meetings by the Remuneration and Appraisal Committee

8

meetings by the Audit and Risk (Supervision) Committee

59

agenda items discussed across all specialized committees

Strengthening Audit and Supervision

China Baowu has continued to improve a group-wide, vertically integrated, and effectively enforced internal audit system. Audit projects are designed to facilitate the implementation of key decisions, identify potential risks in critical areas, and support the Company's high-quality development. Meanwhile, the Group has established and refined an audit rectification framework that integrates comprehensive rectification, targeted rectification, and key issue supervision, ensuring the authoritative and efficient application of audit results and carrying audit rectification follow-up through to completion. In 2024, a total of 507 audit projects were completed within the audit system.

Big Data Audit

Focusing on three core links—back-end audit planning, mid-end remote data support, and front-end real-time issue detection—Baowu has built an integrated digital audit model. This model enables end-to-end, in-depth oversight across all levels, supporting the effective operation of the Company's risk control system and compliance management.

Strategy and Performance Audit

Aligned with the Company's strategic priorities such as the new operational responsibility system, account-based operations, the high-end, intelligent, green, and high-efficiency development directions, and the management principle emphasizing order-driven production, margin-limited output, profit-driven revenue, and cash flow-generating profit, Baowu has completed a series of audit projects. These include annual organizational performance audits of subsidiaries, sample audits on the effectiveness of IT investments and information systems, as well as audits on the implementation of total payroll mechanisms at subsidiaries linked to "effectiveness and efficiency."

Investment Audit

Focusing on account-based investment and the achievement of key investment project targets, Baowu has carried out several audit projects, including the first process audit of the Simandou Project, a process audit of Phase I of the Anhui Baowu High-Performance Magnesium-Based Light Alloy Project with an annual capacity of 300,000 metric tons, and a post-evaluation audit of unauthorized investment projects. These audit efforts have continuously enhanced the Company's investment management framework and capabilities.

Operational Audit

Through economic responsibility audits, Baowu has objectively assessed financial conditions and operating results, enabling the timely identification of major operational risks and potential areas for cost reduction and efficiency enhancement. These efforts have effectively promoted alignment and compliance of management activities with corporate objectives. The Group has also conducted net asset audits for changes in property rights, providing strong assurance for key ongoing business activities such as equity investments and asset transfers.

Overseas Audit

Upholding an integrated approach of unified planning, system-wide coordination, and risk-based orientation, Baowu has achieved full coverage of overseas audits for the 2024-2026 period. Focusing on critical areas and key links such as assets, investments, procurement and sales, and commissions, the Group has strengthened oversight according to the law and elevated supervision to promote compliance management and sound development of its overseas subsidiaries.

Internal Control Supervision and Evaluation

Targeting critical areas, operations, personnel, and key processes—especially within new, overseas, and grassroots units—Baowu has conducted in-depth internal control supervision and evaluations. The Group has strengthened oversight and management of subsidiaries' internal control supervision and evaluations, and explored the development of a Baowu-specific internal control supervision and evaluation model tailored to a state-owned capital investment company.

Prioritizing Risk Control and Enforcing Strict Safety Boundaries

China Baowu places heightened emphasis on risk prevention and regulatory oversight. The Group is accelerating the implementation of the "Four Transformations"* and deepening the integrated four-pronged risk inspection mechanism to enhance its risk prevention and control capabilities. A comprehensive risk management system is in place, complemented by proactive contingency plans for major risks, effectively preventing systemic incidents. In 2024, the Group reported no new incidents involving fictitious trade, major overseas investments, or serious safety and environmental incidents. Overall risk remained under control.

Enhancing Risk Management and Control

Risk Management System

Upholding a bottom-line mindset and prioritizing source prevention, China Baowu continues to improve its risk management systems. A tiered risk prevention and control system is in place for major operational risks, supported by key internal control mechanisms. The Group has refined the risk management framework centered on "source treatment, timely disclosure, decisive response, and accountability for rectification." Clear boundaries are defined for major risk governance at the Group level, with proactive efforts to prevent major risks and hazards in areas such as overseas investments, debt exposure, and trading operations.



Since 2013

11,735

individuals have passed the legal knowledge exam for authorized representatives

Law-Abiding and Compliance Management

China Baowu strictly complies with national laws and regulations and operates in accordance with the law. A comprehensive compliance management system and operation mechanism is firmly in place. Focusing on the themes of law construction and compliance management, Baowu has organized specialized compliance officer training, workshops on the newly revised Company Law, and training sessions to communicate key legal and compliance priorities and enhance professional capabilities. These activities aim to strengthen the performance capacity of Chief Legal Officers and Chief Compliance Officers at subsidiaries while improving the professionalism of legal and compliance personnel across all levels. In 2024, more than 70 compliance officers from the Group, headquarters departments, and subsidiaries participated in specialized compliance officer training. Over 1,000 employees attended workshops on the newly revised Company Law. A total of 1,686 employees passed the legal knowledge exam for authorized representatives, bringing the cumulative number of certified individuals to 11,735 since 2013.



Key Facts

*"Four Transformations":

Transformation from risk response to risk assessment and judgment, from disposal of risk incidents to systemic risk prevention, from internal control system building to internal control capability building, and from risk control to risk-based business management.



On April 22, 2024, China Baowu held the 2024 Work Conference on Law-Based Governance and Compliance Management.

Anti-Unfair Competition

Baowu strictly complies with national laws and regulations on anti-unfair competition. Relevant provisions and requirements are specified in a dedicated chapter of the Group's Compliance Management Guidelines, which serve to regulate and guide the conduct of the Group and its subsidiaries in related areas. In 2024, the Group reported no violations of anti-unfair competition laws.

Strengthening Information Disclosure

Baowu upholds high standards and quality in public information disclosure. It reports corporate data to the National Enterprise Credit Information Publicity System in accordance with laws and regulations, thereby safeguarding the right to information for creditors and other stakeholders. In 2024, the Group received no penalties related to information disclosure violations.

Grievance and Whistleblowing Mechanism

Baowu strictly adheres to national laws and regulations, accepts letters and visits, whistleblower reports, and grievances in accordance with discipline, regulatory procedures, and the law, while also adopting multiple measures to ensure accessible and effective grievance and reporting channels. Baowu has signed integrity agreements with business partners. It communicates expectations on business ethics and labor standards to stakeholders by incorporating relevant clauses in business contracts, publishing them on internet-based business platforms, and embedding them in employee labor contracts and onboarding guidelines.

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Ensuring Workplace Safety



In 2024

The Group's major risk monitoring platform added

3,011

new monitoring indicators

Workplace Safety Management System

China Baowu has launched a three-year action to strengthen workplace safety and issued the *Notice on Issuing the Implementation Plan for China Baowu Three-Year Action to Strengthen Workplace Safety (2024-2026)*. The implementation plan consists of three stages—hazard rectification, foundation reinforcement, and efficiency enhancement—and covers 14 key areas with 34 detailed measures. The Group has also introduced new management regulations, such as the *China Baowu Technical Guidelines for Safety Management of Air Pollution Control Facilities (Trial)* and the *China Baowu Regulations on Pre-emptive Accountability for Workplace Safety (Trial)*, aiming to strengthen long-term workplace safety mechanisms. Efforts have been made to advance the special campaign for standardized operations and accelerate the deep integration of the major risk monitoring platform with safety management practices. By leveraging big data analytics and predictive algorithms, Baowu has enhanced the accuracy of risk assessment and early warning capabilities. Moreover, the Group continues to focus on strengthening the safety management systems of its subsidiaries, with an emphasis on hazard identification, risk control, and source-level prevention—ensuring that all targeted safety initiatives are implemented thoroughly and effectively. In 2024, the Group's major risk monitoring platform added 3,011 new monitoring indicators and 375 surveillance video feeds, bringing the total to 14,198 indicators and 2,565 video feeds. The overall system integration rate has reached 94.6%.

Safety Emergency Management Capability

To improve employees' awareness of fire safety and their ability to respond to emergencies, China Baowu has conducted a variety of practical fire emergency drills. In 2024, the Group was awarded the title of Excellent Organization in the 5th National Emergency Management and Law Publicity Competition. It also organized a fire emergency response skills competition with the participation of 40 teams.

Hazard Identification and Rectification

China Baowu has continued to deepen its focus on safety through targeted inspections. The Group issued the *Notice on Issuing the 2024 Safety Inspection Work Plan*, and carried out related tasks based on the "Five Must-Checks" principle—key areas, major risks, critical hazards, key personnel, and key work processes. A campaign of intensive and targeted rectifications was launched across subsidiaries to address fire hazards. Special inspections of outdated facilities were carried out at various real estate units to further strengthen safety assurance capabilities. In 2024, 91 rectification contact letters were issued by the Group's inspection teams, with all identified hazards under active rectification as planned.

Safety Awareness and Training

China Baowu has actively participated in various safety culture initiatives, advanced the labor competition themed "Enforcing a Workplace Safety Accountability System for All Employees," launched a series of "Workplace Safety Month" campaigns, and held diverse safety training programs such as the "Baowu Workplace Safety Lectures." These activities aim to foster a deeply rooted safety culture. In 2024, the Group provided occupational health and safety training to a total of 522,149 participants, achieving a 100% training coverage.

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Advancing Quality Management and Improving Service Effectiveness

China Baowu continues to strengthen quality management and customer service. By enforcing rigorous quality controls and improving system infrastructure, the Group is solidifying its foundation for superior quality and delivering enhanced customer experiences through full-process service optimization.

Delivering High-Quality Products

China Baowu strictly oversees product quality across all business segments, implementing a consistent quality management system for products. The Group carries out product improvement and technological innovation initiatives to raise the quality, increase the production, and expand market reach of high-quality, high-tech, and high-value-added offerings—ultimately winning customer trust.

Industrial Portfolio	Quality Management Performances	
Steel Manufacturing	Baosteel	Both headquarters and all production bases have passed the ISO 9001 quality management system external certification. All plants supplying automotive sheets are certified to IATF 16949 quality management system.
	Zhongnan Iron & Steel	No major safety or quality liability incidents related to products or services occurred. The product inspection pass rate reached 99.91%, and the company successfully passed the re-certification audit of its quality management system.
	Magang Group	The company has continued to advance production licensing management. The product pass rate reached 94.51%.
	TISCO	The product pass rate reached 99.68%. A total of 32 effective quality management systems are in operation, with 181 QC team activities conducted.
	Bayi Iron & Steel	The company has actively pursued product quality system certifications. No negative safety incidents related to product quality were reported.
	Xinsteel	The product pass rate stood at 99.26%. The maturity level of its quality management system was rated AAA.
Advanced Materials	Baowu Carbon	The first-pass product qualification rate reached 99.71%. The company fully achieved its 2024 annual quality targets.
	Baosteel Metal	13 subsidiaries under Baowu Magnesium have either obtained or maintained valid IATF 16949 quality management system certifications. No major safety or quality liability incidents related to products or services occurred.
	Baosteel Packaging	The company has been certified under the ISO 9000 quality management system, FSSC 22000 food safety management system, as well as recognized as a National Level-2 Workplace Safety Standardization Enterprise and certified for cleaner production.
Green Resources	Baowu Resources	The company has strengthened production licensing management and the guidance of quality performance through quality training and "Quality Month" campaigns.
	Sinosteel	Its subsidiaries have been certified under GB/T 19001 quality management system and GJB 9001C military equipment quality management system.
	Tibet Mineral Development	Both the Shannan Branch and the Zabuye Project have passed ISO 9001 quality management system certification.
Intelligent Services	Baosight	The company has passed supervisory audits for QHSEI and ITSM management systems conducted by the Shanghai Audit Center of Quality System.
	Ouyeel	Ouyeel issued the <i>Logistics Service Handbook for Bases</i> . Subsidiaries Wugang Logistics and Materials Industry Nanjing obtained quality management system certifications.
	Sinosteel Engineering & Technology	The company operates under the "three-standard integration" management system. All completed projects achieved a 100% quality acceptance rate. Sinosteel MECC has passed the quality management system certification.
	Obei	Obei has been certified under the ISO 9001:2015 product quality management system.

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Building a Harmonious Society through Concrete Actions

Setting a Benchmark for Service Excellence

Focusing on both market and on-site needs, China Baowu integrates product development and technical services to address external customer demands and enhance internal manufacturing and R&D capabilities. The Group delivers efficient, professional, and customized service experiences across the full customer journey—from pre-sales to in-sales and post-sales.

Responsible marketing

China Baowu adheres to compliant marketing principles, strictly prohibits false advertising, ensures the accuracy and transparency of information, and safeguards its market reputation.

- Magang Group**
Exaggerated or misleading advertising is strictly prohibited. No violations related to product or service information and labeling occurred in 2024.
- Xinyu Iron & Steel**
Product brochures are well-illustrated with verifiable performance data. Order management is fully transparent.
- Sinosteel Engineering & Technology**
Misleading promotions are strictly forbidden. Strong controls are in place to ensure the authenticity of marketing content.

Information security and privacy protection

China Baowu strengthens data security and customer privacy protection by fortifying its data security defenses through technical safeguards, institutional controls, and compliance management, thereby ensuring full-chain protection of customer information.

- Technical safeguards**
Baowu Resources employs network zoning and encrypted transmission to mitigate risks. Hwabao Trust implements 24/7 real-time monitoring, with critical systems having passed the national Class III cybersecurity protection certification.
- Institutional controls**
Sinosteel Engineering & Technology and Tibet Mineral Development enforce strict confidentiality policies. No customer privacy breaches occurred in 2024. Baowu Group Finance Company has improved its data security management policy framework.
- Compliance management**
Baosteel Packaging has promptly identified and rectified system vulnerabilities to promote compliance with classified protection standards. Hwabao Securities has updated its privacy policy and passed the national cybersecurity protection certification across multiple systems.

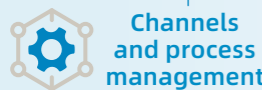
Handling customer complaints

China Baowu has established a comprehensive customer complaint handling system through improvements in policy, optimization of communication channels, and process management. By updating management policies, streamlining feedback channels, and establishing efficient response mechanisms, the Group has ensured a timely response to and effective resolution of customer issues, thereby significantly enhancing customer satisfaction and its service quality.



Policy optimization

Zhongnan Iron & Steel has updated its *Customer Complaint Handling Management Measures* to increase the response and handling speed, achieving a 100% resolution rate in 2024. Bayi Iron & Steel has revised its *Product After-Sales Dispute Handling Management Measures*, which specify key steps such as the handling cycle. Under its guarantee, no negative service performance incidents occurred in 2024.



Channels and process management

Magang Group has integrated a 400 hotline with its self-service platform and built a closed-loop system by dispatching regional representatives and using digital tools. Xinsteel guarantees on-site responses within 48 hours in-province and 72 hours out-of-province, with issues resolved within 10 working days and full online process tracking. Hwabao WP Fund Management has implemented a standardized "Record-Verify-Feedback-Archive" process for complaint handling.



Mechanism innovation

Sinosteel Engineering & Technology has enhanced its project documentation and follow-up visit mechanism to ensure lawful and timely complaint resolution. Baoland Real Estate Asset Management has established both system-based and telephone complaint channels and regularly analyzes feedback collected via QR codes. Hwabao Securities has improved its service quality by updating its case database and enhancing training programs tailored to different types of complaints.

Loss mitigation and compensation mechanism

China Baowu has established a rapid-response loss mitigation and compensation mechanism to address quality issues and contract performance risks in a timely manner, thereby safeguarding customer rights and interests.

Magang Group

For products affecting customers' continuous production, immediate remedial actions are taken, with swift compensation and targeted corrective measures.

Baowu Resources

In cases of quality deviation from contract standards, customers are promptly alerted, products are discounted as appropriate, and compensation is provided in line with regulations. Emergencies are resolved through joint consultation among relevant parties, with clear accountability tracing.

Sinosteel Engineering & Technology

Comprehensive risk assessments are conducted throughout the lifecycle of major contracts, and compensation for damages and dispute resolution are handled in strict accordance with contractual terms.

Product and service accessibility

China Baowu has expanded online service channels and leveraged digital tools to enhance service convenience and efficiency, thereby improving the overall customer experience.

Baowu Group Finance Company

The company has developed online platforms such as the mobile app and e-service hall to enable fully digitalized financial services, and launched digital signature-enabled deposit products.

Baowu Resources

The company has rolled out its first customer-facing trading tool—the Resources GO platform—which achieved a total transaction volume of 84.67 million metric tons, representing a year-on-year growth of 54%. The mobile version of the platform was also launched and put into operation.

Consumer education

China Baowu has carried out investor education through diversified approaches, achieving wide coverage, varied formats, and notable results, thereby contributing to financial literacy promotion and the development of a healthy investment ecosystem.

Hwabao Trust

Hwabao Trust hosted over 60 investor education events, reaching thousands of participants. Dedicated columns on anti-money laundering and consumer protection have been launched on the we-media and official platforms. It has also actively participated in themed promotion campaigns such as "March 15" and "Financial Literacy Month" to popularize trust knowledge and culture.

Hwabao WP Fund Management

Hwabao WP Fund Management has developed the "All About ETFs" service brand IP and launched the Weekly Strategy live-stream series to explain investment fundamentals. This investor education project received recognition from Sina Finance. In 2024, 28 investor education image-text articles were published via its official WeChat and Sina Weibo accounts.

Hwabao Securities

Hwabao Securities conducted 102 "Four Outreach" activities (targeting colleges and universities, corporate groups, communities, and listed companies), including both online live-streams and offline visits, engaging over 13,000 participants. Focused on promoting financial literacy and anti-fraud awareness, these activities contribute to fostering a healthy investment environment.

Toward a More Sustainable Future

Setting an Example for Green and Low-Carbon Transition*

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Stepping up Green Manufacturing to Lead Low-Carbon Industrial Transformation  72

 Response to the United Nations Sustainable Development Goals (SDGs)



* For more details on green and low-carbon development, please refer to the *China Baowu 2024 Green and Low-Carbon Development Report*.



Our Understanding

Green is the fundamental tone of the steel industry and an integral part of high-quality development. As it advances new industrialization, China Baowu remains committed to a development path that is high-end, intelligent, green, and high-efficiency, accelerating the green and low-carbon transformation and high-quality development of the steel industry.

Our Practices

Guided by Xi Jinping Thought on Ecological Civilization, China Baowu maintains a strong political stance and a clear sense of responsibility. The Group has met all performance fulfilled the full scope of objectives outlined in the *Letter of Responsibility on Energy Conservation and Environmental Protection Targets*, contributing to the national vision of building a Beautiful China. The Group has also strengthened pollution control, completing full-process ultra-low emission upgrades across over 100 million metric tons of steel production capacity. With a strong emphasis on wastewater treatment and management, the Group has achieved reductions in both the total volume and intensity of freshwater consumption and wastewater discharge in steelmaking operations. Meanwhile, the Group has pioneered the "Waste Free Group" pilot program, with all efforts being planned from a strategic perspective, implemented to high standards, and executed with a focus on high-quality outcomes. The Group has steadily advanced the "Energy Efficiency Maximization" project, which is focused on establishing energy efficiency benchmarks, and made significant strides in technological innovation and commercialization of low-carbon metallurgical processes. Key breakthroughs include the hydrogen-enriched carbonic oxide recycling oxygenate furnace (HyCROF) and the hydrogen reduction and electric smelting process (HyRESP). Additionally, the Group has launched six categories of low-carbon products under its low-carbon brand, BeyondECO, and put in place a system for total carbon emissions and carbon emissions intensity control. These efforts underscore Baowu's strong commitment to achieving a comprehensive green transformation.



Our Performance

Key Figures for China Baowu in 2024

The HyCROF commercial demonstration project, developed by China Baowu, received the 15th Steelee Awards from the World Steel Association for excellence in low-carbon steel production.



Investment in environmental protection approximately
¥ 4.577 billion

Total investment in energy conservation technology upgrades approximately
¥ 2.813 billion

Water reuse rate
98.59 %

Decrease in sulfur dioxide emissions compared to 2023
7.7 %

Decrease in nitrogen oxides emissions compared to 2023
7 %

Comprehensive solid waste utilization rate
99.60 %

Hazardous waste disposal compliance rate
100 %

The reduction rate of CO₂ emissions per metric ton of steel*
0.82 %

A total of 31 legal entities participated in national and regional carbon emissions trading markets, achieving
100 % compliance annually



*The reduction rate of CO₂ emissions per metric ton of steel is calculated in accordance with the *Guidelines for Accounting and Reporting of Greenhouse Gas Emissions of Chinese Iron and Steel Enterprises (Trial)*.



Tightening up Environmental Management and Laying a Solid Foundation for Green Development

China Baowu actively addresses climate change by enhancing environmental management, conserving energy and resources, promoting circular economy practices, and coordinating pollution control efforts. The Group has implemented full-process ultra-low emission upgrades, striving to improve its energy and environmental management capabilities. It has also developed energy efficiency benchmarks for key steelmaking processes, accelerated the building of green factories, and steadily advanced the "Waste Free Group" pilot program.

Energy and Environmental Management

The Group continues to improve its top-level architecture for energy and environmental management by establishing and refining a group-wide institutional framework. Efforts have been made to set clear energy and environmental management objectives, reinforce the environmental risk prevention and control mechanism, and develop a standardized, systematic management system. By the end of 2024, all steel production enterprises under the Group and key production enterprises within Baowu's diversified industrial segments had been certified under environmental management systems and were operating them effectively. During the reporting period, no major or above-level environmental incidents occurred, nor were there any environmental incidents with serious societal impact.

Energy and Environmental Management Objectives

No violations of laws or regulations, no excessive or unauthorized emissions, and no major or above-level environmental incidents. Promote the effective implementation of the management philosophy of "ultra-low waste gas emissions, zero liquid discharge, and no solid waste leaving the factory." Actively develop green products and foster green industries. Fully leverage the enterprise's functional advantages to contribute to urban ecological development and achieve sustainable growth in harmony with the environment.

Energy and Environmental Organizational System

The Group has established the Energy and Environmental Management Committee (EEMC) to serve as the decision-making body for its energy and environmental strategies and policies. The EEMC reviews major strategies on energy conservation, environmental governance, ecological protection, and resource utilization; approves relevant development plans, rules, and regulations; coordinates the resolution of significant issues; oversees the performance of subsidiaries in fulfilling their responsibilities; and authorizes accountability measures for environmental incidents within the Group.

The EEMC is co-chaired by the Chairman, as well as the President of the Group. Deputy chairs include the Vice President in charge of energy and environmental affairs and the Chairman of the Labor Union. Committee members consist of the heads of subsidiaries, heads of business centers and functional departments at headquarters, and the head of the CCYL Committee.



Energy and Environmental Institutional System

In alignment with national laws and regulations on energy and environmental protection, China Baowu has established and refined a comprehensive energy and environmental institutional system. Energy and environmental management systems and environmental emergency management mechanisms have been formulated, including the *Management Measures for Energy and Environmental Protection*, the *Management Measures for Environmental Incidents (Contingency Plan for Major Environmental Emergencies)*, and the *Management Measures for Accountability of Environmental Incidents*. Through strengthened overall leadership in green development and the implementation of principal responsibilities for energy conservation and environmental protection, the Group aims to enhance its energy and environmental capacity to support green transformation and upgrades. The goal is to achieve high-quality and sustainable development that aligns with energy and resource constraints, matches environmental carrying capacity, and is compatible with environmental protection.

Environmental Early Warning and Emergency Response Mechanism

To strengthen environmental risk management and enhance the ability to control and respond to major environmental emergencies, China Baowu has established clear requirements for managing the risks of such incidents and formulated the *Management Measures for Environmental Incidents (Contingency Plan for Major Environmental Emergencies)*.

In accordance with the regulations, all subsidiaries are responsible for developing their own environmental risk management systems, and for establishing and refining their internal management frameworks, mechanisms, workflows, and regulations for environmental emergencies. Each subsidiary is required to identify and assess potential environmental risks and their corresponding environmental emergency risks, formulate and improve contingency plans for various types of environmental incidents, and regularly organize emergency drills. They should also maintain adequate stocks of emergency environmental equipment and supplies, while identifying and eliminating environmental hazards. Subsidiaries are further required to manage the full response process to environmental incidents, including emergency response, root cause analysis, investigation and resolution, accountability for responsible parties, and environmental remediation. Timely collection, internal reporting, and, where applicable, public disclosure of environmental incident information should be conducted in accordance with the relevant requirements.

Environmental Assessment Policy for New Projects

In accordance with the Group's *Management Measures for Energy and Environmental Protection*, all subsidiaries are required to conduct comprehensive and detailed assessments—prior to project construction—of the potential pollution and environmental impacts the proposed project may cause. Based on the applicable classification management requirements, corresponding environmental impact documentation must be prepared and submitted to the competent authorities with the appropriate approval authority for review and approval.



Energy and Resource Conservation

Establishing Energy Efficiency Benchmarks

China Baowu has continued to advance its "Energy Efficiency Maximization" project, which is focused on establishing energy efficiency benchmarks. This includes intensifying efforts to facilitate the promotion and application of energy efficiency maximization technologies, accelerate upgrades to industrial equipment and production processes, and steadily strengthen its competitive edge in green development. By the end of 2024, over 40% of production capacity in key steelmaking processes across its steel enterprises had achieved benchmark-level energy efficiency. Among them, seven affiliated enterprises, including Baosteel Zhanjiang Iron & Steel, Baoshan Base, Wuhan Iron & Steel, Shanghai Meishan Iron & Steel, Masteel, Shanxi Taigang Stainless Steel, and Xinsteel, completed either public disclosure or on-site acceptance under the "Best Practice of Carbon Peaking and Carbon Neutrality Goals—Energy Efficiency Benchmark Demonstration" by CISA.



Case

2024 Benchmark Case

All five Baosteel bases designated as "Energy Efficiency Benchmark Demonstration Enterprises" by CISA

In 2024, Baosteel focused closely on the high-end, intelligent, green, and high-efficiency development directions set by the Group, making strides in establishing "Energy Efficiency Benchmark Demonstration Enterprises" through innovative management mechanisms, robust data infrastructure, and deepened collaboration. All five bases (Baoshan, Qingshan, Dongshan, Meishan, and Lanshan Bases) completed CISA's energy efficiency benchmark demonstration program, with Dongshan Base becoming the first demonstration enterprise in the industry to receive public recognition. These achievements underscore Baosteel's leading role in the green and low-carbon transformation.



Case

2024 Benchmark Case

Zhongnan Iron & Steel's Echeng Iron & Steel pioneered an innovative model for harmonious coexistence between urban steel mills and the ecological environment

In 2024, Echeng Iron & Steel launched its *Action Plan for Establishing Energy Efficiency Benchmarks* in alignment with China Baowu's *Work Plan for Establishing Energy Efficiency Benchmarks*. The company continued to advance targeted improvement initiatives focused on key energy performance indicators. As a result, Echeng Iron & Steel achieved a self-generated electricity rate of 96.2% in 2024, and its carbon emission intensity decreased by 3.5% year-on-year. The company was recognized by MIT as a "Water Efficiency Leader" among major water-consuming enterprises and was named an "Outstanding Progress Enterprise" for Energy Efficiency Maximization Project in the Steel Industry under the Three-Year Action Plan for Energy Efficiency Benchmarking by CISA. In recent years, Echeng Iron & Steel has completed multiple major energy-saving upgrade projects, cumulatively saving the equivalent of 300,000 metric tons of standard coal and reducing carbon emissions by 800,000 metric tons.



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Optimizing the Energy Mix

China Baowu has prioritized the continuous optimization of its energy mix and the increased use of clean energy as a key task in the Group's 2024 energy and environmental agenda. Tailored to local conditions, subsidiaries have expanded distributed renewable energy deployment and increased the use of clean energy sources such as natural gas and green electricity, while reasonably curbing the growth of coal consumption and continuously optimizing the energy consumption structure. In 2024, the Group added over 200 MW of new renewable energy capacity, bringing its total installed capacity to more than 900 MW. Renewable energy consumption surpassed 7 billion kWh for the year, up more than 15% year-on-year.

Clean transportation and vehicle energy upgrades

Magang Group maintained an average clean transport share of over 80% throughout the year, reaching 81.01% by year-end. New energy vehicles accounted for 14.28% of the fleet, meeting the annual target.

Photovoltaics (PV) and green electricity use

Wugang Group reached a total installed photovoltaic capacity of 53.7 MW, with annual power generation of 45 million kWh and carbon reductions of 26,500 metric tons—making it the largest rooftop distributed PV project in Central China. From 2020 to 2024, Wugang Group procured over 1 billion kWh of green electricity, cutting carbon emissions by more than 600,000 metric tons.

New energy projects and technological breakthroughs

Baowu Clean Energy surpassed 600 MW in grid-connected new energy capacity, with key projects including Phase II of the Zabuye Salt Lake project and the Sanmenxia source-network-load-storage integration project making solid progress. Breakthroughs were made in hydrogen-based energy systems and metallurgical energy storage technologies. Tibet Mineral Development's Zabuye Phase I project replaced coal heating with PV-based systems, reducing coal use by 300 metric tons per year. The Phase II project deployed a source-network-load-storage solution to eliminate fossil fuel-based emissions.

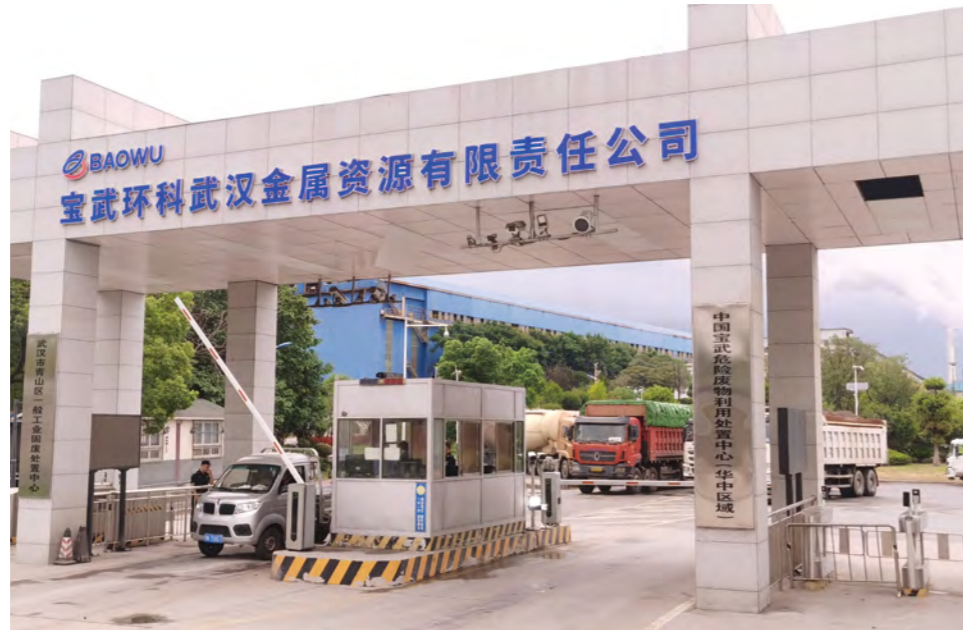
Water Resource Management

China Baowu has strictly adhered to China's most stringent water resource management standards through source-level reduction and total water consumption control. The Group has enforced a strict water withdrawal permit mechanism, integrating water withdrawal permit requirements into the Group's *Management Measures for Energy and Environmental Protection* for standardized management. A paid-use policy for water resources has also been rigorously implemented, with all affiliated entities required to pay water withdrawal fees in full and on time. Comprehensive water conservation management measures have been taken to continuously improve water utilization efficiency. As a result, TISCO's Taigang Stainless Steel was selected as a representative case of water-efficient industrial enterprises for supporting high-quality development in the Yellow River basin. Baosteel Zhanjiang Iron & Steel and Zhongnan Iron & Steel's Echeng Iron & Steel were recognized as "Water Efficiency Leaders" by MIT.



Building a "Waste Free Group"

Actively embracing the "zero waste" development philosophy, China Baowu has formulated the *Pilot Work Plan for Building a Waste Free Group of China Baowu Steel Group Corporation Limited* and the corresponding *Implementation Plan*. These initiatives aim to explore the development of a solid waste environmental management demonstration base tailored to large steel conglomerates and to comprehensively promote the establishment of a "Waste Free Group" pilot, thereby creating an exemplary model of "Waste Free Group" that supports the national goal of building a Beautiful China.



From August 21 to 23, 2024, China Baowu held its first themed training session on the "Waste Free Group" program at the Wuhan Engineering Institute. The event also featured the inauguration ceremony of the China Baowu Emergency Response and Disposal Training and Education Base for Hazardous Waste, along with the unveiling of the China Baowu Center for Hazardous Waste Utilization and Disposal (Central China Region), underscoring the Group's continued commitment to advancing its zero waste philosophy and building a benchmark "Waste Free Group."

Wastewater Discharge Management

Regulations on wastewater discharge management have been incorporated into the *Management Measures for Energy and Environmental Protection*, with efforts focused on minimizing total discharge volumes. China Baowu has actively promoted the reuse of wastewater following advanced treatment, continuously reducing the total volume of wastewater discharged by affiliated entities. The Group has also continued to strengthen wastewater treatment and compliance management at wastewater discharge outlets by ensuring proper installation, standardized monitoring, and regulated discharge. In 2024, the Group's total wastewater discharge across all steel production bases decreased by 12.3% year-on-year.

Upgrades for Ultra-Low Waste Gas Emissions

To guide its efforts in upgrading the organization to achieve ultra-low waste gas emissions, China Baowu has developed the *China Baowu Work Plan for Upgrading Affiliated Steel Enterprises to Achieve Ultra-Low Emissions* and the *China Baowu Work Plan for Upgrading Affiliated Coking Enterprises to Achieve Ultra-Low Emissions*. In 2024, the Group continued to advance these upgrades through a project-based approach. To support implementation across various bases, the Group established a pairing and collaboration mechanism that provided targeted support to each base according to its specific progress and needs. This included solution evaluations, technical exchanges, on-site assistance, and performance monitoring and evaluations. By the end of 2024, over 80% of the Group's steel output had been upgraded to achieve full-process ultra-low emissions.

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Waste Disposal Management

China Baowu has designated 15 pilot enterprises to spearhead the "Waste Free Group" pilot program, following a "one factory, one policy" model. These enterprises are expected to advance the pilot program in alignment with the goals of maximizing solid waste reduction at the source, minimizing off-site discharge, standardizing collection and storage practices, optimizing waste utilization and disposal, promoting the productization of recycled resources, and enhancing intelligent supervision and monitoring systems. By the end of 2024, all designated entities under the "Waste Free Group" pilot program met their assigned goals and performance targets, including maintaining general industrial solid waste intensity for long-process steel production (excluding stainless steel) below 0.68 metric tons per metric ton of steel, and achieving a comprehensive utilization rate of over 98% for general industrial solid waste.

Zhongnan Iron & Steel

Guangdong Zhongnan Iron & Steel completed its ultra-low emission upgrade and publicly disclosed the results of monitoring assessments. Compared to pre-upgrade levels, emissions per metric ton of steel dropped by 45% for particulates, 51% for SO₂, and 45% for NO_x. Ambient air quality across the plant area continued to improve significantly.

Xinsteel

In 2024, Xinsteel implemented 31 ultra-low emission upgrade projects. Once operational, these projects are expected to reduce annual energy consumption by the equivalent of 56,100 metric tons of standard coal and lower SO₂ and NO_x emissions by over 40%.

Sinosteel Engineering & Technology

Sinosteel Tiancheng optimized pollution treatment workflows and accelerated the industry's shift toward ultra-low emissions through a portfolio of self-developed green technologies. These solutions include the ultra-low emission technology for fine particulate matter from steel furnaces, the bag filter dust removal technology for sintering machine head flue gas, and the fugitive emission waste gas control and coordinated treatment technology for delayed coking coke storage pits.



Case

2024 Benchmark Case

Baowu Environment and Resource Technology and Baowu Water Technology jointly create a demonstration model for urban sludge resource utilization

Baowu Environment and Resource Technology has actively promoted the environmental protection concept of building "zero waste cities" by innovating an integrated treatment system built on "reduction, harmlessness, and resource utilization." As a result, the company has reached an annual treatment capacity of 400,000 tons and a 100% harmless disposal rate. Moreover, the company has undertaken the contingency disposal of residual sewer sludge in Shanghai and contributed to the formulation of local standards for sewer sludge treatment. Leveraging the integrated environmental protection industry platform spanning water, gas, solid waste, and soil—jointly developed with Baowu Water Technology—the company pioneered an EPC service model for urban sludge treatment, helping clients resolve complex sludge treatment challenges and supporting Shanghai's development of a "zero waste city". In 2024, the company undertook the emergency cleanup of 150,000 metric tons of dredged sediment in a certain district of Shanghai and treated over 200,000 metric tons of sludge in total, with a daily capacity of nearly 4,000 metric tons—setting a new company record and marking a significant contribution to safeguarding the urban ecological environment.



- 创新构建“减量化—无害化—资源化”三位一体工艺体系
- 年处置能力 40万吨, 无害化处理率 100%, 资源化利用率 100% 以上
- 成为上海市 通沟污泥处理 技术标杆

Stepping up Green Manufacturing to Lead Low-Carbon Industrial Transformation

Centered around innovations in green technologies, China Baowu has accelerated innovation and commercialization of low-carbon metallurgical technologies, focusing on HyCROF and HyRESP systems. The Group has actively promoted the R&D, delivery, and application of green products and services, steadily growing its green industrial portfolio and accelerating its comprehensive green transformation.

R&D of Green Technologies

China Baowu remains committed to proactively advancing R&D in energy conservation and emissions reduction technologies, while exploring next-generation low-carbon metallurgical processes and technologies. The Group has continued to accelerate the commercialization of its 2,500 m³ HyCROF process and conducted industrial-scale trials of hydrogen-based shaft furnace technology at Zhanjiang Iron & Steel. In 2024, HyCROF technology was successfully demonstrated and received the 15th Steelie Award from the World Steel Association for excellence in low-carbon steel production. The million-metric-ton-class hydrogen-based shaft furnace also completed four industrial-scale trials following ignition, with all performance metrics exceeding design expectations, marking the first step forward in mastering the safe production techniques for this breakthrough process.



Case

Bayi Iron & Steel's 2,500 m³ HyCROF commercial demonstration line achieved targeted decarbonization performance

The 2,500 m³ HyCROF commercial demonstration project commenced pilot production on September 28, 2023. Since launch, the HyCROF technical team has undertaken a series of process optimization and operational improvement initiatives aimed at enhancing the line's decarbonization capabilities. These efforts have continuously improved the system's decarbonization performance. By September 2024, the decarbonization system achieved 100% operational uptime, and the decarbonized gas output of the demonstration line met its designed target.

By September 2024

The decarbonization system achieved **100** % operational uptime



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Case

China's first million-metric-ton-class hydrogen-based shaft furnace passed the weekly capacity performance evaluation

On August 22, 2024, Baosteel Zhanjiang Iron & Steel's million-metric-ton-class hydrogen-based shaft furnace achieved 168 hours of continuous full-load operation, passing the weekly capacity performance evaluation. The successful verification of stable operations under high-hydrogen conditions (70% hydrogen content) marks a significant milestone in China's pursuit of zero-carbon and green transformation and development of the steel industry.



Case

Successful application of China's leading core technology for blast furnace gas source-end treatment independently developed by Baowu Environment and Resource Technology and Baowu Water Technology

By February 2024

The project has reached a
gas treatment capacity of

400,000

standard cubic meters
per hour



In February 2024, the No. 1 Blast Furnace Gas Deep Desulfurization Project of the Masteel Group Ironmaking General Plant was completed and put into operation. The facility applied the BW-DHA dry hydrolysis + absorption method for deep desulfurization of blast furnace gas, which reached a gas treatment capacity of 400,000 standard cubic meters per hour. All project indicators met the design specifications, achieving a leading position domestically. As the first full-scale blast furnace gas deep desulfurization project within China Baowu, it serves as a model for the source-end treatment of blast furnace gas in the industry.

The BW-DHA technology, independently developed by Baowu Environment and Resource Technology and Baowu Water Technology with proprietary intellectual property rights, is a source-end treatment solution for deep desulfurization of blast furnace gas. It is characterized by high efficiency, low energy consumption, and long service life. In response to industry-wide challenges, Baowu Water Technology has also developed five core technologies—"gas conditioning," "high-activity anti-poison hydrolysis agents," "thermal energy recycling," "dynamic temperature control," and "intelligent operation"—which significantly enhance gas quality. These advancements have enabled more efficient utilization of gas in power generation and heating processes, thereby improving energy utilization efficiency, and reducing environmental impact.

Advancing High-Quality Green Products

With a focus on high strength, high corrosion resistance, and high efficiency, China Baowu has accelerated the upgrading of its product portfolio toward high-end segments. The Group has further consolidated and enhanced the competitive edge of strategic products such as automotive sheets and silicon steel, while expediting the development of differentiated products. In response to material upgrading demands from downstream industries, the Group has offered integrated solutions built around cross-cutting technologies. By working in synergy across the entire industry chain, it has advanced the high-end transformation of basic steel products and contributed to the upgrading of steel materials that underpin the national economy and broader society.



Case

China Baowu launched a low-carbon brand, BeyondECO, and the first portfolio of low-carbon steel products

On October 23, 2024, China Baowu officially launched its low-carbon brand, BeyondECO, and the first portfolio of low-carbon steel products at the Global Low-Carbon Metallurgy Innovation Forum 2024 & the 9th Baosteel Biennial Academic Conference, themed "Green New Future of Low Carbon Steel."

The term "Beyond" embodies Baowu's commitment to continuous self-advancement and excellence through technological innovation. The stylized letter "d," designed as a budding sprout, represents the company's dedication to empowering the future with digitalization and intelligent transformation, as well as the incubation of emerging green and low-carbon technologies. Meanwhile, "ECO" reflects Baowu's mission to "jointly build a steel ecosystem and create a new green future," positioning green practices as the very foundation and strategic core of its development.

To ensure the high standards and authority of the BeyondECO brand, Baowu has set a minimum threshold for steel products authorized to carry the BeyondECO label: a carbon footprint reduction of more than 30%. The six low-carbon steel product categories released under the brand—high-strength cold-rolled automotive steel, high-surface cold-rolled automotive exterior steel, ultra-low iron loss high-grade oriented silicon steel, high-efficiency high-grade non-oriented silicon steel, seamless steel cylinder steel, and hot-rolled steel for construction—have all undergone rigorous certification. These products are set to play a key role in driving transformation across industries, including transportation, energy, construction, and power generation.



Baosteel officially signed an MoU on low-carbon "green steel" cooperation with FAW-Volkswagen. FAW-Volkswagen will be the first to use Baosteel's green and low-carbon automotive steel for mass production, accelerating the steel-auto industry chain's path toward carbon neutrality.

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Baosteel's Oriented Silicon Steel Product Structure Optimization (Phase II) project was fully commissioned, and construction started on the Ultra-High-Grade Silicon Steel Green Manufacturing Demonstration Project.



Magang Group successfully rolled out its first batch of water-based color-coated steel sheets. The new product surpasses national standards in all physical and chemical properties, representing a significant breakthrough in Magang's R&D of environmentally friendly color-coated steel sheets.



TISCO successfully developed high-grade oriented silicon steel using 100% scrap steel, which has been widely applied in high-efficiency, energy-saving transformers—providing critical materials to support the green transformation of high-end equipment in the power industry.

Expanding the Green Industry

China Baowu has accelerated the development of a green resource and energy system, vigorously advanced green furnace material projects, and expanded the deployment of new energy resources with a focus on green electricity applications. Key projects such as Phase II of the Zabuye Salt Lake project and the Sanmenxia source-network-load-storage integration project have been progressing steadily. The Group has also launched major R&D initiatives on large-scale hydrogen-based energy supply technologies for low-carbon metallurgy, as well as the industrial application of energy storage technologies in metallurgical settings. Moreover, the Group has given full play to the instrumental role of the intelligent services industry in providing functional support, significantly driving the Group's digital transformation, intelligent upgrades, and green, low-carbon, and sustainable development while strengthening the competitive edge of Baowu's core steel operations. Fully leveraging the strengths of its ecosystem, China Baowu is also advancing mutual reinforcement between industry and finance, enabling two-way empowerment, support, and integration. It has actively explored innovative models for inter-financial collaboration, strengthening the foundation of its distinctive financial services.



Case

2024 Benchmark Case

Baosight's digital carbon management platform supports low-carbon transformation across the steel industry chain

Baosight is actively advancing the development of a digital carbon management platform, leveraging big data to empower carbon management. The platform provides comprehensive system solutions for major steel enterprises, assisting them in fulfilling carbon compliance obligations, generating product carbon footprints, and supporting Environmental Product Declarations (EPDs). It enhances product competitiveness, enables effective responses to the EU Carbon Border Adjustment Mechanism (CBAM), and helps affiliated entities gain multi-dimensional insights into their CO₂ emissions—offering strong data support for carbon performance management, carbon emission process control, and carbon emission factor analysis. In 2024, following the platform's architecture and model, the Bensteel carbon management platform was successfully launched, with all product carbon footprint reports certified by TÜV Rheinland. Baosight also built a green and low-carbon public service platform for Chinalco, successfully extending carbon management practices from the steel industry to the non-ferrous metals sector. A joint project with Baosteel—Digital Carbon Management Innovation and Application for Steel Enterprises—won Second Prize in the Raw Materials (Steel) Industry Track of the 4th Intelligent Manufacturing Innovation Competition organized by CISA.



Case

2024 Benchmark Case

Trial production began at green integrated development and utilization project at Zabuye Salt Lake in Xizang

In June 2024, Baowu's green integrated development and utilization project at Zabuye Salt Lake in Xizang entered trial production, featuring a 10,000-metric-ton annual capacity for battery-grade lithium carbonate. This project is the first large-scale industrial salt lake development initiative in the Tibet region. It adopts advanced membrane-based lithium extraction technology, enabling comprehensive recovery of salt lake resources. A supporting clean energy station combining photovoltaic and photothermal power has also been constructed, serving as a demonstration model for green, low-carbon, integrated, and efficient salt lake development. The project adopts a "zero pollution, zero water consumption" approach, introducing no external substances into the salt lake and generating its own freshwater for internal use, with virtually no dependence on natural water sources. Once fully operational, the project will yield 9,600 metric tons of battery-grade and 2,400 metric tons of industrial-grade lithium carbonate annually—enough to power 200,000 to 300,000 electric vehicles. Based on an average travel distance of 20,000 km per vehicle per year, this would reduce CO₂ emissions by approximately 2 million metric tons annually compared to gasoline-powered vehicles.



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Case

Baowu Equipment Intelligent Technology and Baowu Heavy Industries jointly developed full-set torpedo ladle covering equipment for a green and low-carbon future

Baowu Equipment Intelligent Technology partnered with Magang Equipment Maintenance, a subsidiary of Baowu Heavy Industries, to independently develop a full set of torpedo ladle covering equipment, which has already secured three batches of orders totaling 88 units. In December 2024, it was recognized as a "First Set of Major Advanced Technological Equipment" by Anhui Province, recognizing its domestically industry-leading technical performance and its potential as an alternative to imported products. Designed to support the steel industry's strategic goals for achieving carbon peaking and carbon neutrality, the equipment offers technical advantages such as reduced manpower, centralized control, one-button operation, and high energy efficiency. As a digital and intelligent solution, it allows for energy-efficient, smart, and environmentally friendly management across the entire equipment lifecycle.



Case

Hwabao Securities supported Shanghai's carbon inclusive platform launch

On October 29, 2024, Shanghai's carbon inclusive platform, an initiative led by the Shanghai Municipal Bureau of Ecology and Environment, officially launched for public testing. Hwabao Securities developed and launched its own carbon credit mall, which was integrated into the Shanghai Carbon Inclusive Carbon Credit Mall. It was the first and only securities firm included among the initial cohort of stakeholders participating in the platform's public test phase, demonstrating its commitment to supporting Shanghai's efforts to build a carbon inclusive platform and promote green, low-carbon practices across society.



Publishing Green Standards

Two group standards led and compiled by the Central Research Institute—*Evaluation Method of Weldability of High-Strength Steel for Main Structure of Wind Turbine Tower* and *Evaluation Method of Fatigue Performance of Welded Structure of High-Strength Steel Wind Turbine Tower Attachment*—were officially released, providing authoritative guidance and reliable reference for material selection, green manufacturing, and safe operation in the high-end manufacturing of wind power equipment structures. Shanxi Taigang Stainless Steel took the lead in drafting two green and low-carbon industry standards which were released: YB/T 6230-2024 *Technical Requirements for Energy Consumption per Unit Product of Stainless Steel*, and YB/T 6231-2024 *Technical Requirements for Carbon Emissions per Unit Product of Steel Rolling Process in Steel Industry*, marking a shift for Tisco from participation to leadership in formulating green and low-carbon standards, and from group standards to industry standards. Additionally, Baowu Environment and Resource Technology and Baowu Water Technology led the drafting of the group standard *Technical Specifications for Synergistic Treatment of Fly Ash by Metallurgy and Sintering*, providing robust technical support for the environmentally friendly treatment of fly ash.

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Response to the United Nations Sustainable Development Goals (SDGs)





Our Understanding



To accelerate the building of a world-class enterprise, technological innovation is the essential driver. We should consistently position innovation as the primary force behind Baowu's development, fast-track the creation of new quality productive forces, and strengthen the momentum of development. By advancing industrial development toward high-end, intelligent, green, and high-efficiency directions, China Baowu is moving toward becoming a world-class enterprise, powered by greater self-reliance and strength in science and technology.

Our Practices



We are speeding up the development of a source of original technologies and driving breakthroughs in core technologies in key areas, resulting in many significant scientific achievements. Upholding technological innovation as the core driving force, we are driving high-end development through product innovation, accelerating intelligent development by integrating digital technologies with the real economy, advancing green development through innovation in low-carbon metallurgy, and promoting high-efficiency development through energy efficiency maximization. We are committed to cultivating and expanding strategic emerging industries while making forward-looking deployments in future industries. By fully leveraging our role as the main driver of scientific and technological innovation, we have achieved notable progress in building a new sci-tech innovation framework.

Our Performance



Key Figures for China Baowu in 2024

R&D expenditure intensity*

4.95%



Proportion of R&D personnel

10.7%



Number of invention patent

15,978

Number of world-first industrial products*

19



Revenue share from strategic emerging industries

33%



Data management maturity

DCMM5*



Key Facts

***R&D expenditure intensity:** Calculated as (R&D expenses / operating revenue) × 100%.

***World-first industrial products:** Refers to products that achieved first-time industrial-scale trial production globally.

***DCMM:** Short for Data Management Capability Maturity Assessment Model. As China's first national standard in the field of data management, DCMM aims to elevate the strategic importance of data, unlock the value of data as a key factor of production, and help enterprises enhance their data asset management systems by adopting advanced data management concepts and methodologies. DCMM serves as the most authoritative data management capability assessment and certification system in China. It classifies data management maturity into five ascending levels: Initial Level (Level 1), Managed Level (Level 2), Defined Level (Level 3), Quantitatively Managed Level (Level 4), and Optimizing Level (Level 5).

Tackling Core Technologies in Key Fields

The Phase II milestone tasks of the "1025 Special Project" were completed ahead of schedule. China Baowu played a key role in securing materials supply for national strategic projects. A series of high-temperature alloys were successfully used in core defense equipment. High-speed railway wheels were, for the first time, fully installed and operational on a 350 km/h Fuxing bullet train in passenger service. To drive high-end development through product innovation, Baowu launched a series of world-first products, including the third-generation ultra-high-strength X-GPa® steel QP980 and BaoQP® components with ultra-low carbon emissions. The Group has also increased investment in technologies for the advanced materials industry and accelerated the commercialization of R&D achievements. High-end aluminum alloy automotive outer panels were successfully supplied in bulk for the first time to Jaguar Land Rover. A special-grade key titanium alloy material was also successfully developed, and the Group became the sole material supplier for the AES100 aero-engine.

Achievements and Recognitions

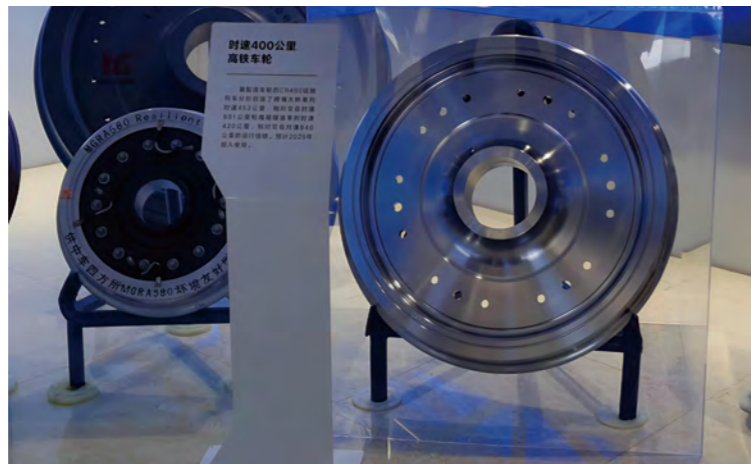
- ▶ The project "Functional and Green Design & Manufacturing of Refractories and Their Support for Green Steelmaking," led by Sinosteel Luonai, received the Second Prize of the 2023 State Scientific and Technological Progress Award.
- ▶ The project "Key Technologies and Equipment for High-Al-Zn-Mg Coated Steel Sheets for Architecture," led by Baosteel, and the project "R&D and Application of Key Technologies for Digital Design Delivery and Digital Twin Factories in Metallurgical Engineering," led by Sinosteel Engineering & Technology, both received the First Prize of the Metallurgical Science and Technology Award.
- ▶ The project "Key Technology for High-Efficiency and Low-Carbon Preparation of High-Grade Asphalt Pavement Materials from Bulk Steel Slag Solid Waste and Its Engineering Application," led by Baosteel, won the First Prize of the Technological Invention Award under the 2023 Shanghai Science and Technology Awards. The project "Development and Innovation of Advanced Stainless Steel Technology for Nuclear Power Applications," led by TISCO, received the First Prize of the 2023 Shanxi Provincial Scientific and Technological Progress Award.
- ▶ For the first time, over 100 projects were submitted for the "China Baowu Major Technological Innovation Achievement Award," with 60 awards granted, including 1 Grand Prize and 8 First Prizes.



Case

Magang wheels drive China's high-speed rail to new speeds

High-speed wheels produced by Magang have been fully equipped on a Fuxing bullet train, setting a record with over 1 million kilometers of safe passenger operation—the longest to date. On December 29, 2024, the prototype of the CR450 EMU was unveiled in Beijing, featuring Magang wheels as a core component. The CR450 EMU, designed for an operating speed of 400 km/h and tested up to 450 km/h, is currently the fastest high-speed train in the world. This breakthrough under the "CR450 Technological Innovation Project" represents a major leap forward in China's rail technology self-reliance and strengthens the country's global leadership in high-speed rail innovation.



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Case

Baosteel Wuhan Iron & Steel's 0.10mm high-strength silicon steel achieved mass production with three world-leading technologies

Baosteel Wuhan Iron & Steel successfully achieved mass production of its 0.10 mm high-strength, ultra-thin non-oriented silicon steel, featuring three world-leading technologies. This marks a world-class advancement for China in the R&D and production of high-strength, ultra-thin non-oriented silicon steel. The product is widely used in high-frequency miniature motors and sensors, serving as core materials for cutting-edge applications such as precision medical devices and smartphone vibration motors. It is also key to improving motor performance in low-altitude aerial vehicles, a key segment of China's emerging "low-altitude economy." Globally, only a handful of companies can produce this product at scale.



Case

TISCO debuted world-leading high-strength lightweight wheel steel in global first use

In August 2024, TISCO's high-strength steel for automotive wheels—currently the strongest of its kind globally—made its official debut in high-end new energy vehicles from leading automakers both in China and abroad following rigorous industry certification and over six months of real-world road testing with the newly developed wheels. This marks the world's first launch and use of 1,300-MPa warm-formed steel for automotive wheels. Compared with conventional hot-formed steel, the 1,300-MPa warm-formed wheel steel enables a more efficient manufacturing process during heating and cooling, significantly reducing energy consumption and improving production efficiency. It also extends the service life of production equipment and effectively lowers manufacturing costs.



Case

Baowu Equipment Intelligent Technology achieved breakthrough in core technology, overcoming a critical bottleneck in mining "mega equipment"



In May 2024, Baowu Equipment Intelligent Technology successfully concluded and passed the acceptance review of a core technology project that had been independently developed over more than two years. All performance indicators fully met the design specifications, breaking foreign monopolies in technology. This achievement represents a significant breakthrough in the localization of key components for large-scale mining electric shovels and showcases Baowu's wisdom in advancing China's mining equipment localization.



In September 2024, Magang's R&D team successfully developed two breakthrough products: Φ1,000 mm P92 continuous casting round billets for ultra-supercritical power plant boilers and Grade Q355 thick-flange (80–120 mm) hot-rolled h-beams for high-rise and long-span building structures. Both products were certified by a third-party institution as first-of-their-kind in China, filling previously unaddressed technological gaps in China.

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Boosting Strategic Emerging Industries

China Baowu earnestly implements the important instructions made by President Xi Jinping on February 26, 2023, in response to the SASAC's special work report. In line with SASAC's deployment to accelerate the development of strategic emerging industries, China Baowu has taken the lead in formulating the *China Baowu Work Plan for Deploying and Developing Strategic Emerging Industries*. China Baowu has formulated the *China Baowu Strategic Emerging Industries Development Plan* based on its current industrial layout. The plan prioritizes strategic emerging materials and aims to accelerate the establishment of a strategic emerging industry system with distinctive Baowu characteristics. Leveraging its resource endowments and capability strengths, the Group has established a "3+3+N" strategic emerging industry system, striving to build a nationally influential hub for the development of strategic emerging industries. In 2024, strategic emerging industries accounted for 33% of the Group's total revenue. Projects such as the "Ultra-High-Grade Oriented Silicon Steel Green Manufacturing Demonstration Project" were selected among the Top 100 Strategic Emerging Industry Projects. Turin Robotics and another subsidiary were selected for the "Set Sail" program led by the SASAC.

"3+3+N" Strategic Emerging Industry System



Case **Three stainless products from Taigang Stainless Steel selected for Shanxi's List of High-Quality New Materials**

In November 2024, three products from Shanxi Taigang Stainless Steel were included in the *List of High-Quality New Materials (First Batch)* by the Department of Industry and Information Technology of Shanxi Province. Among these products, SUS430LX ultra-pure ferritic stainless steel holds a domestic market share of over 80%. The thin-gauge, high-efficiency, high-strength non-oriented silicon steel series delivers optimal comprehensive performance in terms of magnetic and mechanical properties, with all indicators reaching internationally advanced levels. The "hand-torn steel" series has achieved mass production of extreme specifications at 0.015×600 mm, with all performance metrics exceeding industry benchmarks, providing critical foundational materials for high-end manufacturing.





Case

Guangdong Zhongnan Iron & Steel sets new domestic record for molten iron composition detection cycle with online LIBS system

In March 2024, Guangdong Zhongnan Iron & Steel (a subsidiary of Zhongnan Iron & Steel) successfully launched trial operations of its blast furnace molten iron composition online detection system, utilizing Laser-Induced Breakdown Spectroscopy (LIBS) technology. The system enables fully automated, unmanned, real-time detection of molten iron composition, with each analysis completed in approximately 3 minutes—representing a 90% reduction in detection time compared to manual sampling. Through real-time monitoring of composition trends, the system significantly improves control precision. The hit rate for blast furnace molten iron temperature and composition increased from 80% to over 90%. This marks the first application of this technology in China's steel industry and sets a new national record for the shortest detection cycle in blast furnace operations.



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Focusing on Digital Transformation and Upgrading

China Baowu has continued to advance the digital and intelligent transformation of its industrial operations, achieving significant breakthroughs in the integration of artificial intelligence and steel industry applications. Large-scale AI models for blast furnaces and converters, as well as "AI+ applications," have been piloted in full-process quality control, integrated coal and ore blending, and humanoid robot development. The Group unveiled its first humanoid robot concept model, and its proprietary brand, Turin Robotics, has been deployed at scale across multiple industries. The self-developed "xIn³Plat Steel Industry Large Model" made its debut, further providing support for the rapid, large-scale deployment of AI scenarios and achieving a domestically leading level among vertical industry models. Baowu is also building an autonomous and controllable new industrial ecosystem. The "xIn³Plat Steel Industry Large Model" has been recognized as one of the first national Class-A cross-industry and cross-field industrial internet platforms. The fully self-developed, full-stack controllable programmable logic controller (PLC) product was officially launched, and the core performance indicators of its self-controlled supervisory control and data acquisition (SCADA) product have surpassed comparable foreign products. A digital twin factory featuring digital design and delivery jointly developed by Baosteel Engineering, Baosteel, and other affiliated entities won the Autodesk Design & Make Awards 2024 for Digital Factory Innovation.



Case

National Technology Innovation Center for Smart Process Manufacturing inaugurated at Central Research Institute

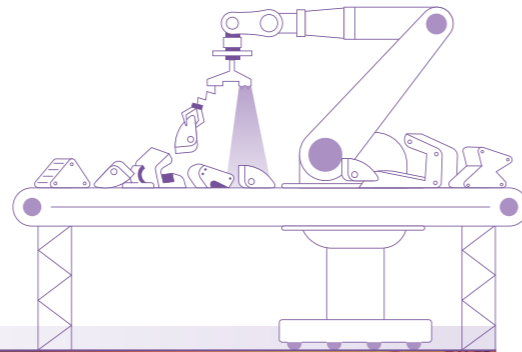
On June 13, 2024, the Steel Low-Carbon Digital and Intelligent Manufacturing Sub-Center of the National Technology Innovation Center for Smart Process Manufacturing was officially inaugurated at the Central Research Institute. This is the first national-level technological innovation center in its category established in Shanghai, jointly built by East China University of Science and Technology and Baosteel. It marks a significant step forward in deepening collaboration between academia and industry, implementing innovation-driven development strategies, and contributing to China's pursuit of greater self-reliance and strength in science and technology.





Case China Baowu's "Dark Factory" featured in the *National Industrial Code*

In September 2024, China Baowu's "Dark Factory" was featured in the *National Industrial Code* audio storytelling series, organized by the News Center of the SASAC. In this advanced facility, most of the "employees" are robots capable of achieving 24/7 operations. Unmanned overhead cranes execute tasks with precision, while grinding robots intelligently identify components and autonomously flip workpieces, ensuring fast, accurate, and stable operations. Equipped with four integrated functions, inspection robots patrol twice a day—each time for 3 to 4 hours—providing "nanny-level" care for all equipment. Baosteel currently operates nearly 1,500 robots in its "dark factories," collectively freeing over 3,000 manual workers from repetitive, labor-intensive, and hazardous working conditions.



In continuous casting operations at Baosteel, robots are now capable of automatically performing tasks such as nozzle replacement, sample collection, temperature measurement, and the addition of protective slag.

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Case Baosight successfully launched fully self-developed, full-stack controllable PLC products

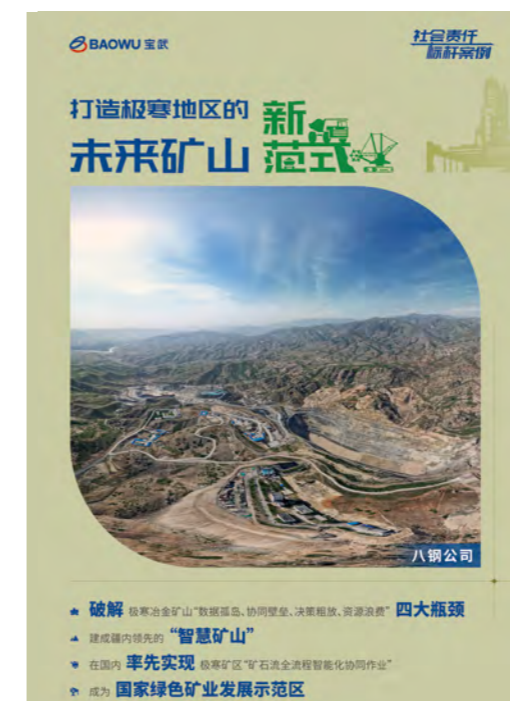
On September 20, 2024, Baosight officially launched its fully self-developed, full-stack programmable logic controller (PLC) products—the T3 and T4 series—in Shanghai. These products, based on a more than decade-long innovation, mark a breakthrough in the independent development and localization of high-end industrial control systems.

Known as Baosky Series, Baosight's PLC products have achieved full-stack, fully autonomous controllability covering the operating system, runtime software, and programming environment. With a high level of reliability, stability, and flexibility, the products can be widely used in various industries' automation.



Case Bayi Iron & Steel's Mengku Mining explored 5G-enabled intelligent mining and deep processing of iron ore

2024 Benchmark Case



In 2024, Bayi Iron & Steel's Mengku Mining launched a comprehensive technological and management innovation system to address four core challenges in the intelligent and green transformation of ultra-cold metallurgical mining—data silos, collaboration barriers, imprecise decision-making, and resource waste. These efforts significantly enhanced the company's iron ore self-sufficiency and development efficiency, earning it a place among the first cohort of "Advanced Smart Factories" in the Inner Mongolia Autonomous Region. Mengku Mining built China's first end-to-end intelligent and coordinated ore flow operation system in an ultra-cold mining area, overcoming the dual challenges of operational efficiency and safety in high-latitude mining. By integrating AI-powered visual recognition and LiDAR ranging technologies, the company achieved precise control of ore loading per railcar (244 metric tons \pm 3%), increasing operational efficiency by 18% compared to manual operations. In addition, the deployment of a dedicated 5G private network enabled L4-level autonomous electric locomotives, increasing daily transportation volume from 12,000 metric tons to 16,000 metric tons—an efficiency gain of 25%.



Case

Baosight achieved localization with its self-developed next-generation industrial control software iPlat-BA

Since 2024, Baosight has accelerated its expansion into strategic emerging industries. Its self-developed next-generation SCADA software, iPlat-BA, has been successfully implemented in projects such as Baosteel's hot-dip galvanizing line and Chongqing Iron & Steel's centralized ironmaking control system, replacing foreign industrial control systems with homegrown alternatives and advancing the digital transformation of enterprises.

Baosight's iPlat-BA is the result of over two decades of dedicated R&D, complemented by years of extensive promotion, application, and market validation. It has been widely adopted across a broad range of industries, including steel, non-ferrous metals, energy and environmental protection, rail transit, petrochemicals, semiconductors, water services, pharmaceuticals, and infrastructure such as bridges and tunnels. To date, iPlat-BA has been licensed over 1,000 times and deployed in hundreds of intelligent manufacturing projects, offering strong domestic software support for the digital transformation of China's industrial enterprises.



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Streamlining Systems and Mechanisms of Technological Innovation

Thoroughly implementing the guiding principles of the national sci-tech conference, China Baowu has fully embraced the enterprise's role as the main driver of scientific and technological innovation. The Group has introduced its innovation philosophy of "Learn and Innovate, Strive for Excellence" and accelerated the creation of a new sci-tech innovation framework driven by independent leadership and open collaboration.

Institutional Foundation to Ignite Innovation Vitality

Focusing on key scientific and technological innovation initiatives, the Group has formulated a series of specialized action plans covering fundamental research for applications, collaborative innovation enhancement, and the cultivation of sci-tech talent. It has revised the *Guidelines on Building an Incentive and Support Mechanism for Scientific and Technological Innovation in the New Era* and introduced the *Implementation Measures on the Fault-Tolerance Mechanism for Application-Oriented Basic Research at the Central Research Institute*, aiming to continuously stimulate innovation momentum. Moreover, the Group has established the Baowu Scientist System, launched a profit-sharing mechanism for the commercialization of scientific and technological achievements. These efforts aim to fully unleash the innovative enthusiasm of R&D personnel and build a high-level talent highland for science and technology leadership. Additionally, the Group has continued to refine its position-based innovation system to align with high-quality development, advancing employees' innovation at their positions and value creation. It has also strengthened patent strategies in R&D innovation, carried out patent navigation efforts, and worked to reduce intellectual property infringement risks.



Case

China Baowu celebrated National Science and Technology Workers Day

On May 30, 2024, China Baowu held a special event to celebrate National Science and Technology Workers Day, themed "Promoting the Spirit of Scientists and Spearheading Greater Self-Reliance and Strength in Science and Technology." Chairman Hu Wangming, also serving as President of Baowu Association for Science and Technology, delivered a keynote titled "Contributing Mighty Steel Power to Greater Self-Reliance and Strength in Science and Technology." In his address, he provided a systematic overview of the mission and pathway of scientific and technological innovation in the steel industry. During the event, plaques were awarded to two Chief Scientists and thirteen Engineering Scientists selected in 2023.



In July 2024, Ouyeel Finance and the Shanghai University of Finance and Economics jointly released the "BSA" Large Language Model (LLM)—short for Beside you, Support you, Achieve together—through their joint Digital and Intelligent Technology Laboratory. This launch has promoted the application and development of LLMs in the financial sector, further enabling the provision of high-quality services to ecosystem partners.



Hu Wangming, Chairman of China Baowu, presenting awards to newly appointed Chief Scientists and Engineering Scientists.

At the 2024 Intelligent Manufacturing Alliance Conference for the Steel Industry held in April, CISA officially announced the establishment of CISA/SWG1, a standardization working group for industrial software. As the lead organization, Baosight was awarded a designation plaque.



Platform-Based Collaboration for Synergistic Effects

The Central Research Institute has coordinated R&D resources to support the Group's core steel business by establishing a collaborative innovation platform featuring "one institute, multiple centers." This platform has been progressively extended to newly integrated steel subsidiaries such as Magang Group, TISCO, and Xinsteel, while exploring the development of an R&D organizational system aligned with the "One Basis and Five Industries" strategy. A professional technical committee collaboration platform has also been established to focus on value creation and unlock the potential of key processes, effectively enhancing the overall manufacturing capabilities across different bases. To strengthen unified R&D, the Central Research Institute has set up the Zhongnan Technology Center and the Northwest Technology Center based on the principles of "specialized support, platform-based services, and market-oriented operation." In addition, it has launched new R&D institutions such as the New Materials Industry Innovation Center, the Low-Carbon Metallurgy Innovation Center, and the Industrial Internet Institute to advance the Group's scientific and technological innovation to a higher level. A number of position-based innovation alliances and innovation studios have also been established to continuously foster a culture of innovation and value creation among all employees.

On August 15, 2024, the Zhongnan Technology Center of the Central Research Institute was officially inaugurated at Guangdong Zhongnan Iron & Steel. This marked the official integration of Zhongnan Iron & Steel's R&D work into Baowu's R&D system with the Central Research Institute as its core.



On September 2, 2024, the Northwest Technology Center of the Central Research Institute was inaugurated at Bayi Iron & Steel. The company's R&D operations have officially joined Baowu's R&D system centered on the Central Research Institute.



Fostering a Culture-Driven Innovation Ecosystem

An innovation culture serves as the spiritual foundation and driving force for unleashing corporate innovation potential and delivering innovation outcomes. It is also a vital component in strengthening the company's capability to build a comprehensive corporate culture system. China Baowu has designated 2024 as the Year of Innovation Culture Development, incorporating innovation culture into its overarching cultural framework. Aligned with the annual key work plan and the Group's corporate culture development initiatives, China Baowu has formulated the 2024 Innovation Culture Development Plan, with a strong focus on serving national strategies and fulfilling the core functions of a central SOE. With these efforts, Baowu is actively fostering a participatory cultural environment and atmosphere where innovation is respected, supported, and embraced by all. At the 2024 China Baowu Science and Technology Innovation Conference, the Group officially released its innovation culture concept—"Learn and Innovate, Strive for Excellence."

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2024 China Baowu Science and Technology Innovation Conference held under the theme "Learn and Innovate, Strive for Excellence"

On December 23, 2024, the 2024 China Baowu Science and Technology Innovation Conference was held at Baowu Building. The conference reviewed the latest sci-tech innovation progress in 2024, outlined priorities for 2025, and recognized outstanding teams and individuals in technological and position-based innovation. Hu Wangming, Chairman of China Baowu, delivered a keynote address titled "Comprehensively Enhancing Technological Innovation to Build a Strong Engine for the Development of a Modern Industrial System".



At the conference, Baowu officially released its innovation culture concept—"Learn and Innovate, Strive for Excellence." This philosophy aims to foster a constant thirst for knowledge, with technological innovation as the core driver. It advocates for excellence guided by virtue and quality through innovation, thereby contributing to the forging of an "iron and steel backbone" for a world-class enterprise built on greater self-reliance and strength in science and technology.



Baowu organized 2024 National Science Popularization Day themed activities

In September 2024, Baowu organized various activities in celebration of National Science Popularization Day, including online theory learning, visits to education bases themed on the spirit of scientists, and various special activities for science popularization. These initiatives aimed to foster a culture where innovation is respected, encouraged, and actively pursued by all. More than 50 high-quality science popularization projects from different Baowu subsidiaries were showcased, highlighting future technological trends, and inspiring a strong sense of scientific patriotism among tech professionals.



Friendly and Inclusive

Building a Harmonious Society through Concrete Actions

- Cultivating and Supporting Employees Development ✓ 98
- Contributing to Rural Revitalization ✓ 110
- Serving Social Development ✓ 115

Response to the United Nations Sustainable Development Goals (SDGs)



Our Understanding

We are keenly aware that fulfilling social responsibilities is a fundamental requirement for enterprises to thrive alongside society. By centering on our employees, we aim to unlock their creativity through an all-around employee development system and an improved rights protection mechanism, creating mutual value for both the company and employees. We contribute to the country's rural revitalization strategy through industrial assistance and concrete initiatives in supporting Xinjiang, Tibet, and Qinghai, helping expedite development in border and ethnic regions, as well as regions receiving targeted assistance. Staying true to our mission as a state-owned capital investment company, we focus on public services, emergency response, social welfare, and other fields, ensuring optimal resource allocation to enhance public well-being and strengthen the cornerstone of social harmony and stability.

Our Practices

We have advanced the comprehensive implementation of the Three-Pronged Enhancement Initiative*, uniting and mobilizing our officials and employees with shared commitment and vigor to fully leverage their role as a driving force in high-quality development. We have also fully carried out the "Teaching to Fish" program for rural revitalization, taking concrete steps to support designated regions in Xinjiang, Tibet, and Qinghai, and setting new benchmarks and paradigms in targeted assistance. Additionally, we have actively participated in charitable initiatives, rescue and relief work, and post-disaster reconstruction, contributing to local socioeconomic development and helping fulfill the people's aspirations for a better life.



Our Performance



Key Figures for China Baowu in 2024



Awarded

2

National Worker Pioneer titles

6

Persons

Received May 1 Labor Medals



Earned an **"Excellent"** rating—top grade for **6** consecutive years—in targeted assistance work



Total donations

RMB **194.87** million

Baosteel Education Award

By the end of 2024, more than

120 higher education institutions nationwide had received the Baosteel Education Award



A total of

28,427 students and faculty members recognized

The cumulative amount allocated for education awards and financial assistance exceeded

RMB **290** million

Volunteer Services

Volunteer organizations in the Group

279

Volunteer activities organized

4,353 sessions

Number of volunteers

15,183

Participants involved

27,671 person-times

Volunteer service projects carried out

561

Total duration of volunteer service

251,374 hours

Key Facts



*Three-Pronged Enhancement Initiative:

Comprehensively enhancing employees' capabilities and overall quality, promoting employees' innovation and value creation in the workplace, and improving employees' sense of fulfillment, happiness, and security.

Cultivating and Supporting Employees Development

China Baowu is deeply advancing the Three-Pronged Enhancement Initiative, placing great importance on the protection of employees' lawful rights and interests. The Group has also established and improved the compensation and benefits system, while expanding career development channels, aiming to continuously enhance employees' sense of fulfillment, happiness, and security.

Legal Protection of Employees' Lawful Rights and Interests



By the end of 2024

The total number of on-the-job employees in the Group is

208,235

Embracing Diverse Talent

Equal employment

China Baowu strictly complies with national laws and regulations such as the *Labor Law of the People's Republic of China* and the *Labor Contract Law of the People's Republic of China*, upholds the principles of equal employment, and advocates diversity and equal opportunities. We oppose all forms of child labor, forced labor, harassment, bullying, or intimidation, sign labor contracts with employees in accordance with the law, and regulate labor management practices. Efforts are also being made to deepen market-based recruitment and appointment mechanisms for overseas talent and continue to optimize the mechanisms for overseas expatriation and repatriation. By the end of 2024, the Group had a total of 208,235 on-the-job employees.

Classification Criteria	2022	2023	2024
By gender			
Male	184,682	186,285	176,126
Female	34,928	35,209	32,109
By education level			
Postgraduate	12,270	13,535	13,840
Undergraduate	60,692	67,233	66,327
Junior college	61,533	63,557	60,212
Technical secondary school	13,559	14,661	13,912
Technical school	16,173	14,712	13,553
Senior high school	25,973	23,043	20,658
Junior high school or below	29,410	24,753	19,733
By age			
25 and below	8,556	8,779	8,603
26-30	14,531	15,563	13,530
31-35	26,269	25,845	22,467
36-40	29,220	30,771	29,893

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Classification Criteria	2022	2023	2024
41-45	35,634	34,157	31,406
46-50	50,290	48,007	44,021
51-55	41,143	43,548	42,812
56-60	13,881	14,765	15,431
61 and above	86	59	72
By professional title			
Senior title	11,876	11,880	11,858
Intermediate title	23,764	23,691	24,049
Junior title	10,944	11,229	11,164
No title	21,305	19,646	17,268
By technical skill level			
Master technician	/	45	72
Senior technician	3,587	3,958	4,100
Technician	11,961	12,985	14,234
Advanced worker	50,986	50,837	49,191
Intermediate worker	26,168	26,069	28,213
Junior worker	13,571	10,521	12,524
No skill level	39,564	31,758	19,940

Localized employment

Baowu Resources

Through the development and construction of overseas projects, localized employment has been promoted. In 2024, the number of overseas employees (including expatriates) reached 345, of whom 188 were local hires, accounting for 54%.

Sinosteel

Upholding the principle of localized operations, most management and operational roles in overseas enterprises are assumed by local employees and professional managers, with only a small number of expatriates. Local employee ratios at subsidiaries such as Sinosteel Philippines H.Y. Mining Corp., Samancor, and Zimasco exceed 90%.

Baosteel Packaging

Baosteel Packaging has advanced localized employment, cumulatively creating 350 jobs.



Frontline workers of Sinosteel in South Africa

Job creation

The "Guobao Talent Program" is being actively implemented, tapping into job resources and recruiting fresh university graduates. Special recruitment events were held for Tibet, Qinghai, and Xinjiang (Three Regions), including a dedicated session for Tibetan graduates. The number of hires in the 13th round of Three Regions recruitment doubled compared to the previous year. A targeted job fair was held for rural revitalization efforts, surpassing the annual goal of 21 hires in targeted assistance areas. Baowu has also facilitated employment for veterans, with 59 subsidiaries offering 92 job positions across 17 provinces, municipalities, and autonomous regions under the organization of the Group, totaling a demand of 224 positions.



Case

From recipients to contributors: Supporting employees with disabilities

Xinsteel continues to build a warm and inclusive workplace with all-around and multi-level career development pathways for employees with disabilities. As early as 2006, Xinsteel recruited the first group of over ten disabled employees—mainly children of existing staff—into the former Xinsteel Welfare Company (now Xinsteel's Logistics Division), assigning them to work on signage, woven products, daily necessities, and lubricant production. By 2024, the company had provided employment for 102 disabled employees in areas such as theaters, supermarkets, laundries, and block operations. In the Miscellaneous Operations Section of the Logistics Division, employees with disabilities account for as much as 94% of the comprehensive team.

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On November 25, 2024, Baoland Real Estate Asset Management's Youjian Apartment was recognized as one of the first "Youth Stations" in Shanghai. By the end of 2024, it had provided transitional housing for nearly 60 young people.

China Baowu officially launched its global campus recruitment program, the "Guobao Talents Program." By the end of 2024, the program had organized nearly 50 job fairs, released over 900 job postings, and recruited a total of 3,498 candidates.

Compensation and Benefits System

In accordance with national policies, China Baowu continues to improve its compensation incentive mechanism that balances incentives and constraints, as well as efficiency and fairness. The Group provides social insurance for all employees, with a 100% coverage rate in 2024.



Employee Compensation Management

Adhering to the allocation principle of "only those who create value can share value," China Baowu continues to improve the performance-linked incentive mechanism, cultivate a strong performance-driven culture, and strengthen incentives for scientific and technological innovation, ensuring that compensation allocation serves both as a motivator and a strategic guide.



Corporate Annuity Program

Upholding the principle of "balancing security and returns," China Baowu has strengthened risk control for the corporate annuity program, sought to increase investment yields while ensuring capital preservation, and dynamically adjusted major asset allocation strategies to optimize annuity asset portfolio structures and effectively protect employee interests.



Employee Leave Protection

China Baowu strictly implements policies on paid annual leave to safeguard employees' right of rest and vacations.

Holiday Rights Protection

During major regional festivals such as the Tibetan New Year and the Saka Dawa Festival, Tibet Mineral Development strictly enforces the Regulations on the Development of the Model Zone for Ethnic Unity and Progress in the Tibet Autonomous Region. Measures such as ensuring a full 5-7 day holiday for Tibetan officials and employees, dynamically managing dietary restrictions in staff canteens, and offering culturally distinctive drinks and snacks help satisfy both rest and dietary needs of employees and safeguard their rights during ethnic holidays.

Improving the Employee Training System and Promotion Pathways

In 2024



China Baowu trained

over **300** engineering master's and doctoral candidates

Enhancing Talent Development

Focusing on key talent segments, including leadership, mass affairs, technical and skilled professionals, and globally oriented talent, China Baowu has built a "1+N" talent training and development system for a stronger enterprise consisting of "1 unified talent development framework and N key talent groups." This system accelerates the building of a talent highland at China Baowu, supported by strengthened organizational safeguards, faculty cultivation, curriculum system development, online learning platforms, theoretical research, project research capabilities, and exchange and internship platforms. At the same time, targeted training for overseas local employees has been initiated, combining the needs of localized staff with short-term programs featuring China Baowu characteristics. These include corporate culture, capacity building, and other focused training programs to continuously improve the skill levels of foreign employees.

In 2024, the Group established a core scientific research talent pool, piloted the "one person, one file" training plan for young PhDs, and trained over 300 engineering master's and doctoral candidates. Eleven highly skilled personnel were awarded the State Council Special Government Allowance. Overseas talent reserves accelerated, with 25 trainees selected for overseas training programs.

China Baowu held a special promotion meeting on reform pilot programs for China Baowu's engineering master's and doctoral training, and concurrently conducted a specialized workshop for the 2023 class of corporate mentors.



China Baowu hosted the 2024 China Baowu Retired Officials Training Program.

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China Baowu held the launch ceremony of the 2024 "Three Fundamentals Empowerment" training program for newly recruited finance graduates.



The Magang Craftsman Academy was officially inaugurated.



China Baowu organized centralized pre-employment training for the 2024 cohort of engineering master's and doctoral candidates.

Expanding Career Development Channels

China Baowu has developed a dual-track career development and mobility mechanism integrating both technical and management sequences, ensuring "H-shaped" career development for employees. A "Chief Engineer" system has been established for technical personnel, encouraging their continuous professional growth. A core talent development project is being implemented to build a "three-tier, three-type" talent ladder: Baowu Scientists at the group-level (strategic research type), Chiefs/Experts at subsidiaries (professional type), and grassroots leaders (technical type).

Employees are offered more possibilities for self-fulfillment. Employees are given opportunities to take temporary posts as officials in Tibet, Qinghai, and Yunnan, allowing them to grow through experience in diverse and challenging environments. They may also participate in the Doctoral Service Corps to take on key roles in enterprises, go on secondment to government agencies or rotate across posts, or take up international assignments in overseas organizations to broaden global perspectives.

Case Baoland Real Estate Asset Management empowers female employee development

Baoland Real Estate Asset Management has explored a career development path for female employees featuring "transformation + cultivation + empowerment," tailored to the business needs and characteristics of Youjian Apartment. It has leveraged women's unique strengths in store manager and steward roles. By the end of 2024, women had accounted for 25% of the 12 store managers and 35.7% of the 28 stewards at Youjian Apartment. Notably, 80% of these women transitioned from manufacturing and logistics support roles. Through these professional transitions, Youjian Apartment has provided women with a pathway to break industry barriers and redefine the value of their careers, forming a replicable model for female empowerment.

Deepening the Reform of the Industrial Workforce

Industrial workers are the backbone of the working class and a key force in creating social wealth and implementing the innovation-driven development strategy to build a strong manufacturing nation. China Baowu has fully implemented the directives of the *All-China Federation of Labor Unions and the State-owned Assets Supervision and Administration Commission on Fully Leveraging the Leading Role of State-Owned Enterprises in Advancing the Reform of the Industrial Workforce*. Centered on its core responsibilities in rights protection and service provision, as well as its production and operational goals, the Group has launched 13 key initiatives in areas such as ideological guidance, skills development, and innovation and efficiency creation, with the goal of building a world-class team of industrial technicians to support Chinese modernization with strong human capital.

Strengthening Ideological and Political Guidance

China Baowu has strengthened model leadership and value empowerment by identifying and promoting exemplary individuals. The Group has received numerous national and provincial-level honors, and has established internal recognition mechanisms such as the Baowu Golden Bull Award to build a multi-tiered community of role models. Themed campaigns such as "Shouldering Responsibility with Concrete Actions, Driving Innovation and Efficiency for Excellence" have been conducted to deepen professional dedication through activities like model employee experience-sharing seminars and cultural competitions. The Group has also promoted the "Model Workers and Craftsmen Supporting Enterprises" campaign, organizing role models and skilled craftsmen to provide technical assistance and share knowledge online with companies along the industrial chain, thereby fostering both the spirit of craftsmanship and enterprise development. In 2024, China Baowu was awarded two National Worker Pioneer titles and six May 1 Labor Medals. The Group also received 10 provincial-level advanced collective titles, 21 model worker titles, five May 1 Labor certificates, nine Worker Pioneer titles, and 18 May 1 Labor Medals. More than 60 instances of model workers and craftsmen were dispatched to provide services for nearly 70 companies along the industrial chain, resolving nearly 70 technical challenges, creating over RMB 9 million in value, and training nearly 1,000 employees. The "Baowu Experts Talk" live broadcast series aired over 40 episodes.

Enhancing Employee Skills and Competencies

Efforts have been made to improve the skills and career development of industrial workers. Leveraging Baowu Craftsman Academy—recognized as a key support project by the All-China Federation of Labor Unions—China Baowu promoted the transformation of workers into craftsmen. Four employees were selected as national-level master craftsman cultivation candidates. The 4th Employee Skills Competition was held, balancing elite and general contests. A simulation training platform was developed, enabling over 4.09 million participations in employee skill-building exercises. Participants went on to win multiple honors at national and provincial competitions. The new eight-level worker system has been implemented to standardize vocational skills level certification. A Chief Technician team was established, with a cumulative total of 72 Master Technicians selected and appointed, and 4,100 Senior Technicians certified. A total of 15,000 employee vocational skill upgrades were achieved, with high-skilled talent accounting for 52.4% of the workforce. A dual-track development path for skilled and professional technical personnel has been established, with 17,000 employees realizing dual-track career development.



In 2024

A simulation training platform was developed, enabling over

4.09 million

participations in employee skill-building exercises



China Baowu held the 4th Employee Skills Competition with the theme of "Forging Craftsmanship, Upgrading Skills".



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Promoting On-the-Job Innovation

Relying on a standardized, efficient, and collaborative competition mechanism, labor competitions have been launched under the theme "Contributing to High-End, Intelligent, Green, and High-Efficiency Development, Pursuing Order-Driven Production, Margin-Limited Output, Profit-Driven Revenue, and Cash Flow-Generating Profit, and Building a World-Class Enterprise," fostering a strong culture of innovation and value creation. The Group has also promoted a shift in innovation from individual efforts to team collaboration, and strengthened innovation platforms by consolidating foundations, expanding scale, improving quality, and enhancing connectivity. Activities such as "Offer a Proposal" have helped improve innovation efficiency, transitioning from large quantity to superior quality. By evaluating excellence in innovation transformation and establishing a benefit-sharing mechanism, efforts have been made to shift innovation outcomes from "individual gains" to "shared benefits," connecting the entire chain of job-based innovation. In 2024, 98 outstanding innovation teams and 20 "new quality productive forces" task-oriented innovation studios were recognized. Centered around the above theme, a total of 347 projects received the 4th Baowu Excellent On-the-Job Innovation Achievement Award. The Group also won one Metallurgical Science and Technology Award (Workers), two gold medals at the Concours Lépine International Paris, and eight silver and bronze medals. A total of 98 projects were awarded for excellent innovation transformation, with a total of RMB 1.3 million distributed to employees for their contributions to achievement development and transformation.



In 2024

A total of

1.3 million

RMB was distributed to employees for their contributions to achievement development and transformation

Enhancing Employees' Sense of Fulfillment, Happiness, and Security

Practicing democratic management

China Baowu regards democratic management as a crucial approach to corporate governance strategy, closely integrating it with the company's reform, development, and stability. The Group's Labor Union continues to improve the democratic management system centered on the workers' congress, ensuring employees' rights to information, participation, expression, and oversight. Four labor unions of affiliated enterprises were recognized as "National Model Workers' Homes," and three as "National Model Workers' Mini-Homes." The 20th *Baowu Manager Questionnaire Survey* was conducted with active participation from 11,082 employees and 2,269 managers, providing valuable insights to support scientific and democratic decision-making within the Group and subsidiaries. In 2024, all subsidiaries of the Group implemented a standardized collective bargaining system, achieving 100% coverage of collective contracts.

Strengthening health and well-being support

By the end of 2024, a total of 152 employee wellness stations had been established, including 50 Group-level stations, and 3 stations were recognized as Shanghai municipal-level fitness stations. Additionally, 281 frontline employee break rooms were upgraded, including 100 Group-level break rooms. A total of 55 "Home for Youth" stations were designated. The Group promoted widespread deployment of automated external defibrillators (AEDs), installing 202 new units and organizing cardiopulmonary resuscitation (CPR) and AED usage training sessions. All affiliated enterprises have actively leveraged platforms such as the Employee Assistance Program (EAP), psychological support hotlines, and mental care rooms to help employees alleviate mental stress when needed.

Work Environment and Condition Safeguards

Baowu Resources

Baowu Resources has improved on-site working environments and adopted intelligent operations to reduce employee exposure to occupational hazards. The company has provided qualified protective equipment compliant with occupational disease prevention and control requirements and established systems for its use, maintenance, and management. Warning signs and instructions have been prominently displayed at all posts with potential occupational hazards, and health checks have been conducted for workers with potential exposure to occupational hazards before, during, and after employment.

Baosteel Packaging

Baosteel Packaging has focused on improving work meals and environments to enhance employees' workplace satisfaction. All 51 practical employee-centered projects set for 2024 were completed, and the company was selected as a pilot unit for enhancing workers' quality of life in Shanghai.

Delivering care and support

Guided by the *Special Action Plan on Addressing Practical Issues and Responding to Employee Needs*, the Group has actively conducted employee demand surveys and organized activities such as "Sending Warmth to Employees," high-temperature care, and the "Health and Safety Protection" program. Baowu's official WeChat account has launched a "Party Secretary's Heartfelt Conversations" column to further reinforce employee engagement and support. The Group has also enforced the *Special Collective Agreement on the Protection of Female Employees' Rights at Baowu Headquarters*, established "Women's Innovation Studios," and promoted the construction of "Mommy Care Rooms." Through the Smart Labor Union platform, both online and offline services have been provided to both common and personalized employee needs. In 2024, the assistance and care activities organized by Baowu's subsidiaries benefited employees over 106,400 person-times, providing RMB 66.3426 million in aid. 1,632 practical projects were implemented to address pressing employee concerns.

Subsidiaries of China Baowu have generally established and improved long-term mechanisms for employee care and support. Research projects such as "China Baowu's Employee Life Quality Improvement Model" and "Baowu's Mechanism for Overseas Employee Care and Support" have been initiated. These projects have resulted in the development of a life quality improvement model for employees and a care and support mechanism for employees dispatched overseas. The latter research project has been highly recognized by leaders from the International Liaison Department of the All-China Federation of Labor Unions. Baosteel has not only been selected as part of the second batch of national pilot units for enhancing workers' quality of life but also named a demonstration unit in Shanghai. Baosight, Baosteel Packaging, and Baowu Clean Energy have also become pilot units for enhancing workers' quality of life in Shanghai.



China Baowu held an advanced exchange event to celebrate International Workers' Day (May 1) and Youth Day (May 4).



Case

China Baowu held a themed event to commemorate the 114th anniversary of International Women's Day

On March 8, 2024, China Baowu held a themed event to commemorate the 114th anniversary of International Women's Day. The event featured an exchange session on the "account-based management" women's campaign, and honored outstanding teams and individuals of the 2023 China Baowu "Golden Rose" and "Rose" medals and certificates. At the event, a template for the Special Collective Agreement on the Protection of Female Employees' Rights was released, further safeguarding women's legal rights and special interests. A total of 41 "Women's Innovation Studios" and 59 "Mommy Care Rooms" had been established by the end of 2024, providing female employees with warm and comfortable rest spaces. Baosteel and Wugang Group were recognized as "2023 Caring Employers for Childcare" by the All-China Federation of Labor Unions and the National Health Commission.



The "Ruixiyuan" relocation housing project by Magang Group officially commenced delivery, marking a new beginning for over 600 Masteel employees who had no self-owned properties.



Baowu Resources launched a winter holiday care class to support working parents in mining areas by addressing childcare challenges during school breaks.

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Organizing diverse activities

A variety of cultural and recreational activities, such as the "My Youth Shines at Baowu" themed essay campaign, "Model Worker Stories" column, and photography contests were organized. These activities aim to strengthen cultural exchanges with overseas teams and further enhance employee satisfaction and happiness.



The 2024 "Baowu Good Stories" speech event, themed "Forging Steel Backbones, Shouldering the Mission of the Times," awarded outstanding entries and best organizations, and released the *Baowu Model Stories* e-book.



Holding the first employee photography competition titled "The Chinese Dream, the Beauty of Labor, the Steel Bond".



Holding Season 3 of the "100-Second Innovation Talk" under the theme "Sound of You, Voice of Excellence".



Baosteel launched a series of calligraphy activities to celebrate the Spring Festival.



Magang Group organized an online exhibition showcasing the calligraphy and painting works of employees' children on the theme of "Family Support for Safety."



Bayi Iron & Steel hosted the "Labor Union Cup" Half-Marathon for employees.



TISCO held a company-wide sports meet for employees.



Xinsteel celebrated World Book Day with a themed activity titled "Reading to Encounter Beauty."

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Baoland Real Estate Asset Management organized the Third "Baoland Cup" Fun Sports Games for employees.



Baosteel Can Making (Malaysia), a subsidiary of Baosteel Packaging, held the traditional "Prosperity Toss" activity.



Baowu Clean Energy organized a themed "Family Day for Overseas Assignees."



Ouyeel Finance, a company under the management of Hwabao Investment, hosted a team-building activity.

Contributing to Rural Revitalization

China Baowu has earnestly studied and implemented the guiding principles of President Xi Jinping's important speeches and instructions, diligently fulfilled its assistance responsibilities, advanced the development of "Four Demonstration" brands through projects, and taken solid steps in rural industry development, construction, and governance. These efforts have significantly contributed to consolidating and expanding the achievements of poverty alleviation, promoting comprehensive rural revitalization, and accelerating agricultural and rural modernization in the supported regions.

Strengthening Organizational Support for Rural Revitalization



In 2024

A total of

366 person-times leaders and experts have been conducted field investigation within the targeted assistance regions

Leadership Team Setting an Example

The Group's leadership team has taken the lead by visiting supported regions to promote targeted assistance and pairing-up support. They visited local governments, inspected Baowu-supported projects, and provided on-site guidance for assistance and support initiatives. Assistance funds and support projects have been managed in strict accordance with regulations, and special audits have been conducted on the use of targeted assistance funds to ensure efficient use of funds. In 2024, a total of 366 person-times leaders and experts from the Group departments and subsidiaries have been conducted field investigation within the targeted assistance counties. The Group executives also received delegations from local governments in Shigatse City and Zhongba County (Tibet Autonomous Region), Tongde County (Qinghai Province), Pu'er City and Jiangcheng County (Yunnan Province), Wenshan Zhuang and Miao Autonomous Prefecture and Guangnan County (Yunnan Province), and Ongniud Banner (Inner Mongolia Autonomous Region), engaging in extensive exchanges on rural revitalization and industrial assistance and cooperation.



On July 18, 2024, Hu Wangming, Chairman of China Baowu, visited Luotian County in Huanggang City, Hubei Province to conduct field research on rural revitalization work.

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On August 1, 2024, Hou Angui, President of China Baowu, visited Ongniud Banner in Chifeng City, Inner Mongolia Autonomous Region for in-depth research on rural revitalization progress.

High-Level Promotion of Assistance Work

The Group convened meetings of the Rural Revitalization Leading Group to discuss and plan annual priorities. A 2024 work plan was formulated and issued, specifying the target and task assignment of each unit in participating in demonstration projects. Reports on rural revitalization progress were regularly presented during regular administrative meetings to review and plan subsequent actions. A financial task force for rural revitalization was established to leverage financial expertise for industrial and intellectual support, providing essential "financial water" to revitalize rural areas. In 2024, a total of 20 dedicated meetings were held on targeted assistance initiatives.

China Baowu's Targeted Assistance Counties and Banners

- Ning'er County, Yunnan Province
- Zhenyuan County, Yunnan Province
- Jiangcheng County, Yunnan Province
- Guangnan County, Yunnan Province
- Luotian County, Hubei Province
- Shanglin County, Guangxi Zhuang Autonomous Region
- Ongniud Banner, Inner Mongolia Autonomous Region

Selecting and Dispatching Top Talent for Assistance Work

The Group has continuously selected and assigned politically committed, energetic, and well-rounded key personnel to take on temporary posts in assistance regions, ensuring seamless continuity of support efforts. Pre-departure and on-assignment training for assigned personnel has been emphasized, including an annual 3-day thematic training session. This provides a learning and exchange platform for 50 temporary assistance personnel, village first secretaries, and staff working at the support departments, aiming to enhance their professional capabilities. Regular care visits and one-on-one conversations have been carried out to understand and resolve pressing concerns and ensure welfare and support for dispatched personnel. In 2024, a total of three temporary municipal- and prefecture-level officials, eight temporary assistance personnel, and seven village first secretaries were assigned to targeted assistance regions.



From November 21–23, 2024, 50 dispatched personnel from Guangxi, Yunnan, Qinghai, and other regions gathered at Wuhan Engineering Institute for a thematic training session for China Baowu's assigned personnel to targeted assistance regions, themed "Showing Baowu's Assistance and Support, Painting a New Vision of Rural Revitalization Together." The training included theoretical lectures, field study, case-based teaching, and group discussions.

Ensuring Funding Support for Assistance Initiatives

The Group has strictly adhered to the "Four No-Withdrawals" policy to ensure the timely and sufficient allocation of support funds. In 2024, a total of RMB 250 million was directly invested in pairing-up support and targeted assistance for nine counties and banners, including RMB 148 million in non-repayable funding. Additionally, RMB 191 million was invested to assist ecosystem partners, of which RMB 34.491 million was non-repayable. The Group has continued its focused support for Guangnan County, Yunnan Province—a national key county to receive assistance in pursuing rural revitalization—providing RMB 28.11 million in direct, non-repayable assistance and attracting RMB 53.1734 million in additional funding. Guangnan was the largest recipient of investment among the seven targeted assistance counties and banners.

In 2024

A total of

RMB **250** million

was directly invested in pairing-up support and targeted assistance for nine counties and banners



Key Facts

*The "Four No-Withdrawals" policy:

No withdrawal of responsibilities, policies, assistance efforts, or oversight after poverty alleviation goals are achieved.

Enhancing Supervision and Guidance

The Group revised and issued the *China Baowu Management Measures for Targeted Assistance and Pairing-up Support Work* to standardize the management of support funds and aid projects. In 2024, ten rounds of supervision and guidance were conducted, identifying 21 new issues arising in policy implementation and issuing 10 targeted supervision and guidance reports, effectively mitigating risks during project execution.

Advancing "Four Demonstration" Brands through Projects

Leveraging collaborative efforts across the industrial chain, value chain, and from ecosystem partners, China Baowu has capitalized on its diversified and differentiated industrial strengths to pool greater efforts for rural revitalization. Based on its unique assistance capabilities, the Group has advanced the development of "Four Demonstration" brands, using them as vehicles to comprehensively enhance the quality and effectiveness of support initiatives.

"Cluster-Based" Assistance Demonstration Projects

In Shengli Town, Luotian County, Hubei Province, the Group supported the development of a specialized "ton bag" industrial town, creating nearly 400 jobs for local residents. The ton bag manufacturing enterprises achieved RMB 50.42 million in annual sales and contributed over RMB 1 million in taxes. In Ning'er County, efforts have been focused on increasing the value added of "Ning Xiao Dou" coffee public brand. Annual sales surpassed RMB 29 million, benefiting more than 6,800 local coffee farming households within the county and over 30,000 residents.

"Digital and Intelligent Empowerment" Demonstration Projects

The Group supported the smart agriculture platform development of Luotian County, Hubei Province to serve as a benchmark digitalization project in Huanggang City, Hubei Province. By the end of 2024, smart agriculture and supply chain platforms had been launched in assistance regions such as Guangnan County, Yunnan Province, Shanglin County, Guangxi Zhuang Autonomous Region, and Ongniud Banner, Inner Mongolia Autonomous Region. A "Village Digital Management" mini-program was developed and deployed in 88 villages of Ning'er County, Yunnan Province, effectively addressing data statistics gaps regarding left-behind populations.

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"Carbon Peaking and Carbon Neutrality Driven" Demonstration Projects

The Group supported the successful rollout of a pilot forestry carbon sink program in Ning'er County, Yunnan Province, facilitating the consumption of 2,000 tons of carbon credits via the Ning'er carbon inclusive platform, "Ning Tan Hui." It also assisted in the replanting and replenishment of understory economic crops across 2,000 mu (approximately 133.33 hectares), as well as the tending of 2,800 mu (approximately 186.67 hectares) of forest, while contributing to the development of three zero-carbon products. A rooftop solar project with a capacity of 100 kW was completed with an investment of RMB 500,000 to support self-use power generation and low-carbon production. In parallel, the Group has continued to advance green and low-carbon development in ongoing support of industrial growth in Xinjiang and Tibet.

"Charity Support" Demonstration Projects

The Group implemented the "Happy Farm" produce adoption program, with 18,649 new participants in 2024 adopting over ten types of crops and helping farmers increase their incomes by RMB 1.33 million. A "Micro-Wish" assistance campaign saw China Baowu employees fulfill 713 individual wishes, with in-kind donations totaling RMB 120,000. The Group also advanced the "Intangible Heritage Showcase" cultural preservation project, systematically documenting 130 intangible cultural heritage items in its counties receiving targeted assistance and pairing-up support. In addition, "Green Steel on Campus" and "Outstanding Teachers and Students Meet the Pillars of a Great Power" educational aid initiatives were organized.

Case China Baowu's "AI-Empowered Rural Revitalization Initiative" showcased

On July 5, 2024, China Baowu was invited to attend the 2024 World Artificial Intelligence Conference sub-forum—"AI-Empowered Rural Revitalization Scenario Launch," where it shared best practices from its "AI-Empowered Rural Revitalization Initiative" and "AI-Empowered County-Level Specialty Industrial Chain Development." These efforts harness intelligent technologies to empower agriculture and strengthen counties, establishing a distinctive model for driving urban-rural integrated development through digital and intelligent technologies.



Taking a Multi-Pronged Approach to Deliver on the "Five Revitalization" Tasks



In 2024

The Group facilitated employment transfers for

3,178 people

lifted out of poverty

Provided training sessions covering a total of

18,100 person-times

of cadres and talents from various counterpart support and targeted assistance regions

Industrial Revitalization

Based on the development realities, resource endowments, local specialties, and community needs of the seven counties and banners receiving targeted assistance, the Group introduced 23 assisted enterprises and projects, supported the establishment of 27 assistance workshops, and attracted actual investments totaling RMB 88.87 million. Leveraging its ecosystem's strength in resource integration, the Group worked in collaboration with local governments to facilitate employment transfers for 3,178 people lifted out of poverty, including 22 directly hired by the Group. In addition, it purchased or helped sell agricultural products from areas that have been lifted out of poverty, totaling RMB 169 million in value.

Talent Revitalization

Relying on its platform as a national enterprise integrating industry and education, the Group established and developed localized talent systems in its designated assistance areas, integrating educational resources from across society. In 2024, it provided training to 7,184 grassroots officials, 2,503 rural revitalization leaders, and 8,361 various technical professionals. Across the counties and banners receiving pairing-up support and targeted assistance, a total of 18,100 person-times of cadres and talents were trained. Specifically, the Group provided training sessions for officials and professionals covering a total of 3,109 person-times in Guangnan County, Yunnan Province, a national key county to receive assistance in pursuing rural revitalization.

Cultural Revitalization

The Group supported Ongniud Banner, Inner Mongolia Autonomous Region in promoting mutual reinforcement between the tourism and cultural sectors. It assisted Derisugacha Village in organizing a tourism and culture festival featuring the Nadam Fair, helping the village establish a signature agricultural tourism brand and enriching the cultural life of local residents.

The Group supported the preservation of ethnic culture in the border villages of Jiangcheng County, Yunnan Province. It launched the Modernized Happy Village Project in Bobie Village, Guoqing Township, focusing on the protection of Yi ethnic traditions such as folk dances and the Dragon Worship Festival. These efforts rescued and revived endangered cultural practices, promoted cultural heritage, and enhanced the ecological and cultural development of the entire village, laying a cultural foundation for future cultural and tourism development.

Ecological Revitalization

In Guangnan County, Yunnan Province, the Group continued to support the development of green and beautiful demonstration villages. Assistance projects in Xialibang and Anle villages of Jiumo Township included road greening and other infrastructure upgrades to preserve water resources, improve the ecosystem, and help local governments build ecological demonstration zones for rural revitalization.

In Pinghu Township, Luotian County, Hubei Province, the Group promoted the enhancement of a rural tourism complex by developing demonstration parks such as a chestnut-integrated understory economy zone, a farming study and education park, and a folk culture experience park. These efforts aim to build model industrial parks that integrate agriculture, culture, and tourism through "Tourism+" and "Ecology+" development models. The ultimate goal is to promote the integration of primary, secondary, and tertiary industries, and to support sustainable income growth for formerly impoverished farming households.

Organizational Revitalization

Group subsidiaries established 44 Party branch partnerships with their counterparts in assisted counties, engaging in joint efforts with 35 villages. Donations of RMB 936,000 in funds and supplies were made to co-building villages to support education, improve infrastructure. Additionally, the Group supported the cultivation of 55 new types of agricultural business entities to strengthen the collective rural economy.



In 2024

The Group donated

RMB 936,000

in funds and supplies to co-building villages

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Serving Social Development

China Baowu continuing to leverage its resource advantages across education support, volunteer services, infrastructure assistance, community building, and emergency response. Through professional expertise and concrete actions, the Group actively contributes to social development, promotes the spirit of public welfare, and plays a vital role in enhancing people's well-being.

Committed to Public Welfare and Philanthropy



By the end of 2024

The Group had recorded

27,671

volunteer participations

China Baowu has established the Baosteel Education Foundation, which provides educational awards and financial support to fully support educational reform and development. In 2024, a total of 283 teachers received the Baosteel Excellent Teacher Award, while 500 students were recognized with the Baosteel Excellent Student Award. By the end of 2024, the Baosteel Education Awards had been established in 77 accredited universities and two official evaluation institutions (the China Association of Metallurgical Education and the Shanghai Municipal Education Commission) across 31 provinces, autonomous regions, and municipalities in the Chinese mainland (excluding Taiwan, Hong Kong, and Macao), covering over 120 colleges and universities nationwide.

The Group is committed to advancing volunteer services through standardized operations, project-based management, professional implementation, and brand-driven development, encouraging a shift from serving the enterprise to serving the broader society. The first youth volunteer service recognition event was successfully held, with the Group's Youth Volunteer Association and Baosteel's "Xiaoganghua (Little Steel Flower)" Volunteer Team becoming official group members of the 6th Shanghai Youth Volunteer Association. The Group provided volunteer services for major internal and external events such as the Group's Workers' Congress, Science and Technology Workers' Day, and the NEOM project promotion event in Saudi Arabia. It also intensified its efforts to care for youth in regions receiving assistance and support, and organized extensive "Learn from Lei Feng" youth volunteer activities. By the end of 2024, the Group had 279 volunteer organizations, 561 volunteer service programs, and 15,183 registered volunteers. A total of 4,353 volunteer events were conducted, with 27,671 volunteer participations, contributing a cumulative total of 251,374 service hours.



Case

The Baosteel Education Award practice selected as an "Outstanding ESG Case of Chinese Enterprises"

On November 16, 2024, the Baosteel Education Foundation held the Baosteel Education Award Review and its Annual Work Meeting. Nearly 90 judges from the Ministry of Education, 77 accredited universities, and two evaluation institutions voted to determine the recipients of the 2024 Baosteel Special Awards for Outstanding Teachers and Students.

Each year, the Baosteel Education Award recognizes approximately 500 outstanding students and 270 outstanding teachers, with total award funds amounting to approximately RMB 10 million. Over the past three decades, nearly 30,000 teachers and students from over 300 universities and research institutes nationwide have received this award. The Baosteel Education Award is widely regarded as one of China's most prestigious national honors in higher education, known for its broad coverage, substantial prize funding, and high recognition, which is highly valued by teachers and students. In 2024, the Baosteel Education Award practice was selected by the China Enterprise Reform and Development Society as an Outstanding ESG Case of Chinese Enterprises.





Case China Baowu launched the first youth volunteer service recognition event

To mark the 61st "Learn from Lei Feng Day," Baowu organized its inaugural youth volunteer service recognition event. A total of 40 outstanding individual awards, 23 outstanding organizational awards, and 18 outstanding project awards for youth volunteers were granted. These awards aim to recognize young volunteers, volunteer teams, and model projects that have had a meaningful impact and demonstrated exemplary performance in urgent, challenging, and high-risk tasks as well as in various social practice activities.



China Baowu organized "Learn from Lei Feng" volunteer service activities.



Volunteer services for the Global Low-Carbon Metallurgy Innovation Forum.



Chongqing Iron & Steel (a subsidiary of Zhongnan Iron & Steel) conducted volunteer activities for children with special needs.



Chongqing Iron & Steel (a subsidiary of Zhongnan Iron & Steel) assisted farmers by thinning and bagging fruits.



Sinosteel donated supplies to impoverished families overseas.

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Magang Group launched a series of youth "Social Practice" volunteer service activities.



Chengchao Mine, managed by WISCO Resources (part of Baowu Resources), organized employee blood donation drives for 13 consecutive years.



Hwabao Trust officially launched the "Shanben · Zhejiang Commercial Bank – Hwabao Trust Boshi Jizhong No. 5 – huxing · Yijiang Education Aid Charitable Trust."

Supporting Community Development

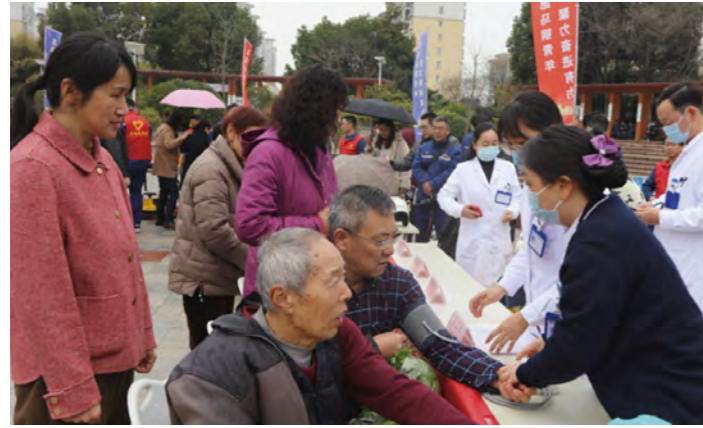
The Group actively engages with local communities through diverse activities and joint initiatives. These include donations of public facilities, improving street environments, offering festive care programs, and launching targeted service trusts. These efforts aim to enhance residents' quality of life, support community workers, and promote social harmony.



Baosteel contributed targeted donations of community infrastructure to Yuepu and Yanghang, enhancing community services and improving the local green environment for residents.



Sinosteel MECC (a subsidiary of Sinosteel Engineering & Technology) participated in a Christmas celebration hosted by the Colonia community near its project site in Bolivia, bringing gifts to local children.



Magang Group launched the "Free Clinic Enters the Community" program, offering free blood sugar and blood pressure checks for local residents.



Xinsteel supported subdistrict and community renovation efforts to jointly build a warm and inclusive neighborhood.



The Guinea project team of Sinosteel MECC (a subsidiary of Sinosteel Engineering & Technology) built a "Four-Season Organic Garden" tailored to the local climate, helping improve agricultural production techniques in local communities.



Samancor, one of Sinosteel's subsidiaries, renovated classrooms for a local high school.



Hwabao Trust officially launched China's first service trust dedicated to supporting community workers—the "Jinsha Program" Mutual Assistance and Care Plan for Community Workers in Chengdu.



Jinshandian Mine, managed by WISCO Resources (part of Baowu Resources), organized free clinics for residents in partnership with the local community.

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Emergency Response

Upholding the principle of putting people first, China Baowu responds swiftly in earthquake relief work and emergency rescue. Through financial aid, the development of professional emergency response systems, and other coordinated measures, the Group strives to protect lives and property.



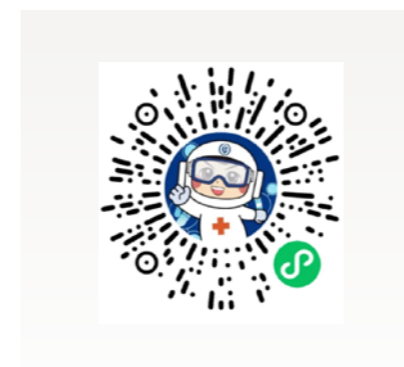
China Baowu donated RMB 12 million to support earthquake relief in Dingri County, Tibet Autonomous Region

On January 7, 2025, a 6.8-magnitude earthquake struck Dingri County in Shigatse City, Tibet Autonomous Region, resulting in significant casualties and property damage. China Baowu promptly initiated emergency response measures and donated RMB 12 million to support earthquake relief and post-disaster reconstruction efforts in the affected region.



National Mine Emergency Rescue Team based at Bayi Iron & Steel in Xinjiang: A comprehensive safeguard for coal mine safety

The National Mine Emergency Rescue Team based at Bayi Iron & Steel in Xinjiang is one of the region's primary forces for mine incident response. Comprising over 40 members, this nationally certified team has been responsible for firefighting, safety hazard inspections, and hands-on safety training at mine sites for more than 30 years. It regularly conducts specialized rescue drills and continuously strengthens the physical fitness and technical skills of its members to ensure all-round coal mine safety. The rescue team has earned numerous accolades in various rescue skill competitions and professional contests both within and outside the region. They have bravely taken the lead in multiple emergency rescue and disaster relief missions.



Baoland Real Estate Asset Management and Baosight successfully developed and launched an emergency "Pre-hospital Emergency Medical Care" mini-program at Baosteel Baoshan Base. The program integrates features such as one-click emergency calls, AED locator, and health education content, offering more efficient and convenient emergency medical services to employees at Baoshan Base and ecosystem partners.



Baoland Real Estate Asset Management was officially designated as a Red Cross Emergency First Aid Training Base by Baosteel, making it one of only three municipal-level emergency training centers in Shanghai.

CSR Management

➤ CSR Organization

China Baowu continues to establish and improve its corporate social responsibility (CSR) organizational system by strengthening CSR governance, clarifying CSR planning, and refining relevant policies and mechanisms, thereby laying a solid foundation for advancing the Group's CSR efforts in a coordinated manner.

CSR Governance

The Group has established and improved a structured CSR organizational framework covering the decision-making level, management level, and execution level from top to bottom, forming a CSR management organizational mechanism with clearly defined responsibilities across all levels. The Board of Directors is responsible for leadership and decision-making. The Corporate Social Responsibility Committee and functional departments at headquarters are responsible for management. All subsidiaries are responsible for execution. The Chairman and President serve as Committee Directors, with other executive team members acting as Deputy Directors. The Office of the Corporate Social Responsibility Committee acts as the leading body, with the Corporate Culture Division under the Corporate Culture Department as the competent departments. The Office Director is a designated executive, and the Deputy Director is the Head of the Corporate Culture Department. The Group has restructured the working groups under the Corporate Social Responsibility Committee to strengthen the CSR system with a focus on key issues. Units leading on these key issues serve as committee members and collaborate to advance CSR practices. China Baowu also promotes the establishment of CSR/ESG organizational structures across subsidiaries, designating lead departments for ESG work and actively supporting listed subsidiaries in strengthening ESG organizational and leadership systems.



China Baowu Corporate Social Responsibility Organizational Structure

Case Annual meeting of the Corporate Social Responsibility Committee held

In March 2025, China Baowu convened its annual meeting of the Corporate Social Responsibility Committee to review the Group's CSR and ESG progress over the past year, and to plan key tasks for 2025. The meeting also deepened the study and implementation of the *Guidelines for Central SOEs to Fulfill Social Responsibilities in High Standard in the New Era* issued by the SASAC. At the meeting, Hu Wangming, the Chairman of China Baowu, emphasized that sustainable development is not only a pressing imperative but also a long-term strategic choice. He stated that social responsibility is a "must-answer question" requiring higher political awareness and strategic foresight. It should be fulfilled to high standards throughout all aspects of management and operations, thereby positioning the Group as a sustainability benchmark in its journey toward becoming a world-class enterprise.



CSR Concept

China Baowu adheres to the CSR concept of "jointly building a steel ecosystem and creating a new green future," which is embodied in three foundational commitments—integrity management, innovation-driven growth, and green development—and four priority areas: caring for employees, giving back to society, co-building the ecosystem, and fulfilling responsibilities overseas.

CSR Planning

CSR topics are embedded in China Baowu's medium- and long-term development planning. The Group continues to integrate its social responsibility principles into corporate strategy, major decision-making, daily operations, and supply chain management. 14.28% of the Group's listed companies have formulated a clear ESG strategic plan, while 71.42% have integrated ESG-related elements into their corporate strategies. In response to new priorities in global development, the Group has revised the 2022 version of its International Development Plan and issued a new International Development Plan. Additionally, it prepared the 2024 Social Responsibility Summary Report and developed the 2025 Annual Work Plan for Social Responsibility.

CSR Systems

The Group continues to refine a social responsibility system with Baowu characteristics. In 2024, it revised the *China Baowu Social Responsibility Management System (2024)*, incorporating new ESG and overseas responsibility requirements—including definitions of ESG, ESG management scopes, and overseas responsibility fulfillment. China Baowu also supports its listed subsidiaries in strengthening ESG systems. Baosteel has introduced an ESG-specific regulation for the supply chain—*Supplier ESG Second-Party Audit Standards*. Over half of Baowu's listed companies have either developed ESG-specific policies or embedded ESG requirements into existing systems.

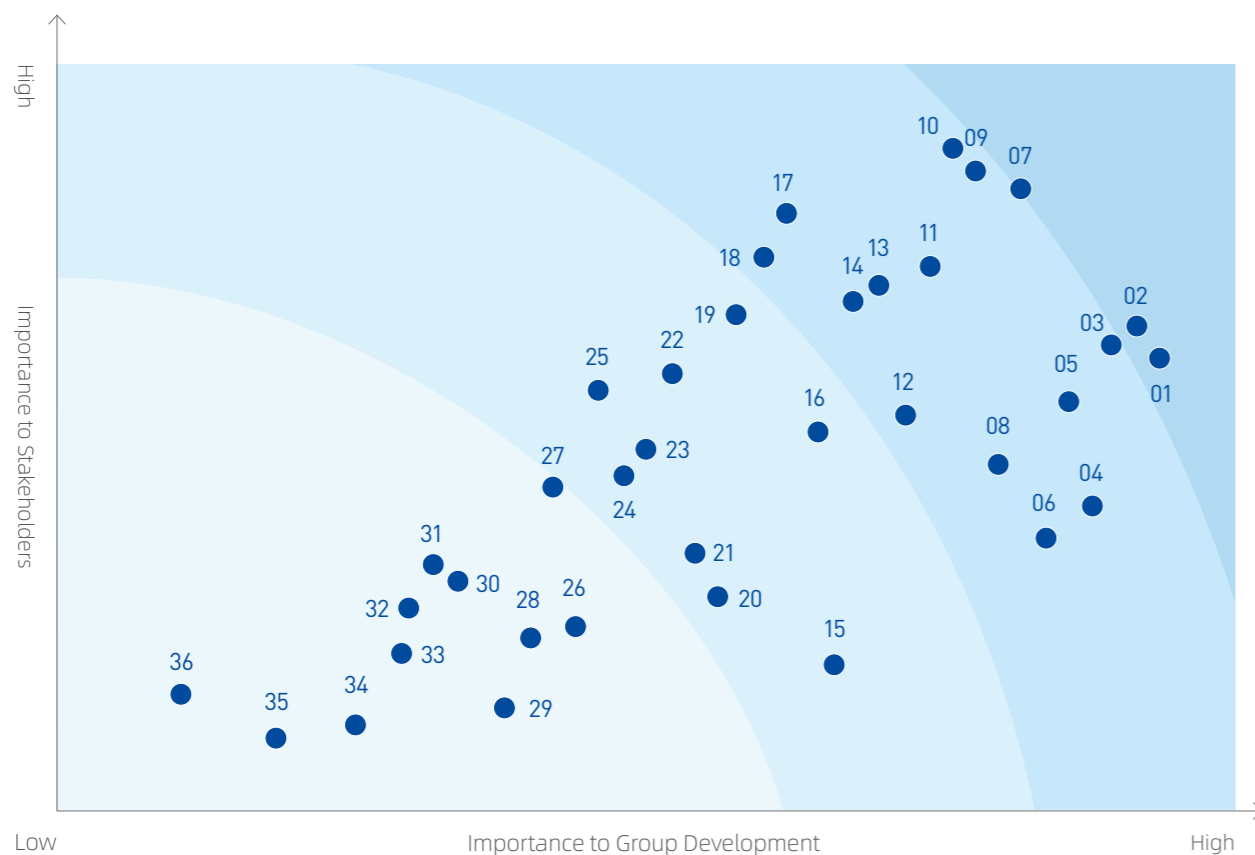
➤ CSR Integration

Translating social responsibility from theory to practice requires integrating responsibility philosophy and planning into every aspect of the company's daily operations. China Baowu places high importance on CSR integration by advancing four key elements: CSR issues, CSR processes, CSR performance, and CSR capability. These form a complete PDCA (Plan-Do-Check-Act) cycle that drives CSR integration into corporate development strategies and business activities, thereby contributing to the creation of an influential and sustainable responsibility brand.

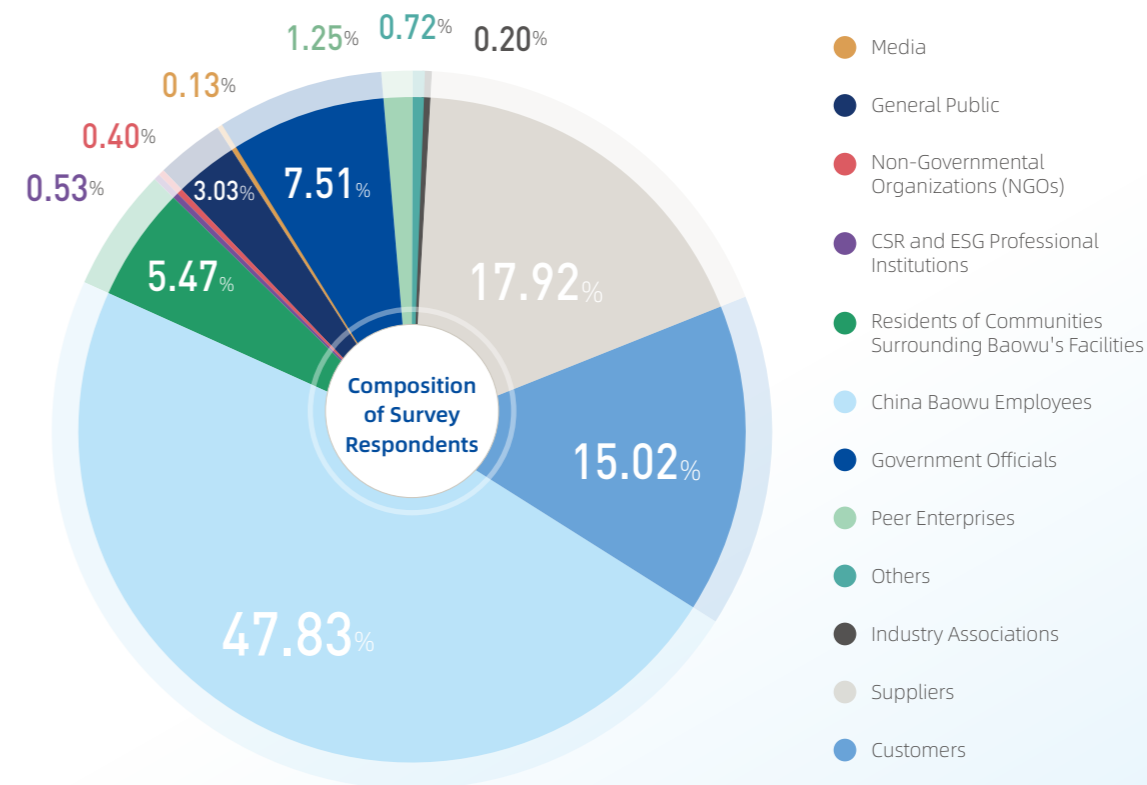
CSR Issues

In 2024, the Group continued to refine its indicator system and key issues. New indicators such as "focusing on core businesses and real economy," "strengthening brand leadership," and "optimizing industrial layout" were added. On this basis, the Group continued to carry out material topic surveys, drawing on industry policy trend research, analysis of domestic and international reporting standards, benchmarking against leading peer reports, and surveys of internal and external stakeholders. These efforts aimed to continuously refine and update key material issues to better address stakeholders' concerns.

A total of 1,518 valid questionnaires were collected from stakeholders, including government agencies, industry associations, suppliers, customers, Baowu employees, residents of communities surrounding China Baowu's facilities, media, the general public, CSR and ESG professional institutions, and peer enterprises.



- | | | |
|--|---|---|
| 01 Breakthroughs in Original and Pioneering Technologies | 13 Energy Conservation and Emissions Reduction | 26 Implementation of the Global Development Initiative and Contribution to High-Quality Belt and Road Cooperation |
| 02 Provision of Integrated Material Solutions | 14 Digital and Intelligent Transformation | 27 High-Quality Information Disclosure |
| 03 R&D and Technological Breakthroughs in Critical Materials | 15 Deepening Reform of State-Owned Enterprises | 28 Employee Development |
| 04 R&D of Low-Carbon Metallurgical Technologies | 16 Carbon Peaking and Carbon Neutrality Goals and Climate Change Response | 29 Philanthropy and Emergency Relief |
| 05 Green and Low-Carbon Products and Services | 17 Occupational Safety and Emergency Management | 30 Stabilizing and Promoting Employment |
| 06 Optimization of Corporate Governance | 18 Strengthening Brand Leadership | 31 CSR and ESG Management Systems |
| 07 Integrity and Compliance Management | 19 Effective Responsibility Communication | 32 Coordinated Regional Development |
| 08 Development of a Responsible Supply Chain | 20 Employee Health and Rights Protection | 33 Biodiversity Conservation |
| 09 Safeguarding the Security of the Industrial Chain | 21 Ecosystem Conservation and Restoration | 34 Community Co-Building |
| 10 Enhancing Product Quality and Service | 22 Recycling and Reuse of Resources | 35 Support for Rural Revitalization |
| 11 Layout for Strategic Emerging and Future Industries | 23 Development of an Open Collaborative Innovation System | 36 Localized Operations in Overseas Development |
| 12 Utilization of Renewable Energy | 24 Development of Energy and Environmental Management Systems | |
| | 25 Promotion of Responsible Branding Projects | |

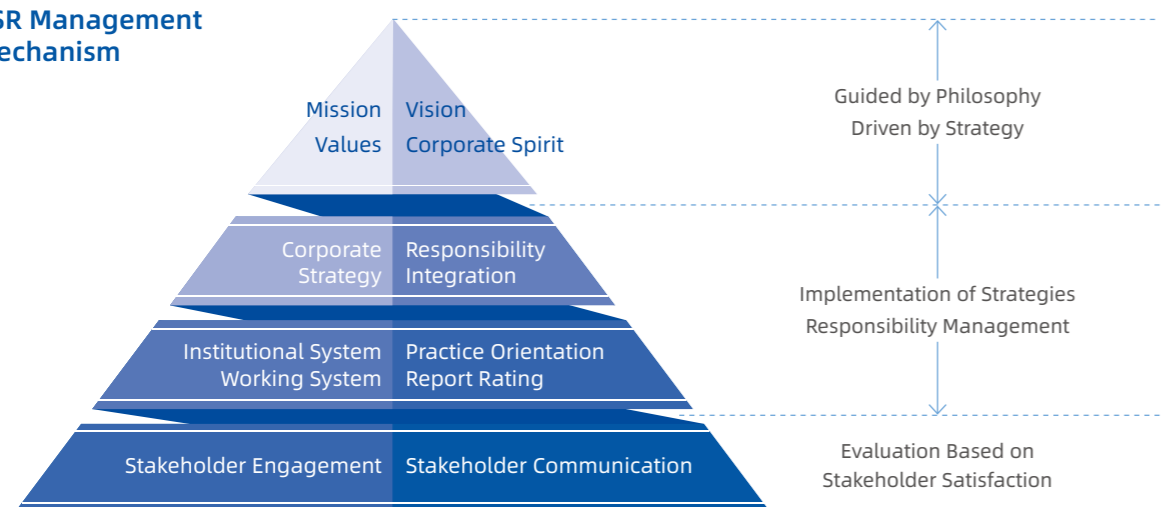


CSR Process

China Baowu upholds the principle of "promoting management, improvement, and enhancement through reporting." By using the Corporate Social Responsibility Report as a key tool, the Group integrates the specific requirements of CSR issues into workflows, optimizes practices in critical positions, improves social responsibility performance, and deepens the integration of corporate strategy with social responsibility—ultimately earning the trust and support of stakeholders.

In 2024, the Group incorporated "high-standard CSR performance and enhanced ESG governance" into the 2025 business planning control requirements for its subsidiaries. Each entity was asked to focus on material issues closely related to its business, and to formulate specific, measurable actions and goals. Additionally, the Group has advanced digital applications in social responsibility by developing an environmental and energy management information platform, thereby empowering responsibility management with digital tools.

CSR Management Mechanism



CSR Performance

In 2024, the *China Baowu 2023 Social Responsibility Report* once again received the highest "Five-Star Plus" rating. All Baowu-controlled listed companies have published ESG reports. The Group ranked second for the third consecutive year in the "Central SOE CSR Management • Pioneer 30 Index." Listed subsidiaries such as Baosteel, Masteel, Taigang Stainless Steel, and Sinosteel Engineering & Technology also demonstrated strong performance in relevant index ranking.

At the same time, Baowu has actively fostered a culture of "performance-oriented, benchmark-driven, role-model-based, and excellence-pursuing" responsibility management, integrating social responsibility into corporate management through the inclusion of related assessment criteria and indicators. In 2024, China Baowu continued its recognition programs, including the CSR Pioneer Awards and the selection of benchmark and outstanding cases. Baosteel received the Gold Award in the collective category of the "Baowu CSR Pioneer Awards," while five units received the Silver Award and seven units received the Bronze Award. In addition, ten benchmark cases and ten outstanding cases were selected.



Baoshan Iron & Steel Co., Ltd.



Maanshan Iron & Steel Co., Ltd.

Baowu Resources Co., Ltd.

Shanxi Taigang Stainless Steel Co., Ltd.

Sinosteel Engineering & Technology Co., Ltd.

Samancor Chrome Limited



Guangdong Zhongnan Iron & Steel Co., Ltd.

Baowu Carbon Materials & Technology Co., Ltd.

Xinjiang Bayi Iron & Steel Group Co., Ltd.

Shanghai Baosteel Packaging Co., Ltd.

Xinyu Iron & Steel Group Co., Ltd.

Ouyeel Co., Ltd.

Hwabao WP Fund Management Co., Ltd.

中国宝武钢铁集团有限公司文件

宝武字〔2024〕378号

关于印发2025年度全面预算管理暨商业计划书编制大纲的通知

各子公司、总部各部门：

现将《中国宝武2025年度全面预算管理暨商业计划书编制

大纲》印发给你们，请遵照执行。各子公司要结合实际，将ESG项目策划纳入各子公司战略任务重点推进，打造持续高质量发展新优势。

五、时间节点要求

2024年11月上旬，各子公司在前期开展全面预算编制基础上完成商业计划书初案，测算预算目标。

2024年11月上旬，各业务发展部/中心、总部职能部门与子公司交流商业计划书，明确经营及管控目标，编制生产经营及投资、融资等年度计划。

2024年11月下旬，集团公司总经理专题会评审子公司商业计划书。

Baowu incorporated social responsibility requirements into the business plan of its subsidiaries.

Winners of Baowu CSR Pioneer Awards (2022–2023)

Title of Benchmark Case	Field Involved	Contributor
Setting the benchmark, leading with innovation: All five bases designated as "Energy Efficiency Benchmark Demonstration Enterprises" by CISA	Green development	Baosteel
Transforming "pollution sources" into "backyard gardens": Creating a new urban landmark	Green development	Zhongnan Iron & Steel
Fulfilling the mission with determination: Magang high-speed wheels fully equipped on a Fuxing bullet train	Industrial leadership	Magang Group
Independently developed ultra-low temperature steel for LNG storage tanks: From a follower to a frontrunner in ultra-large LNG tank construction	Industrial leadership	TISCO
Shaping a new paradigm for future mining in extreme cold regions	Safety support	Bayi Iron & Steel
Marketing as wings, shipping as sails: Escorting the first batch of Australian "Silk Road fines" home	Ecosystem co-building	Baowu Resources
Big data-driven carbon management: Providing systematic solutions for low-carbon transition across the entire industry chain	Green development	Baosight
Creating a demonstration model for urban sludge resource utilization and contributing to the development of "zero waste cities"	Green development	Baowu Environment and Resource Technology and Baowu Water Technology
Localization of nickel-based welding materials for the world's first commercial high-temperature gas-cooled reactor	Green development	Baowu Special Metallurgy
Breaking through saturated salt lake development barriers: Efficient and integrated utilization of the Zabuye Salt Lake	Green development	Tibet Mineral Development

2024 China Baowu CSR Benchmark Cases

Title of Outstanding Case	Field Involved	Contributor
Localization of key stainless steel materials for molten salt energy storage supporting national energy transition	Green development	TISCO
Building a "three-in-one" care system: Empowering employees with disabilities from recipients to contributors	Employee development	Xinsteel
Leading industry standard setting and enabling the digital and intelligent transformation of the steel industry	Industrial leadership	Baosight
Platform + Alliance + Standards: Building a one-stop green service matrix for SMEs	Green development	Ouyeel
Research on key technologies for the industrialization of hot-state slag wool production to promote the resource utilization of waste heat and energy	Green development	Baowu Environment and Resource Technology
From "four-season organic gardens" to a "Sino-Guinean friendly homeland"	International development	Sinosteel Engineering & Technology
Greening the "can lid": Setting a low-carbon benchmark in the metal packaging industry	Green development	Baosteel Packaging
Driving the internationalization of the roll industry with high-end green products and intelligent, efficient services	Industrial leadership	Baowu Equipment Intelligent Technology and Baowu Heavy Industry
Creating a "Caring Childcare" ecosystem and building the "1+N" childcare and after-school care service brands	Employee development	Wugang Group
Enhancing overseas capital management and empowering Baowu's global expansion	International development	Baowu Group Finance Company

2024 China Baowu CSR Outstanding Cases

CSR Capability

The Group continues to build an exceptional team for CSR and ESG management. Each year, external experts are invited to provide guidance, and specialized training sessions are organized to enhance understanding of the latest domestic and international trends, explore strategic directions, identify weak links, and study improvement pathways. In 2024, China Baowu organized two dedicated CSR training programs, inviting industry experts and representatives from outstanding private enterprises to share their experience in CSR, sustainability, and ESG management. The Group also co-initiated a platform for rating Chinese suppliers' ESG performance, contributing to the development of ESG ecosystems in China and around the world.



China Baowu was recognized as an "ESG-Model Demonstration Base" by China Media Group and the China Enterprise Reform and Development Society, becoming the first demonstration base of the program.



On November 8, 2024, China Baowu held a special training session on social responsibility under the theme "Fulfilling Responsibilities to High Standards, Advancing High-Quality Development." Experts from the Bureau of Social Responsibility under the SASAC provided an in-depth policy interpretation, while ESG experts from CIMC shared the company's ESG system development and its advanced approaches and practices for implementing key ESG issues.



As one of the founding members, China Baowu played an active role in launching the platform for rating Chinese suppliers' ESG performance.

➤ CSR Communication

China Baowu has established a diversified internal and external communication platform to engage with stakeholders on the company's social responsibility efforts, enabling two-way transmission, reception, analysis, and feedback of related information.

CSR Report

The CSR report serves as the most important medium for communicating corporate responsibility. China Baowu has established and continuously improved a "1+N+M" reporting system and a regular publication mechanism—where "1" refers to the annual CSR report, "N" represents thematic reports such as the Green and Low-Carbon Development Report and the Rural Revitalization White Paper, and "M" refers to the CSR/ESG/sustainability reports issued by its subsidiaries.



On August 7, 2024, China Baowu held a centralized release event for its 2023 "1+N+M" social responsibility reports. A total of 29 reports—including CSR, ESG, sustainability, and overseas responsibility reports—were issued by 26 Baowu-affiliated companies, marking the third consecutive year of full reporting coverage by all listed subsidiaries under the Group.

Participation of Stakeholders

The Group has established effective mechanisms for stakeholder engagement, identifying and responding to stakeholder concerns. It discloses updates on its social responsibility efforts and activities through official channels such as its website, public WeChat account, and mainstream media. Multimedia content—including promotional videos in the Group's brand video matrix, the "Baowu Good Stories" and "Baowu Good News" campaigns, and the e-book of *Baowu Model Stories*—has helped narrow the distance between the Group and the public, effectively conveying its CSR concept and practices to enhance stakeholders' understanding and support. The Group places great importance on engaging with overseas stakeholders by convening overseas work conferences and leveraging the internet and international social media platforms to enhance the outreach of its social responsibility efforts abroad. The Group also strengthens communication and exchanges with mainstream media, research institutions, and industry associations, as well as the collaboration with leading ESG institutions. Moreover, the Group has actively participated in major events such as the Parallel Forum on State-Owned Enterprise Social Responsibility at the Seventh China Enterprise Forum, the Eighth China Enterprise Reform and Development Summit and Achievements Release Conference, the launch events for the *Blue Book on Corporate Social Responsibility (2024)* and the *Blue Book on Social Responsibility of Steel Industry (2024)*, and the 2024 China Brand Development Conference—Steel Industry Session.



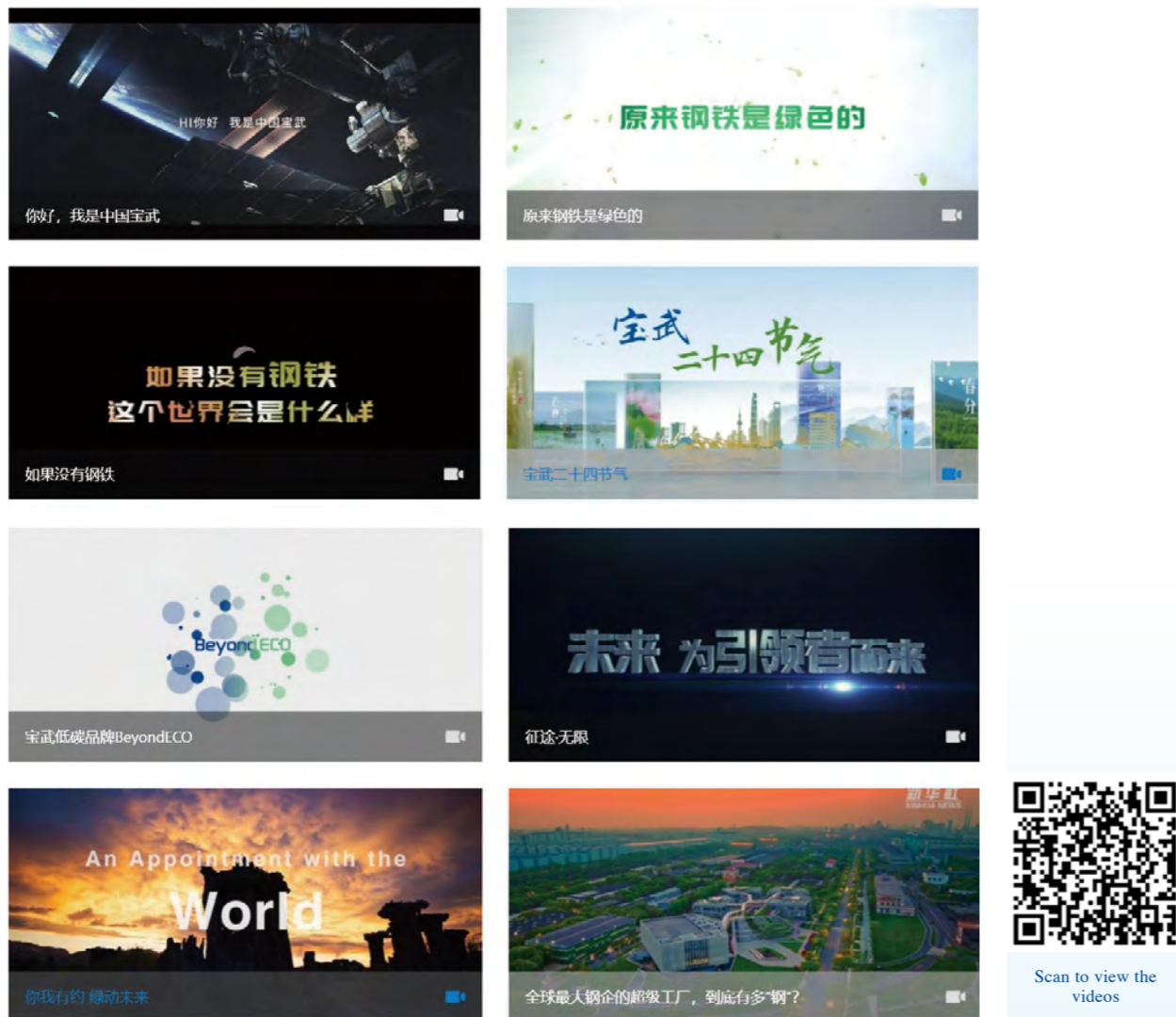
On May 10, 2024, in celebration of China Brand Day, China Baowu launched a series of themed activities to showcase its dynamic practices and outstanding achievements driven by innovation and guided by the high-end, intelligent, green, and high-efficiency development direction.



On May 11, 2024, at the China Brand Development Conference—Steel Industry Session, China Baowu released a thematic report titled "Innovation-Driven: Illuminating the Power of Baowu's Brand—The Philosophy, Methodology, and Practice of Baowu's Brand Management." The report presents Baowu's brand management through the lens of "philosophy, methodology, and practice," highlighting how the Group reshapes the image of steel, showcases its inherent beauty, and conveys its warmth through branding initiatives. "Striving for Excellence, Forging a World-Class Enterprise—The 'Philosophy, Methodology, and Practice' of Baowu's Brand Management" was selected as an outstanding case in brand creation in 2023 under the China Iron And Steel Association's initiative focused on expanding product variety, enhancing product quality, and building strong brands in the steel industry, and recognized as a typical case for "Corporate Culture Development and Management" in 2024 by the China Corporate Culture Institute.



Focusing on its overseas development, China Baowu launched Season 2 of the bilingual "Baowu 24 Solar Terms" poster series. Disseminated through domestic integrated media platforms and a matrix of overseas social media platforms, the series received wide attention and positive feedback.



China Baowu's brand video matrix.

序号	平台类型	账号名称	国家和地区	序号	平台类型	账号名称	国家和地区
1	脸书	Friendly Baowu	美国	9	脸书	Baosteel Packaging	越南
2	脸书	Friendly Baosteel	新加坡/印度	10	脸书	Ouyeel Cross-Border Steel E-commerce	越南
3	脸书	Baosteel Tailored Blanks	德国	11	脸书	Baosteel resources international	中国香港
4	X (原推特)	FRIENDLY BAOSTEEL	土耳其	12	脸书	Baosteel Packaging (Malaysia)	马来西亚
5	连我	Friendly BAOSTEEL	日本	13	脸书	Sinosteel OR	全球
6	脸书	Friendly Masteel	德国	14	脸书	Baosteel Packaging (Cambodia)	柬埔寨
7	脸书	Friendly Taigang	中国香港	15	脸书	Baosteel resources Australia	澳大利亚
8	脸书	BAYI Steel international Kazakhstan	哈萨克斯坦				

Building a matrix of overseas social media platforms.

CSR Honors

- China Baowu was recognized as the first **"ESG-Model Demonstration Base in China,"** jointly awarded by China Media Group and the China Enterprise Reform and Development Society.
- China Baowu ranked seventh overall in the **"Top 10 of the China Top 300 Enterprises' Social Responsibility Development Index,"** and first in the steel industry.
- China Baowu's HyCROF commercial demonstration project received the 15th **Steelie Awards** from the World Steel Association for excellence in low-carbon steel production.
- China Baowu and seven of its subsidiaries received the **"Standards Pioneer Award"** from the British Standards Institution (BSI), and Baosteel was honored with the **"Digital Trust Assurance Award"** (Gold Medal for Trusted Digital Factory).
- The Baosteel Education Award practice was selected by the China Enterprise Reform and Development Society as an **"Outstanding ESG Case of Chinese Enterprises."**
- China Baowu's Corporate Social Responsibility Report received the **"Five-Star Plus"** rating for the fourth consecutive year.
- China Baowu was honored with the **"CSR Jingniu Award - CSR Enterprise Award"** in the list of 2024 CSR Jingniu Awards by the CSR Cloud Research Institute. Ten non-listed subsidiaries received the **"CSR Jingniu Award"**, and six listed subsidiaries were recognized with the **"ESG Jingniu Award"**.
- Three listed subsidiaries were named among the **"Chinese ESG Listed Companies Pioneer 100,"** ranking second among Chinese enterprises for the second consecutive year.

Appendix

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	Management Team	P4.1	P17
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CSR Highlights	Accelerating the Deep Integration of AI and the Steel Industry	P3.1-3.2	P20-21
	Creating a Model of Sustainable Development at Simandou	P3.1-3.2, E3.3-3.6	P22-27
	Spearheading a Full-Chain Sustainability Ecosystem	P3.1-3.2	P28-33
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Rating Report

Rating Report of the 2024 Corporate Social Responsibility Report of China Baowu Steel Group Corporation Limited

At the request of China Baowu Steel Group Corporation Limited (hereinafter referred to as "China Baowu," "Baowu," or "the Group"), the Chinese Expert Committee on CSR Report Rating convened a team of experts to form a Rating Team and evaluate the 2024 Corporate Social Responsibility Report of China Baowu Steel Group Corporation Limited (hereinafter referred to as "the Report").

I. Rating Basis

The rating was conducted in accordance with the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0)* issued by the Chinese Academy of Social Sciences (CASS) and the *Rating Standards for the Sustainability Report of Chinese Enterprises (2025)* by the Chinese Expert Committee on CSR Report Rating.

II. Rating Process

1. The Rating Team reviewed and confirmed the *Confirmation Letter on Materials for Process Evaluation of the Sustainability Report of Enterprises* along with relevant supporting documents submitted by the Preparation Team of the Report.

2. The Rating Team assessed both the compilation process and the disclosed content of the Report and drafted the Rating Report.

3. The Vice Chairman of the Chinese Expert Committee on CSR Report Rating and the leader as well as the expert of the Rating Team cosigned the Rating Report.

III. Rating Results

Process (★★★★★)

Led by the Group's CPC Publicity Department and Corporate Culture Department, a report preparation working group was established to oversee the preparation process in a coordinated manner and control the overall direction and key milestones. The Chairman and President of China Baowu are responsible for the final approval of the Report. The Report is positioned as an important tool for improving information disclosure mechanisms, strengthening stakeholder communication, enhancing CSR management, and shaping the corporate responsibility brand image, with clearly defined functional values. As key priorities disclosed in the Report, material topics were identified through the combination of domestic and international CSR standards, research on industry policies and trends, internal and external stakeholder surveys, and corporate development strategies. The Group has continued to refine a social responsibility system with Baowu characteristics and revised the China Baowu Social Responsibility Management System (2024), incorporating ESG and overseas responsibility requirements and improving the CSR management level. The Report will be presented in both electronic and printed formats, demonstrating outstanding process performance.

Materiality (★★★★★)

The Report systematically discloses key issues in the industry, including the implementation of macro policies, product quality management, product innovation, responsible procurement, occupational health management, workplace safety, R&D and application of environmental technologies and equipment, energy and water resource conservation, circular economy development, and environmental governance surrounding the factories. The content is detailed and thorough, showing outstanding performance in materiality.

Completeness (★★★★★)

The Report systematically covers 93.46% of the core industry indicators from the perspectives of "With Sincerity and Dedication, Leading High-Quality Development across the Industry," "Toward a More Sustainable Future, Setting an Example for Green and Low-Carbon Transition," "Led by Innovation, Pioneering Original Innovation in Enterprise Development," and "Friendly and Inclusive, Building a Harmonious Society through Concrete Actions." Therefore, the Report exhibits outstanding completeness performance.

Balance (★★★★★)

The Report discloses negative data, such as "employee turnover rate," "number of workplace accidents," and "suppliers terminated due to non-compliance." It also briefly mentions that "no major or above-level environmental incidents occurred, nor were there any environmental incidents with serious societal impact," and describes in detail the issues that occurred in supplier ESG evaluations and the countermeasures. Therefore, the Report has an outstanding balance performance.

Comparability (★★★★★)

The Report provides three-year comparative data on 74 KPIs, including "total assets," "steel output," "total public welfare donations," "CSR training hours," "investment in environmental protection," and "fresh water consumption per metric ton of steel." It also includes horizontal comparisons, such as "ranked 44th on the 2024 Fortune Global 500 for the third consecutive year,

China Baowu continues to lead the global steel industry" and "China Baowu ranked seventh overall in the 'Top 10 of the China Top 300 Enterprises' Social Responsibility Development Index', and first in the steel industry." Therefore, the Report exhibits outstanding performance in comparability.

Readability (★★★★★)

With the theme "Strive for Excellence," the Report adopts a topic-based framework structure, which has clear logic and a well-organized structure. It presents annual CSR practices and achievements comprehensively. In the page-spanning chapters, the Report incorporates large-scale real-world images that align with the chapter's content, and features "Our Understanding," "Our Practices," and "Our Performance" to help readers quickly grasp the key points of each chapter. The inclusion of multiple "Key Facts" clarifies industry-specific terminology, enhancing the Report's readability. The use of QR codes and mini-programs for multimedia extension enriches the content and increases the interactivity, showcasing outstanding readability.

Innovation (★★★★★)

The Report features the "CSR Highlights" section on "Accelerating the Deep Integration of AI and the Steel Industry," "Creating a Model of Sustainable Development at Simandou," and "Spearheading a Full-Chain Sustainability Ecosystem." The section highlights China Baowu's key CSR practices of the year, including the deep integration of AI with the steel industry, the sustainable development of Simandou, and the promotion of sustainability across the industrial chain, reflecting its commitment to corporate social responsibilities as a central SOE. Moreover, Baowu has established and continuously improved a "1+N+M" reporting system and a regular publication mechanism, encouraging its subsidiaries to publish CSR reports and strengthening the sustainability management. The Group plans to hold a special press conference to release the Report, which will also be re-released during the centralized publication event for the ESG reports of central SOEs, enhancing the Report's reach and communication value. By participating in the report rating for several consecutive years, Baowu has strengthened the standardization and credibility of its sustainable development efforts, demonstrating outstanding performance in innovation.

Overall Rating (★★★★★+)

Upon evaluation by the Rating Team, the 2024 Corporate Social Responsibility Report of China Baowu Steel Group Corporation Limited has received a "Five-Star Plus" (★★★★★+) rating based on its outstanding performance in process, materiality, completeness, balance, comparability, readability, and innovation. It is a benchmark among corporate sustainability reports.



China Baowu's Corporate Social Responsibility Report has received a "Five-Star" rating once and has been awarded the top-tier "Five-Star Plus" rating for the fifth consecutive year.

IV. Suggestions for Improvement

More industrial core indicators should be disclosed to enhance the overall completeness of the Report.

俞冲皓

Vice Chairman of the Chinese Expert Committee on CSR Report Rating

邵国胜

Leader of the Rating Team

钟宏武

Expert of the Rating Team

Issued on July 31, 2025



Scan the QR code to view the enterprise's rating file

Feedback

Dear Reader,

Thank you for taking the time to read the *2024 Corporate Social Responsibility Report of China Baowu Steel Group Corporation Limited*. To continuously improve the management of our social responsibility reporting, we sincerely invite your feedback and suggestions. We would greatly appreciate it if you could complete the feedback form and return it to us through one of the following channels:

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Postal Code: 200126

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Email: csr@baowugroup.com

Your Information

Name: _____ Organization: _____

Contact Number: _____ Email: _____

Evaluation Questions (Please check where applicable)

How well does this report reflect China Baowu's significant economic, social, and environmental impacts?	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor
How effectively does this report respond to and disclose stakeholder concerns?	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor
How clear, accurate, and complete is the information, indicators, and data in this report?	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor
How would you evaluate the overall readability of the report?	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor
Your overall assessment of the report:	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor

Open-Ended Questions

What suggestions do you have for improving China Baowu's CSR efforts?

What valuable social responsibility information did this report provide to you?

What additional information would you like to see disclosed in future reports?

What do you see as the main shortcomings of this report?





China Baowu Steel Group Corporation Limited

Environmental considerations for report publishing
Paper: Printed on eco-friendly paper
Ink: Uses environmentally safe ink to minimize air pollution