



**凝心聚力  
建设世界一流企业**

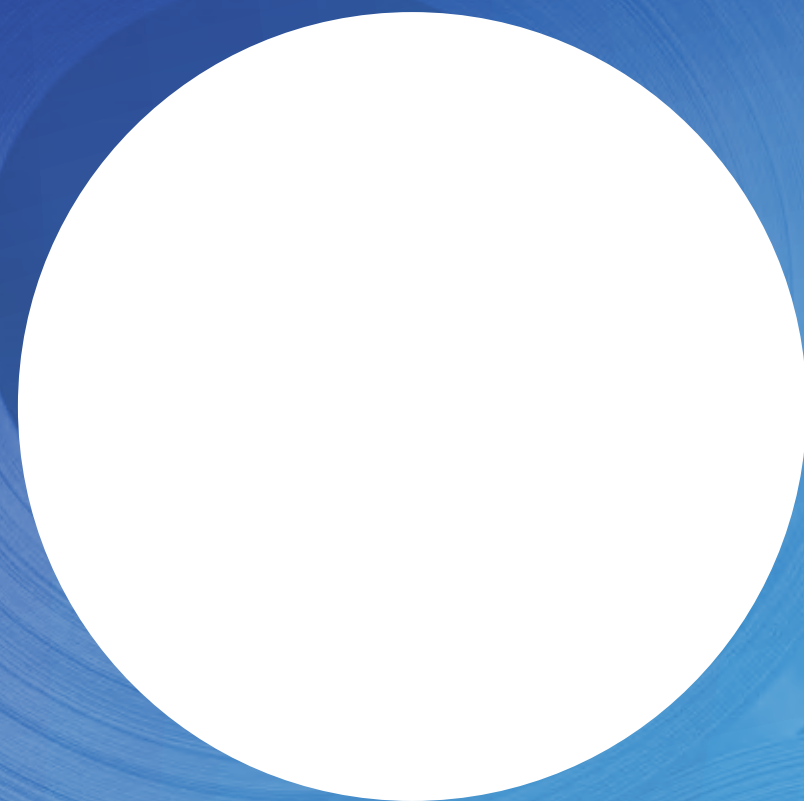
Pull Together to Build a  
World-Class Enterprise

中国宝武钢铁集团有限公司  
**社会责任报告**

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China Baowu Steel Group Corporation Limited  
**Corporate Social Responsibility Report**





**凝心聚力  
建设世界一流企业**  
Pull Together to Build a  
World-Class Enterprise

**团结成“一块坚硬的钢铁”**  
Stay United as “a Piece of Hard Steel”

习近平总书记强调，全党全国各族人民要在党的旗帜下团结成“一块坚硬的钢铁”，心往一处想、劲往一处使，推动中华民族伟大复兴号巨轮乘风破浪、扬帆远航。宝武以“共建产业生态圈推动人类文明进步”为使命，上下凝聚“同一个宝武”文化共识，在党的旗帜下紧密团结成“一块坚硬的钢铁”，不忘“钢铁报国”初心，牢记“钢铁强国”使命，齐心绘就发展同心圆，以满腔热情、豪迈干劲，为建设世界一流企业，为全面建设社会主义现代化国家、全面推进中华民族伟大复兴而团结奋斗！

General Secretary Xi Jinping called on the whole Party and all Chinese people to stay united as “a piece of hard steel” under the leadership of the Communist Party of China (CPC) and pull together with one mind to power the giant ship of national rejuvenation through the wind and waves to reach its destination. Taking “jointly build an industrial ecosystem and promote the progress of human civilization” as its mission, Baowu reaches a cultural consensus of “One Shared Baowu” at all levels, stays united as “a piece of hard steel” under the leadership of the CPC, and bears in mind the original aspiration of serving the country with steel and the mission of strengthening the country with steel, and makes concerted efforts to draw concentric circles of development. Baowu will strive in unity to build a world-class enterprise, build a modern socialist country in all respects, and advance the rejuvenation of the Chinese nation on all fronts with great passion and high energy.



资产总额

**12398.41** 亿元

Total assets

RMB **1239.841** billion

营业总收入

**10877.07** 亿元

Total operating revenue

RMB **1087.707** billion

利润总额

**301.56** 亿元

Total profits

RMB **30.156** billion

钢产量

**13184** 万吨

Steel output

**131.84** million tons

纳税总额

**415.45** 亿元

Total tax

RMB **41.545** billion

## 凝心聚力 建设世界一流企业

Pull Together to Build a  
World-Class Enterprise

### 使命 Mission

共建产业生态圈推动人类文明进步

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

### 价值观 Values

诚信 创新 绿色 共享

Integrity, Innovation,  
Green and Sharing

### 愿景 Vision

成为全球钢铁及先进材料业引领者

Become a leading company in the global industry of  
steel and advanced materials industry

### 企业精神 Corporate Spirit

钢铁报国 开放融合 严格苛求 铸就强大

Dedication, Integration,  
Perfection and Greatness

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# 报告概述

## About This Report

### 报告体系

#### Reporting system

本报告为中国宝武钢铁集团有限公司（以下简称“宝武”“集团公司”或“我们”）自 2016 年以来对外公开发布的第七份社会责任报告，同时也是宝武“1+N+M”社会责任报告发布体系中的“1”——主报告。

This report is the seventh Corporate Social Responsibility Report released to the public by China Baowu Steel Group Corporation Limited (hereafter referred to as “Baowu”, “Group Corporation”, or “we”) since 2016. It is also the main report “1” in the “1+N+M” Corporate Social Responsibility Report Release System of Baowu.

#### 宝武“1+N+M”社会责任报告发布体系

“1+N+M” Corporate Social Responsibility Report Release System of Baowu



“1”——2021 年社会责任报告

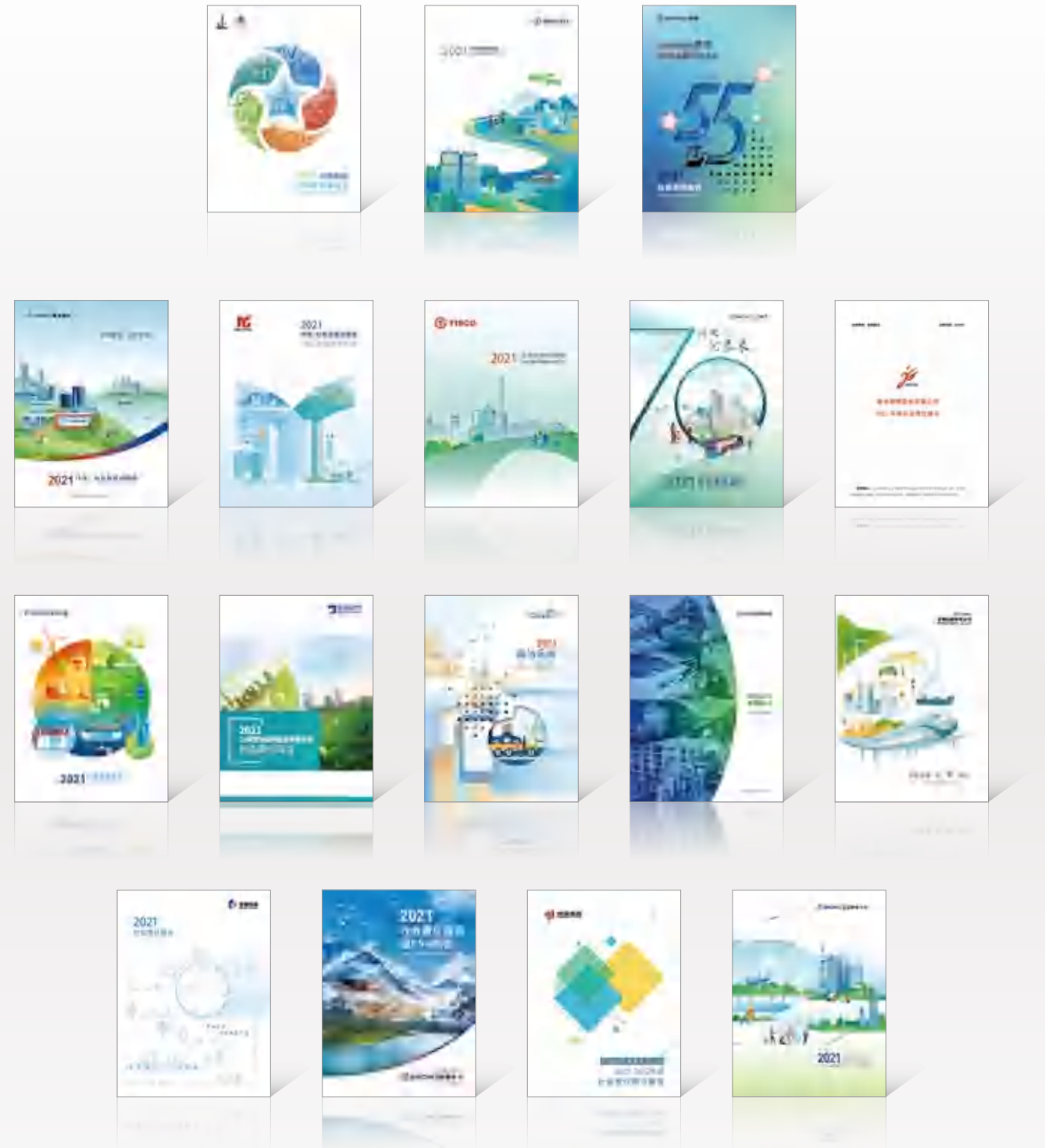
“1” – Corporate Social Responsibility Report 2021

“N”——2021 年绿色低碳发展报告

“N” – Green and Low-Carbon Development Report 2021

“M”——2021 年子公司社会责任及 ESG 报告

“M” – Corporate Social Responsibility Reports and ESG Reports 2021 of subsidiaries



质量保证  
Quality assurance

本报告披露的信息和数据来源于集团公司统计报告和正式文件，并经过相关部门审核。我们承诺本报告不存在任何虚假记载或误导性陈述，并对内容的真实性、准确性和完整性负责。

The information and data disclosed in this report are from the statistical reports and official documents of the Group Corporation and have been reviewed by relevant departments. We undertake that there is no false record or misleading statement in this report, and are responsible for the authenticity, accuracy and completeness of the content.

编制原则  
Principle

本报告参照国务院国资委《关于中央企业履行社会责任的指导意见》（国资发研究〔2008〕1号）《关于中央企业开展管理提升活动的指导意见》（国资发改革〔2012〕23号）《关于国有企业更好履行社会责任的指导意见》（国资发研究〔2016〕105号）、联合国可持续发展目标（SDGs）、中国社会科学院《中国企业社会责任报告指南（CASS-ESG 5.0）》以及《中国宝武社会责任工作管理制度（2022版）》，充分考虑利益相关方的愿望和关切，并结合宝武对社会责任的独特理解和具体实践编写而成。

This report is compiled with reference to the *Guidelines on Fulfillment of Corporate Social Responsibility by Central Enterprises* (GZFYJ No. [2008] 1) issued by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, *Guidelines on Management Improvement Activities of Central Enterprises* (GZFEGG No. [2012] 23) issued by the SASAC, *Guidelines on Better Fulfillment of Corporate Social Responsibility by State-owned Enterprises* (GZFYJ No. [2016] 105) issued by the SASAC, UN Sustainable Development Goals (SDGs), *Guidelines for Preparation of China Corporate Social Responsibility Report* (CASS-ESG 5.0) issued by the Chinese Academy of Social Sciences, and *China Baowu Social Responsibility Work Management System* (2022 edition), in full consideration of the wishes and concerns of stakeholders, and based on the unique understanding and specific practices of corporate social responsibility of Baowu.

报告范围  
Scope

除有特殊说明，本报告主要描述 2022 年 1 月 1 日至 2022 年 12 月 31 日期间，宝武在诚信经营、创新驱动、绿色发展、关爱员工、回馈社会、生态圈共建、海外履责等方面履行社会责任的工作及绩效，报告内容涵盖钢铁制造业、先进材料业、绿色资源业、智慧服务业、产业不动产业务和产业金融业务等。

Unless otherwise specified, this report mainly describes the work and performance of Baowu in fulfilling its social responsibility in integrity management, innovation-driven development, green development, caring for employees, contribution to society, ecosystem co-building, overseas duty fulfillment, etc. from January 1 to December 31, 2022, and the report covers steel manufacturing industry, advanced materials industry, green resource industry, intelligent service industry, industrial real estate buisiness, and industrial finance buisiness, etc.

文本语言  
Text language

本报告以中文、英文两种文字同时发布，若两种文字的表述存在差异，请以中文表述为准。

This report is published in both Chinese and English. In the event of any discrepancy between the two languages, the Chinese version shall prevail.

发布形式  
Release form

本报告以印刷品、电子文档形式发布，其中电子文档可在宝武官方网站（www.baowugroup.com）下载阅读。为减少印刷对环境产生的影响，我们倡导读者尽可能下载阅读电子文档。

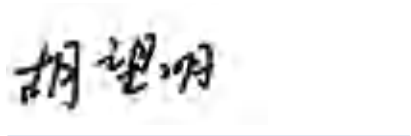
This report is released in printed and electronic forms, among which the electronic document can be downloaded from the official website of Baowu (www.baowugroup.com). To reduce the environmental impact of printing, we encourage readers to download and read electronic documents whenever possible.

编制流程  
Process



# 高层致辞

## Message from Chairman



中国宝武钢铁集团有限公司

董事长、党委书记 胡望明

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

**企业强则国家强，企业兴则国家兴。**当前，面对百年未有之大变局，加快建设一批具有国际影响力的世界一流企业，事关社会主义现代化战略全局，十分重要且紧迫。

**A country will be strong only when its enterprises have strength, and a nation will prosper only when its enterprises thrive.** At present, faced with profound changes rarely seen in a century, building a galaxy of world-class enterprises with international influence is concerned with the overall situation of the socialist modernization strategy, which is important and urgent.

宝武深入贯彻落实习近平总书记关于“加快建设一批产品卓越、品牌卓著、创新领先、治理现代的世界一流企业”及党中央国务院《关于加快建设世界一流企业的指导意见》的重要指示精神，研究制订《中国宝武加快创建世界一流企业实施方案》，印发相关行动方案，以创建世界一流企业工作统领产业链链长建设、龙头企业培育、绿色低碳转型、国有资本投资公司建设、党的建设等各项工作，展现价值创造的卓越能力。2022年《财富》世界500强我们首次挺进前50强，排名第44位。

Baowu has thoroughly implemented the important guidelines of General Secretary Xi Jinping on “accelerating the building of world-class enterprises with outstanding products and brands, leading innovation, and modern governance” and *Guiding Opinions on Accelerating the building of World-class Enterprises* presented by the Central Committee of the Communist Party of China, researched and formulated the *Implementation Plan of China Baowu to Accelerate the building of World-class Enterprise*, and issued the relevant implementation plan. Guided by the work of building a world-class enterprise, we have carried out the building of an industry chain leader, the cultivation of a leading enterprise, green and low-carbon transformation, the building of a state-owned capital investment company, and the Party building, revealing the excellent capability in value creation. In 2022, we ascended to the top 50 in the *Fortune Global 500* for the first time, ranking the 44<sup>th</sup>.

**我们造就卓越产品，提升宝武产品竞争力。**产品卓越是世界一流企业的安身立命之本。我们聚焦钢铁及先进材料综合解决方案和产业生态圈服务两块产品，推进“一基五元”紧盯产品卓越要求，把“宝武出品、必是精品”落到实处。

**We have improved the product competitiveness of Baowu with Outstanding products.** Outstanding products are the foundation of a world-class enterprise. We have focused on two product categories, i.e. integrated solutions of steel and advanced materials and industrial ecosystem services, promoted “One Basis and Five Industries” with close attention to the requirements for Outstanding products, and tried to put the watchword of “Baowu products are bound to be quality ones” into practice.

**我们创建卓著品牌，提升宝武品牌影响力。**品牌卓著是世界一流企业软实力的重要组成部分。我们强化全员品牌意识，全力创建卓著品牌，探索符合宝武使命愿景的差异化品牌建设路径；坚定不移实施国际化战略，加大国际化发展力度、推进国际化布局；全面实施乡村振兴“授渔”计划，深入打造“四个示范”工作品牌。

**We have enhanced the brand influence of Baowu with outstanding brands.** Outstanding brands are an important part of the soft power of a world-class enterprise. We have strengthened the brand awareness of all staff, made all-out efforts to create outstanding brands, and explored the differentiated brand building path in line with the mission and vision of Baowu. We have unswervingly implemented the internationalization strategy, intensified efforts to promote international development, and advanced the international layout. We have fully implemented the “Teach the Fishing” Plan for Rural Revitalization and deeply created the “Four Demonstrations” working brand.

**我们坚持创新领先，提升宝武科技引领力。**创新领先是世界一流企业的内在灵魂。我们瞄准高科技企业定位进一步强化科技创新，优化创新生态，以碳中和技术创新工程引领钢铁业绿色低碳发展，推进产业智慧化、智慧产业化，破解“卡脖子”难题，加快培育高水平科技领军人才队伍。

**We have increased the scientific and technological leadership of Baowu by persisting in leading innovation.** Leading innovation is the inner soul of a world-class enterprise. We have further reinforced scientific and technological innovation targeting our positioning of a high-tech enterprise, optimized the innovation ecosystem, and led the green and low-carbon development in the iron and steel industry through the carbon neutrality technology innovation project, thereby promoting the intellectualization of industry and the industrialization of intelligent technologies. Moreover, we have broken through the bottleneck problems and stepped up efforts to cultivate a high-caliber leading talent team in science and technology.

**我们瞄准治理现代，提升宝武治理先进力。**治理现代是世界一流企业的重要特征。我们不断自我审视、对标找差，加快完善中国特色现代企业制度，增强战略管控能力，以正式转为国有资本投资公司为契机，开展治理现代专项行动，提升经营管理水平和防风险能力，以优异成绩回答了“超亿吨宝武，我们管得住更管得好”这个广受关注的问题。

**We have strengthened the advanced governance capability of Baowu with a focus on modern governance.** Modern governance is a major feature of a world-class enterprise. Through unceasing self-investigation and benchmarking, we have sped up efforts to improve the modern enterprise system with Chinese characteristics and enhance our strategic management and control ability. Taking the official shift into a state-owned capital investment company as an opportunity, we have carried out special actions for modern governance to improve our operation and management level and ability to guard against risks. We have responded to the matter of widespread concern that “we can well govern a Baowu with over-100-million tons of steel production” with our outstanding performance.

**千川汇海阔，风好正扬帆。**宝武坚持以习近平新时代中国特色社会主义思想为指导，全面贯彻落实好党的二十大精神及习近平总书记有关宝武的重要指示批示精神，在建设世界一流企业的征程中，持续以产品卓越展现世界一流，以品牌卓著唱响世界一流，以创新领先引领世界一流，以治理现代夯实世界一流。钢铁报国、开放融合、严格苛求、铸就强大的宝武精神，让我们有信心、有能力、有勇气无惧雨雪风霜，始终勇毅前行。让我们团结成“一块坚硬的钢铁”，以加快建设世界一流企业的新格局新成效，为我国全面建设社会主义现代化国家、全面推进中华民族伟大复兴作出新的更大贡献！

**Thousands of rivers have converged to form a vast sea and it is the best time for us to set sail.** Under the guidance of Xi Jinping’s Thought on Socialism with Chinese Characteristics for a New Era, Baowu will fully implement the guiding principles of the 20<sup>th</sup> CPC National Congress and General Secretary Xi Jinping’s important instructions and directions on Baowu, and spare no effort to build a world-class enterprise with outstanding products and brands, leading innovation, and modern governance. Baowu’s spirit of “Dedication, Integration, Perfection and Greatness” propels us to forge ahead bravely with confidence, capabilities and courage, despite various difficulties and hardships. Let us stay unified as “a piece of hard steel” and make greater contributions to building China into a modern socialist country in all respects and advancing the rejuvenation of the Chinese nation on all fronts with the new pattern and new results of speeding up to build a world-class enterprise!

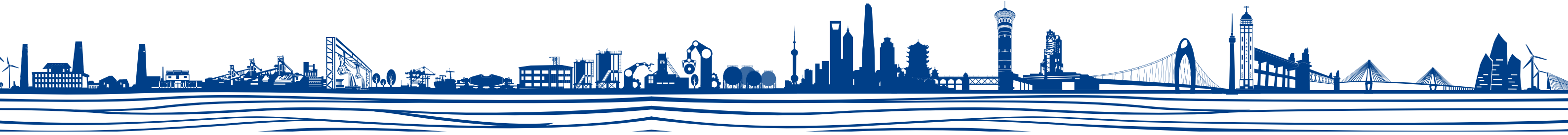
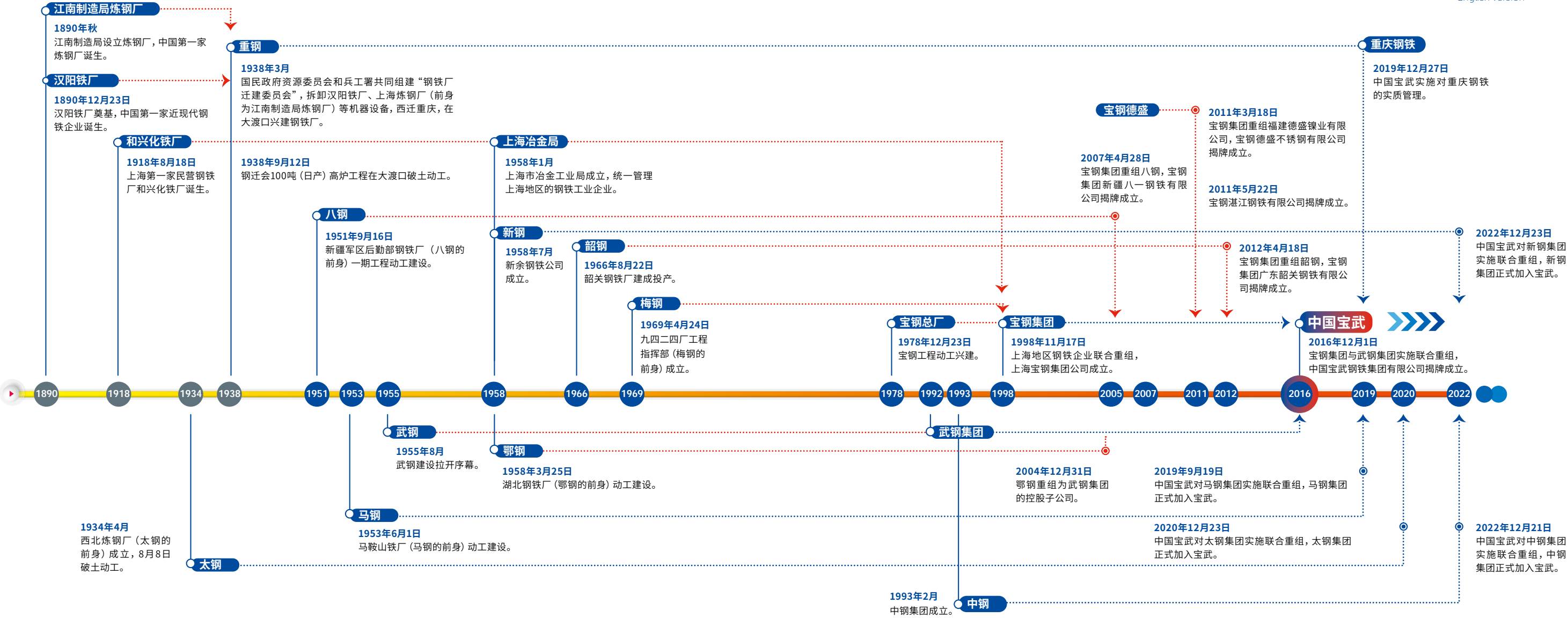


# 走进宝武

## About Baowu



扫描二维码，观看英文版  
Scan QR code to read the English version





# 公司概况

## Company profile

中国宝武钢铁集团有限公司是中央直接管理的国有重要骨干企业，总部位于上海。2020 年，被国务院国资委纳入中央企业创建世界一流示范企业；2022 年 6 月，正式转为国有资本投资公司。在 2022 年《财富》世界 500 强排行榜位列 44 位，位居全球钢铁企业首位。

Headquartered in Shanghai, China Baowu Steel Group Corporation Limited is an important state-owned backbone enterprise under the direct administration of the central government. In 2020, Baowu was included in the list of central SOEs to establish a world-class demonstration enterprise by the State-owned Assets Supervision and Administration Commission of the State Council. In June 2022, it was officially transformed into a state-owned capital investment company. On the *Fortune* Global 500 List released in 2022, Baowu ranked 44<sup>th</sup>, topping the global steel enterprises.

### 2022 年，宝武

In 2022, Baowu achieved



资产总额

**12398.41** 亿元

Total assets of  
RMB 1239.841 billion



营业总收入

**10877.07** 亿元

Total operating revenue of  
RMB 1087.707 billion



利润总额

**301.56** 亿元

Total profits of  
RMB 30.156 billion



钢产量

**13184** 万吨

Steel output of  
131.84 million tons



员工总数

**219610** 人

219610 employees  
in total

近六年来宝武在

“世界级钢铁企业竞争力排名”中的排名

Rankings of Baowu in the “Competitiveness Ranking of World-class Steel Enterprises” in the past six years

第 10 名

Ranking 10<sup>th</sup>

2017

第 17 名

Ranking 17<sup>th</sup>

2018

第 15 名

Ranking 15<sup>th</sup>

2019

第 11 名

Ranking 11<sup>th</sup>

2020

第 5 名

Ranking 5<sup>th</sup>

2021

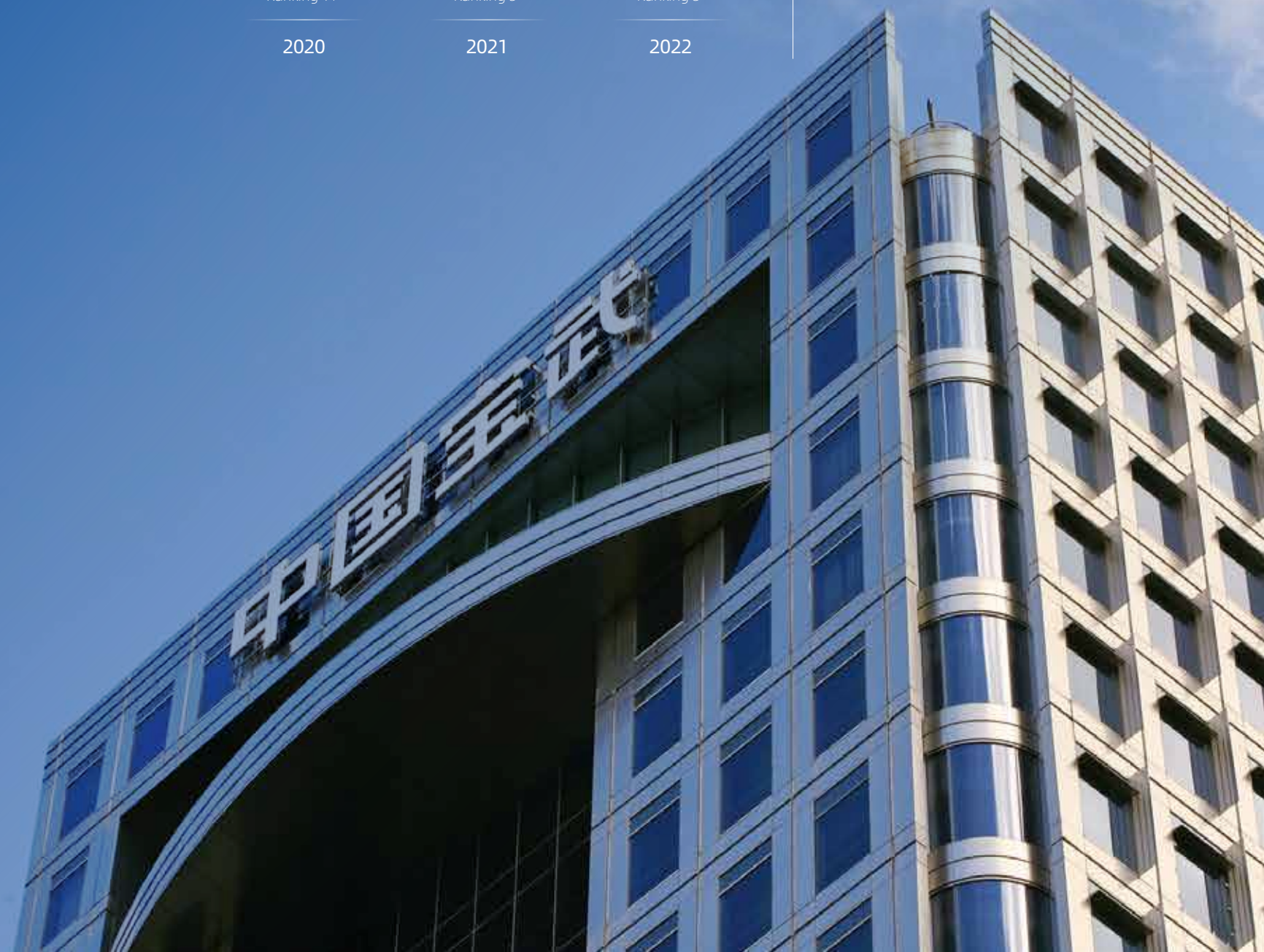
第 5 名

Ranking 5<sup>th</sup>

2022



2017-2022





## 公司定位

### Corporate orientation

提供钢铁及先进材料综合解决方案和产业生态圈服务的高科技企业

A high-tech enterprise to provide integrated solutions to steel and advanced materials and industrial ecosystem services

## 业务和品牌

### Business segments and brands



#### “一基五元”业务板块

“One Basis and Five Industries” business segments

## 企业文化

### Corporate culture



#### 使命 Mission

共建产业生态圈推动人类文明进步  
Jointly build an industrial ecosystem and promote the progress of human civilization



#### 价值观 Values

诚信 创新 绿色 共享  
Integrity, Innovation, Green and Sharing



#### 愿景 Vision

成为全球钢铁及先进材料业引领者  
Become a leading company in the global steel and advanced materials industry



#### 企业精神 Corporate Spirit

钢铁报国 开放融合 严格苛求 铸就强大  
Dedication, Integration, Perfection and Greatness

## 公司品牌

### Corporate brand





董事会

Board of directors



胡望明  
Hu Wangming

董事长、党委书记  
Secretary of CPC, Chairman



唐复平  
Tang Fuping

外部董事  
Outside Director



罗建川  
Luo Jianchuan

外部董事  
Outside Director



张国厚  
Zhang Guohou

外部董事  
Outside Director



程道然  
Cheng Daoran

外部董事  
Outside Director



胡章宏  
Hu Zhanghong

外部董事  
Outside Director



张贺雷  
Zhang Helei

工会主席、职工董事  
Chairman of Labor Union  
and Employee Director

管理团队

Management team



胡望明  
Hu Wangming

董事长、党委书记  
Secretary of CPC, Chairman



邹继新  
Zou Jixin

党委常委  
Standing Committee Member of CPC



朱永红  
Zhu Yonghong

总会计师、党委常委、  
董事会秘书（兼）  
Chief Accountant, Standing Committee  
Member of CPC, Secretary of the board  
of directors



孟庆阳  
Meng Qingyang

党委常委、纪委书记、国家监委驻  
宝武监察专员  
Standing Committee Member of  
CPC, and Secretary of Committee for  
Discipline Inspection, Inspector of the  
State Supervisory Commission in Baowu



侯安贵  
Hou Angui

副总经理、党委常委  
Vice President, Standing Committee  
Member of CPC



魏尧  
Wei Yao

党委常委  
Standing Committee Member of CPC



高建兵  
Gao Jianbing

副总经理、党委常委  
Vice President, Standing Committee  
Member of CPC



王继明  
Wang Jiming

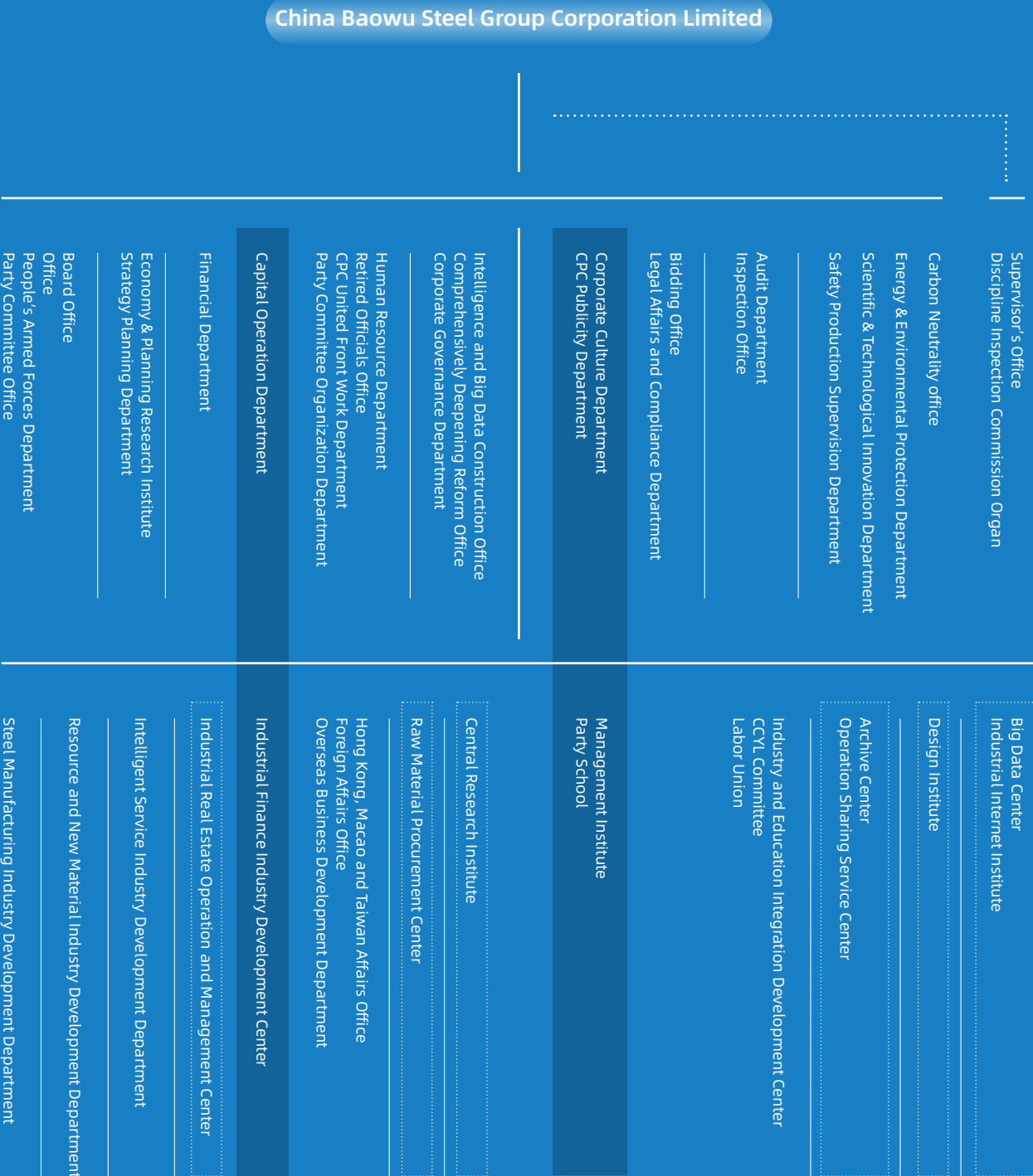
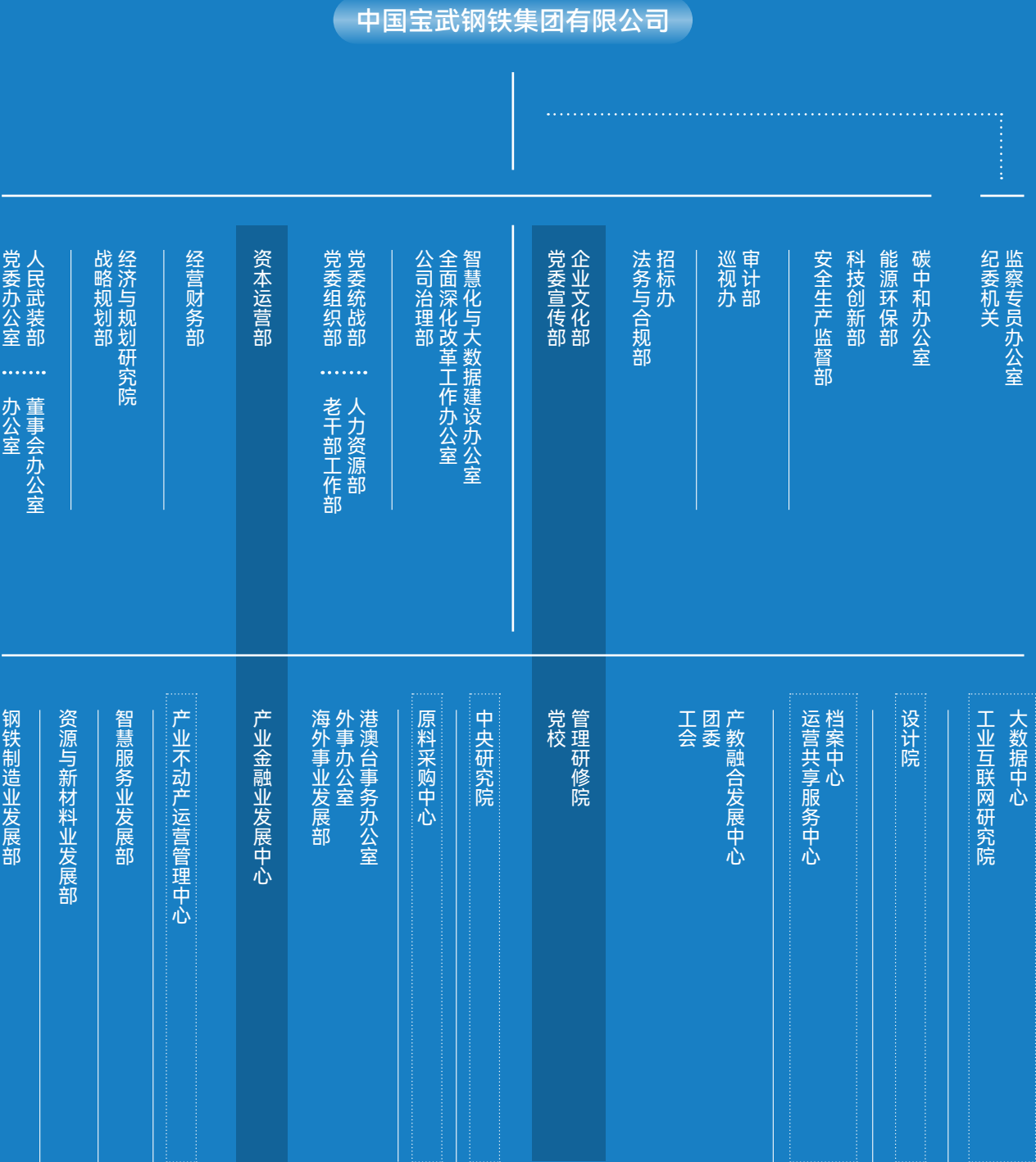
副总经理、党委常委  
Vice President, Standing Committee  
Member of CPC

来源：中国宝武钢铁集团有限公司官网（<http://www.baowugroup.com>），截至 2023 年 7 月  
Source: Official website of China Baowu Steel Group Corporation Limited (<http://www.baowugroup.com>), as of July 2023

来源：中国宝武钢铁集团有限公司官网（<http://www.baowugroup.com>），截至 2023 年 7 月  
Source: Official website of China Baowu Steel Group Corporation Limited (<http://www.baowugroup.com>), as of July 2023

# 组织机构

## Management structure





# 建设世界一流企业

## Build a World-Class Enterprise



世界一流企业是国家经济实力、科技实力、国际竞争力的重要载体，是引领全球产业发展和科技创新的关键力量。加快建设世界一流企业，是党中央国务院面对“两个大局”深刻演变做出的一项具有全局性、战略性、牵引性的重大战略部署。

World-class enterprises are vital carriers of a country's economic strength, scientific and technological strength, and international competitiveness, as the key force in leading global industry development and scientific and technological innovation. Accelerating the building of a world-class enterprise is a major strategic deployment made by the Central Committee of the Communist Party of China and the State Council in the face of the profound changes in domestic and international situations, which plays an overall, strategic and leading role.

钢铁报国、铸就强大是百年宝武始终不渝的情怀与追求。为提升国资央企参与国际竞争的国家队影响力，宝武强化战略思维，致力于做国家大战略大布局的践行者、发展方式转型的带动者、科技创新的引领者，加快建成世界一流企业。

"Dedication and Greatness" is an unswerving sentiment and pursuit of centenary Baowu. To improve the influence of state-owned enterprises as national teams in international competition, Baowu strengthens strategic thinking and is committed to becoming a practitioner of national grand strategy and big layout, a driver of the transformation of development patterns, and a leader in scientific and technological innovation, thereby accelerating the efforts to build a world-class enterprise.

## 总体要求

### Overall requirements

#### 目标 Goals

产品卓越、品牌卓著、创新领先、治理现代

Outstanding Products and Brands, Leading Innovation, Modern Governance

#### 工作原则 Working principles

坚持和加强党的领导、坚持创新驱动、坚持战略引领、坚持深化改革、坚持市场化法治化、坚持国际化

Uphold and strengthen the leadership of the CPC, keep innovation-driven and strategy-leading development, insist on deepening reform, adhere to market-based development, legalization, and adhere to internationalization

#### 路径 Paths

三高两化，即高科技、高效率、高市占、生态化、国际化

Three Highs and Two-lizations (i.e. high-tech, high efficiency, high market share, ecologicalization, internationalization)

#### 量化目标 Quantitative goals

到 2035 年，实现“亿万千百十、五四三二一”目标

By 2035, we will achieve the goal of "A Hundred Million, A Trillion, A Hundred Billion, Ten Billion, A Billion" and "5%, 4000, 30%, 20%, 10%"

宝武形成亿吨级钢铁、矿产和再生资源量，万亿级营收、资产和市值，千亿级利润；培育一批千亿级营收、百亿级利润的龙头企业，其余子公司均为百亿级营收、十亿级利润的优秀企业。

Baowu will realize a hundred million tons of steel, mineral products and renewable resources, a trillion yuan of operating revenue, assets and market capitalization, and a hundred billion yuan of profits. Moreover, we will cultivate a batch of leading enterprises with a hundred billion yuan of operating revenue and ten billion yuan of profits, and other subsidiaries that are excellent enterprises with ten billion yuan of operating revenue and a billion yuan of profits.

“亿万千百十”  
"A Hundred Million,  
A Trillion, A Hundred  
Billion, Ten Billion, A  
Billion"

“五四三二一”  
"5%, 4000,  
30%, 20%, 10%"

研发强度 5%，人均产钢 4000 吨，吨钢减碳 30%，跨国指数 20%，净资产收益率 ROE 达到 10%。

5% of R&D ratio, 4000 tons of steel output per capita, 30% carbon reduction per ton of steel, 20% of transnational index, and 10% of Return On Equity (ROE).

## 制度保障

### Institutional guarantee

为全面贯彻落实党中央国务院《关于加快建设世界一流企业的指导意见》和《关于推进国有企业打造原创技术策源地的指导意见》，加快建设“产品卓越、品牌卓著、创新领先、治理现代”的世界一流企业，制订相关行动方案，明确目标与任务。

To fully implement the *Guiding Opinions on Accelerating the Building of World-class Enterprises* and the *Guiding Opinions on Promoting State-owned Enterprises to Create Original Technology Sources* presented by the Central Committee of the Communist Party of China and the State Council, we have formulated the relevant implementation plan to specify the goals and tasks, so as to step up our efforts to build a world-class enterprise with “outstanding products and brands, leading innovation, and modern governance”.

成立世界一流企业建设领导小组办公室，设在战略规划部。负责组织编制世界一流企业建设行动方案和工作清单；负责建立工作日常推进机制，将世界一流企业建设各项任务纳入集团公司年度重点工作；负责建立工作检查、评估、反馈机制，将落实情况纳入巡视监督和管理审计范围；负责对口国家部委开展相关工作。

We have set up the office of steering group for building a world-class enterprise under the Strategy Planning Department. The office is responsible for organizing to compile the actions plans and work lists for building a world-class enterprise; establishing a daily work promotion mechanism, and incorporating all tasks of building a world-class enterprise into the annual key work of the Group Corporation; establishing work inspection, evaluation and feedback mechanisms, and incorporating the implementation into the scope of inspection supervision and management audit; carrying out the work in connection to the corresponding national departments.

## 组织保障

### Organizational guarantee

### 党建引领 Party building as the guide

全面加强党的政治建设，加强基本组织、基本队伍、基本制度建设，加强党风廉政建设和反腐败工作，筑牢“根”“魂”优势。以一流党建引领保障世界一流企业建设，确保各项工作方向不偏、路径不乱、意志不衰减。集团公司党委充分发挥把方向、管大局、保落实的领导作用，负责总体设计、统筹协调、整体推进、督促落实。

In strengthening the political progress of the Party, we intensify our efforts to build the basic organization, basic team and basic institution, improve Party conduct, government integrity and anti-corruption, and retain our advantages in “root” and “soul”. We lead the building of a world-class enterprise by first-rate Party building to ensure that all tasks adhere to the correct direction, clear path, and undiminished will. The Party committee of the Group Corporation plays a leading role in setting the right direction, keeping in mind the big picture, and ensuring the implementation of Party policies and principles, and is responsible for the overall design, overall planning and coordination, advancement as a whole, and supervision over implementation.

### 工作机制 Working mechanism

成立世界一流企业建设领导小组，负责审议行动方案及工作清单；负责指导、检查行动方案的推进工作；负责协调推进过程中的重大事项等。

We have set up a steering group for building a world-class enterprise, whose responsibilities include deliberating action plans and work lists, guiding and inspecting the implementation progress of the action plans, and coordinating the major issues in the implementation process.





# 行动方向及具体措施

## Action routes and measures

| 行动方向<br>Action routes  | 具体措施<br>Measures   |
|--|--|
| <div></div> <div><b>打造原创技术策源地<br/>成为产品卓越的高科技企业</b><br/><br/>Build an original technology source and become a high-tech enterprise with outstanding products</div> | <div>优化创新生态；实施碳中和技术创新工程；勇担“卡脖子”产品技术攻关；实施钢铁材料升级工程；实施先进材料产业布局工程；实施数智化发展工程。</div> <div>Optimize the innovation ecosystem; carry out carbon neutrality technology innovation projects; boldly assume the responsibility to break through the bottleneck in the development of products and technologies; and implement the steel material upgrading projects, advanced materials industry layout projects, and digital and intelligent development projects.</div> |
| <div></div> <div><b>勇担链长使命<br/>建设高质量产业生态圈</b><br/><br/>Bear in mind the mission as an industry chain leader and build a high-quality industrial ecosystem</div> | <div>切实履行链长主体支撑责任；持续推进专业化整合、生态化协同；充分发挥链长融通带动作用。</div> <div>Effectively take on the primary supporting responsibility as the industry chain leader; constantly promote professional integration and ecological coordination; and fully play the connecting and leading role of the industry chain leader.</div>   |
| <div></div> <div><b>优化产业布局<br/>提升全球竞争核心能力</b><br/><br/>Optimize the industrial layout and improve the core global competitiveness</div>                         | <div>实施钢铁业联合重组工程；全面提升国际化经营能力；加快推进矿产资源保障工程；实现海外钢铁投资项目实质性突破；积极参与国际标准制定。</div> <div>Implement the combination and reorganization project in the steel industry; improve the international operation capacity in an all-round way; accelerate the mineral resources guarantee project; make substantive breakthroughs in overseas steel investment projects; and take an active part in formulating international standards.</div>                                 |



**推进治理现代  
打造国有资本投资公司典范**  
  
Promote modern governance and set an example for state-owned capital investment companies

完善中国特色现代企业制度；优化宝武特色管控模式；健全子公司法人治理；强化合规风控监督体系；深化体制机制改革。  
  
Improve the modern enterprise system with Chinese characteristics; optimize the management and control mode with Baowu characteristics; improve corporate governance of subsidiaries; consolidate the compliance risk control and supervision system; and deepen the reform of institutional mechanisms.



**深化对标找差  
增强价值创造能力**  
  
Seek the gap by benchmarking and improve the ability to create value

持续开展全面对标找差活动；实施龙头企业培育工程；增强战略管理和资本经营能力；全面提升要素效率。  
  
Continue to carry out activities to seek the gap by comprehensive benchmarking; implement the project for fostering leading enterprises; enhance the strategic management and capital operation ability; and fully increase factor efficiency.



**传承宝武文化  
塑造品牌卓著企业形象**  
  
Carry forward Baowu culture and shape a corporate image with outstanding brands

建设“同一个宝武”；践行高标准社会责任；创建宝武卓著品牌。  
  
Build “One Shared Baowu”; practice high-standard social responsibilities; and create outstanding brands of Baowu.



**实施人才强企  
夯实一流企业建设根基**  
  
Make the enterprise stronger through talent cultivation and lay a solid foundation for the building of a world-class enterprise

建设高素质员工队伍；加强重点人才培养；充分发挥企业家作用。  
  
Build a high-caliber staff team; increase efforts to cultivate key talents; and play the role of entrepreneurs to the fullest extent.



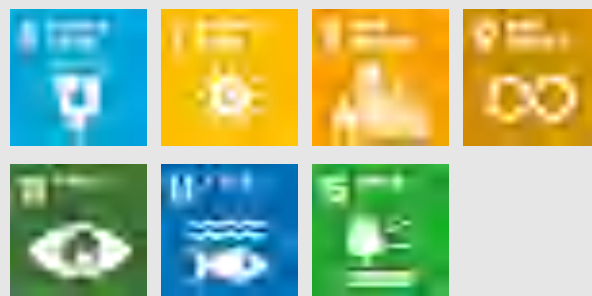
# 产品卓越

点亮“超亿吨宝武”生命底色

## Make Outstanding Products

to Shine a More Brilliant Light on “a Baowu with Over-100-million Tons of Steel Production”

回应可持续发展目标  
Response to SDGs



责任专题：聚焦产品卓越  
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Column on Responsibility: Improve Product Competitiveness by Focusing on Outstanding Products

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Green industry



# 我们的理解

## What we know

产品是企业赖以生存的根本，是企业立于不败之地的法宝。建设世界一流企业不能脱离企业的存在根基，我们必须要有具备差异化竞争优势的“拳头产品”“看家技术”，建立市场话语权，抢占市场份额，实现差异化精品增效。

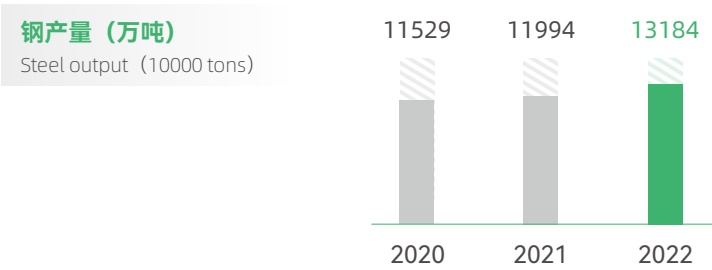
Products are a lifeline for an enterprise and an effective instrument for remaining invincible. Building a world-class enterprise cannot be discussed in isolation from the foundation for an enterprise's survival. We should equip ourselves with “knock-out products” and “special technologies” that bring us advantages in differentiated competition, so as to strengthen our voice in the market, seize market share, and achieve efficiency increase with differentiated and high-quality products.

# 关键绩效指标

## Key performance indicators

### 竞争力：规模

Competitiveness: scale



### 钢铁制造业市占率

Market share in steel manufacturing industry

2022 年，宝武钢产量及全球市场占有率均保持全球第一

In 2022, Baowu ranked first in the world in terms of output and global market share of steel

### 高附加值产品

High value-added products

| 公司 Company                    | 2020 | 2021 | 2022 |
|-------------------------------|------|------|------|
| 宝武 Baowu                      | 9    | 9    | 9    |
| 浦项制铁 POSCO                    | 10   | 10   | 10   |
| 日本制铁 Nippon Steel Corporation | 10   | 10   | 10   |
| 安赛乐米塔尔 ArcelorMittal          | 9    | 9    | 9    |
| JFE 钢铁 JFE Steel Corporation  | 10   | 10   | 10   |

注：“高附加值产品”的评分机构为世界钢动态公司（WSD），满分为 10 分。  
Note: The “high value-added products” indicator was scored by World Steel Dynamics (WSD), with a maximum score of 10.

# 我们的实践

## What we do

宝武坚持“全面对标找差，创建世界一流”管理主题，以绿色制造、绿色产品、绿色产业为主线，全面推进绿色低碳转型发展，以低碳统领“绿色、高端、智慧”全面发展，打造高科技领航地位，承担大国重器的责任，不断推进世界一流企业建设。

Insisting on the management theme of “comprehensive benchmarking campaigns to fill gaps and create a world-class enterprise”, Baowu promotes green and low-carbon transformation and development in full swing with green manufacturing, green products and green industry as its mainlines. We lead the comprehensive development of "green, high-end and intelligent" with low carbon, navigate our direction with high technology, and take on the responsibility as a national pillar to further promote the building of a world-class enterprise continuously.

### 精品指数

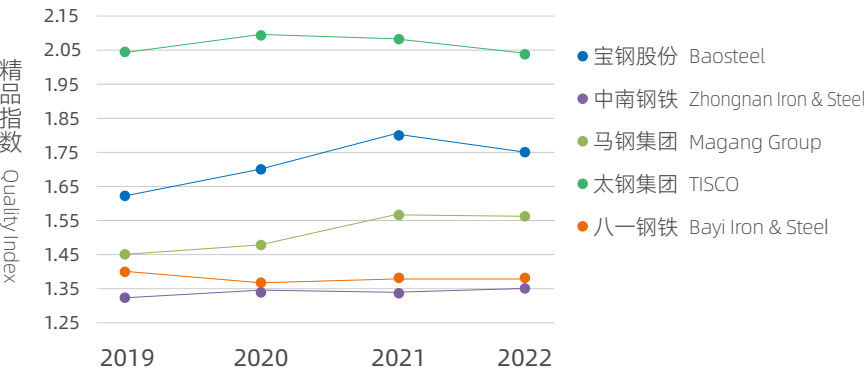
Quality index

各个产品大类根据不同的产品用途和特性进行品种分类，设置强度以及耐蚀、高效、低温韧性、安全等评价指标，表征产品精品化程度，得到精品指数。

The product categories are classified according to their applications and characteristics. Evaluation indexes such as strength, corrosion resistance, high efficiency, low-temperature toughness and safety are set to characterize the quality degree of the products, and quality indexes are thus obtained.

### 钢铁业子公司精品指数情况

Quality Indexes of Subsidiaries in the Steel Industry



| 公司 Company                 | 2019 | 2020 | 2021 | 2022  |
|----------------------------|------|------|------|-------|
| 宝钢股份 Baosteel              | 1.62 | 1.7  | 1.8  | 1.744 |
| 中南钢铁 Zhongnan Iron & Steel | 1.33 | 1.35 | 1.34 | 1.356 |
| 马钢集团 Magang Group          | 1.45 | 1.48 | 1.56 | 1.56  |
| 太钢集团 TISCO                 | 2.04 | 2.09 | 2.08 | 2.04  |
| 八一钢铁 Bayi Iron & Steel     | 1.4  | 1.37 | 1.38 | 1.38  |

先进材料业市占率

Market share in advanced materials industry

| 单位名称<br>Company                    | 指标名称<br>Indicator  | 单位<br>Unit | 2021年实绩<br>Performance in 2021 | 2022年实绩<br>Performance in 2022 |
|------------------------------------|--|------------|--------------------------------|--------------------------------|
| 宝武碳业<br>Baowu Carbon               | 焦油加工市占率<br>Market share in tar processing                      | %          | 13                             | 14                             |
| 宝钢金属<br>Baosteel Metal             | 轻量化部件细分市场占有率<br>Market segment share in lightweight components | %          | 9.6                            | 12.3                           |
| 宝钢包装<br>Baosteel Packaging         | 国内两片罐市占率<br>Domestic market share of two-pieced cans           | %          | 20.2                           | 21.8                           |
| 宝武特冶<br>Baowu Special Metallurgy   | 镍基合金市占率<br>Market share of nickel-base alloy                   | %          | 46.2                           | 40                             |
|                                    | 钛及钛合金市占率<br>Market share of titanium and titanium alloy        | %          | 7.26                           | 4.0                            |
|                                    | 模具钢市占率<br>Market share of die steel                            | %          | 10.0                           | 10.4                           |
| 武汉耐材<br>Wuhan Refractory Materials | 滑板市占率<br>Market share of slide plates                          | %          | 5.4                            | 5.5                            |

绿色资源业市占率

Market share in green resource industry

| 单位名称<br>Company                                      | 指标名称<br>Indicator  | 单位<br>Unit       | 2021年实绩<br>Performance in 2021 | 2022年实绩<br>Performance in 2022 |
|--|--|------------------|--------------------------------|--------------------------------|
| 宝武资源<br>Baowu Resources                              | 铁矿石自给率<br>Iron ore self-sufficiency rate   | %                | 37.0                           | 37.6                           |
| 宝武环科<br>Baowu Environment and Resource Technology    | 集团外业务占比<br>Proportion of business outside the Group Corporation  | %                | 3.68                           | 7.15                           |
| 宝武水务<br>Baowu Water Technology                       | 非关联业务占比<br>Proportion of non-related business  | %                | 23.11                          | 23.7                           |
| 宝武清能<br>Baowu Clean Energy                           | 非关联业务占比<br>Proportion of non-related business  | %                | 17.7                           | 18                             |
| 欧冶链金<br>Ouyeel Lianjin Recycling Resources Co., Ltd. | 经营规模<br>Scale of operation   | 万吨<br>10000 tons | 2600                           | 3720                           |
|  | 废钢加工基地业务占比<br>Proportion of business of the steel scrap processing base                                  | %                | 29                             | 26                             |
| 西藏矿业<br>Tibet Mineral Development                    | 国内盐湖锂盐成品产量市场占有率<br>Market share in the output of lithium salt finished products from domestic salt lakes | %                | 2.0                            | 6.43                           |

智慧服务业市占率

Market share in intelligent service industry



| 单位名称<br>Company                                | 指标名称<br>Indicator  | 单位<br>Unit            | 2021年实绩<br>Performance in 2021 | 2022年实绩<br>Performance in 2022                                     |
|--|--|-----------------------|--------------------------------|--|
| 宝信软件<br>Baosight                               | 集团外业务占比<br>Proportion of business outside the Group Corporation  | %                     | 48                             | 51.3   |
|  | 钢材交易量全国市场占比<br>Proportion of steel trading volume in the national market                                   | %                     | 5.04                           | 6  |
| 欧冶云商<br>Ouyeel                                 | 钢材交易量在国内钢材在线总交易量中占比<br>Proportion of steel trading volume in total online trading volume of domestic steel | %                     | /                              | 33   |
| 宝钢工程<br>Baosteel Engineering                   | 集团外业务占比<br>Proportion of business outside the Group Corporation  | %                     | 40                             | 74.4(含中钢国际)<br>74.4 (including Sinosteel Engineering & Technology) |
| 宝武重工<br>Baowu Heavy Industry                   | 集团外业务占比<br>Proportion of business outside the Group Corporation  | %                     | 40                             | 45.43  |
| 宝武智维<br>Baowu Equipment Intelligent Technology | 集团外业务占比<br>Proportion of business outside the Group Corporation  | %                     | 18.6                           | 20.6   |
|  | 设备接入量<br>Equipment access quantity   | %                     | 32.64                          | 50.17  |
| 欧冶工业品<br>Obei                                  | 平台 GMV<br>Platform GMV   | 亿元<br>RMB 100 million | 2700                           | 3500   |
|  | 集团外 GMV 比例<br>Proportion of GMV outside the Group Corporation  | %                     | 31                             | 38   |



## 责任专题

### Column on Responsibility

## 聚焦产品卓越，提升产品竞争力

### Improve Product Competitiveness by Focusing on Outstanding Products

宝武以产品卓越为目标，围绕航空航天、能源电力、交通运输、建筑建造等重点行业需求，实施钢铁产品全生命周期评价（LCA），开展钢铁产品绿色设计，研发“高强度、高耐蚀、高效能”的绿色高端精品，拓展应用领域和应用场景，不断提升综合材料解决方案能力。

With outstanding products as its goal and centering on the demands of key industries including aerospace, energy and power, transportation and building construction, Baowu has carried out the full Life Cycle Assessment (LCA) and green design for steel products, researched and developed high-quality and high-end green products with “high strength, high corrosion resistance and high efficiency”, and expanded the application fields and scenarios, in a continuous effort to improve the ability to provide integrated material solutions continuously.

### 航空航天

#### Aerospace

航空航天领域的“国之重器”，是衡量一个国家技术水平和综合国力的重要标志，是“大国制造”高精尖核心关键领域，对产品加工的可靠性、稳定性、安全性等方面有着严苛的标准。航空航天材料要求具有优良的耐高低温性能、耐老化和耐腐蚀性能，能适应空间环境，且必须始终坚持自主可控。为助力打造“国之重器”，宝武聚焦航天领域的关键核心技术和前沿方向，研发系列高温合金、精密合金材料、高性能的碳纤维材料等解决航空航天“卡脖子”难题的关键材料，助力我国航天强国的建设。

The “national pillar” in the aerospace field is an important sign to measure a country’s technological level and comprehensive national strength. It is the key and core field of high-grade, precision and advanced production of a “manufacturing power” and poses tough standards on the reliability, stability and safety of product processing. Aerospace materials are required to have outstanding high and low temperature resistance, aging resistance and corrosion resistance, which can adapt to the space environment and should be always provided in an autonomous and controllable way. To assist in building the “national pillar”, Baowu has focused on the key and core technologies and frontier directions of the aerospace field, researched and developed crucial materials for solving the bottleneck problems in this field such as a series of high-temperature alloy materials, precision alloy materials and high-performance carbon fiber materials, thereby contributing to building China into an aerospace power.



太钢不锈独创的碳纤维手撕钢复合材料，有着独特的性能、极高的强度，备用于国产大飞机尾翼。

The original carbon-fiber stainless steel foil composite developed by Shanxi Taigang Stainless Steel is used in the tails of domestic large airplanes due to its unique property and super-high strength.



宝钢股份为国之重器——“国和一号”核电站供应汽轮发电机所用磁屏蔽钢板。

Baosteel supplies the magnetic shield plates for turbomotor to the CAP1400 nuclear power plant, a national pillar.

### 能源电力

#### Energy and power

能源是国家实现“双碳”目标的主战场，而电力是主力军，因此能源尤其是电力行业的绿色低碳科技创新与产业发展，对于推进我国生态文明建设和经济社会高质量发展具有极其重要的意义。宝武围绕水电、风电、光伏、核电、输电网络等能源电力领域，研发生产高强度、高耐用、低能耗的钢铁精品，助力能源电力行业绿色转型。

Energy is the main battlefield for China to achieve its “dual-carbon” (carbon peak and carbon neutrality) goals, while power is the main force. Therefore, green and low-carbon technological innovation and industrial development in energy, particularly in the power industry, are of great significance in boosting ecological civilization construction and high-quality economic and social development in China. Pivoting around the energy and power fields such as hydropower, wind power, photovoltaic power, nuclear power, and power transmission and distribution networks, Baowu has developed and manufactured quality steel products with high strength, high durability and low energy consumption to propel the green transformation of the energy and power industry.



## 交通运输 Transportation

交通运输是国民经济中基础性、先导性、战略性产业和重要的服务性行业，是碳排放的重要领域之一。轨道交通作为绿色环保的交通工具，在低碳交通运输体系建设中被委以重任；公路运输占全国交通运输碳排放总量 85% 以上，是交通运输领域最主要的碳排放来源。宝武聚焦轨道交通、公路交通运输工具，研发绿色高端精品，助力交通运输行业绿色发展。

Transportation is a basic, pioneering and strategic industry in the national economy, an important service industry, and one of the vital areas of carbon emissions. Rail transit, as a green and environment-friendly transportation means, is entrusted with an important task in the construction of the low-carbon transportation system. Highway transportation, accounting for more than 85% of the total carbon emissions in national transportation, is the leading carbon emission source in the transportation field. Baowu has concentrated on transportation means in rail transit and highway transportation and developed high-quality and high-end green products to boost the green development of transportation.



宝钢股份探索汽车用钢的低碳工艺路径，完成了汽车用冷轧和热镀锌低碳产品的试制，产品碳足迹经第三方验证，较常规流程降碳超过 60%。

In exploring the low-carbon technology path of automotive steel, Baosteel completed the trial manufacture of the cold-rolled and hot-dip galvanized low-carbon products for vehicles. The carbon footprint of the products passed a third-party verification and the products could reduce carbon emissions by more than 60% compared with conventional processes.

2022 年度标杆案例  
Benchmarking case in 2022

马钢股份研发的高速重载车轴产品，为我国全面实现轨道交通用高速、重载车轴等关键部件国产化打下了重要基础，促进了我国冶金和高端装备制造行业的进步，支撑了我国轨道交通产业的发展和走出去战略的实施，为“中国制造”向“中国创造”转型提供了示范效应。

The high-speed and heavy-duty axle products developed by Masteel laid the groundwork for China's comprehensive localization of key components such as high-speed and heavy-duty axles for rail transit, promoted advances in Chinese metallurgy and high-end equipment manufacturing, supported the development of China's rail transit and the implementation of the “go global” strategy, and provided a demonstration effect for the transformation from “Made in China” to “Created in China”.



## 建筑建造 Building construction

建筑领域是我国能源消耗和碳排放的重要领域。有关数据显示，我国建筑全过程能耗占到全国能源消费总量的 45%，碳排放量占到全国排放总量的 50.6%。为促进建筑领域节能减排，中国加快打造绿色建筑，建筑产业“绿色”占比持续提升。宝武致力于为建筑行业提供绿色钢铁产品，推动建筑节能。

The building field is an important one for China's energy consumption and carbon emission. Relevant data showed that the full-process energy consumption in the field of building construction accounted for 45% of the total energy consumption in China, and the carbon emissions in this field accounted for 50.6% of the total emissions in China. To promote energy conservation and emission reduction in building construction, China is accelerating its pace in creating green buildings and continues to raise the proportion of “green” in building industry. Baowu is committed to providing green steel products for building industry to pursue energy conservation in buildings.



宝武瞄准钢结构居住建筑，形成经济、舒适、绿色、高效、美观的“宝武房”钢结构建筑解决方案，累计参与建设的钢结构居住建筑面积达 70 万平方米，助力国家体育馆（鸟巢）等国家重大工程建设。

Targeting residential buildings with steel structures, Baowu has formed the solutions to economical, comfortable, green, efficient and beautiful “Baowu House” steel structure buildings. The area of residential buildings with steel structures involved in the construction exceeded 700000 square meters in total, and the solutions also made a contribution to the construction of national major projects such as the National Stadium (Bird's Nest).

太钢集团双相不锈钢板材率先在国内实现了品种规格系列化、生产规模化，在核电工程、桥梁工程等国内外重点领域、重点工程项目中得到广泛应用，市占率连续多年位居国内第一、全球第二。

The duplex stainless steel plate of TISCO takes the lead in achieving a series of varieties and specifications and large-scale production in China, which have been widely applied in domestic and foreign key areas and projects such as nuclear power projects and bridge projects. Our market share has ranked first in China and second in the world for many consecutive years.

## 服务重大工程 Serving major projects

宝武秉承钢铁初心，勇担国家使命，充分发挥“稳定器”“压舱石”作用，为一系列国家重大工程、重点项目建设提供高端精品，有力支撑了我国国民经济的高质量发展，为实现人民对美好生活的向往不断贡献着宝武力量。

Upholding the original aspiration of a steel enterprise and bearing the national mission, Baowu gives full play to the role of “stabilizer” and “cornerstone” and provides the construction of a series of national major and key projects with high-quality and high-end products, strongly supporting the high-quality development of China's national economy and contributing its efforts to realizing the people's aspiration for a better life.



# 绿色制造

## Green manufacturing

2022 年，宝武坚持绿色低碳高质量发展，持续深化“三治四化、两于一入”工作，按照集团公司的总体部署深入推进节能减排工作，取得新成效。

In 2022, Baowu persisted in green, low-carbon and high-quality development, continued to deepen the work related to “Three Treatments and Four Doing, Two-than and One-into”, promoted energy conservation and emission reduction according to the overall deployment of the Group Corporation, and achieved new achievements.

# 能源环保管理

## Energy and environmental protection management

### 管理方针 Management guideline

坚定以习近平生态文明思想为指导，坚持节约资源、保护环境的基本国策和发展循环经济的国家重大战略，遵循“依法依规落实法人主体责任，推进‘三治四化’，实现‘两于一入’，以技术创新驱动产业绿色发展，以资源共享助推城市生态文明”的管理方针，组织开展能源环保管理工作。

We have firmly taken Xi Jinping’s thought on ecological civilization as the guide, stuck to the basic state policy of resource conservation and environment protection and the major national strategy of developing a circular economy, and adhered to the management guideline of “fulfilling the principal liability of legal person according to laws and regulations, boosting ‘Three Treatments and Four Doing’, realizing ‘Two-than and One-into’, driving green industrial development with technological innovation, and powering urban ecological civilization with resource sharing” to organize and carry out the work related to energy and environmental protection management.

### 名词解释

Terms interpretation

**三治四化：**三治，即废气超低排、废水零排放、固废不出厂；四化，即洁化、绿化、美化、文化。

**Three Treatments and Four Doing：**“Three Treatments” refers to “ultra-low exhaust gas emission, zero wastewater discharge, no solid waste leaving the factory” and “Four Doing” refers to “cleaning, greening, beautifying, civilizing”.

**两于一入：**高于标准、优于城区、融入城市。

**Two-than and One-into:** higher than the standard, better than the urban area and integrated into the city.

### 管理原则 Management principles

实行法人负责、分层管理、分类管控、属地化协同的管理原则。

We implemented the management principles of corporate responsibility, hierarchical management, classified management and control, and localized coordination.

### 管理制度 Management system

不断完善能源环保管理办法，形成《能源环保管理办法》《环境保护合规性管理办法》《企业突发环境事件风险控制管理办法》《环境保护事件问责管理办法》等管理制度。

We have constantly improved the management measures for energy and environmental protection and formed management systems such as *Management Measures for Energy and Environmental Protection*, *Management Measures for Environmental Protection Compliance*, *Management Measures for Environmental Emergencies Risk Control of Enterprise*, and *Management Measures for Accountability on Environmental Protection Events*.

### 能源环保管理体系认证 Certification for the management system of energy and environmental protection

所有钢铁生产企业均通过了能源管理体系和环保管理体系认证，并定期开展复审。非钢铁产业中的主要制造业企业也均通过了环保管理体系认证，部分单位通过了能源管理体系认证。

All steel manufacturing enterprises have passed the certification of the energy management system and environmental protection management system and conducted a review regularly. The main manufacturing enterprises in the non-steel industry have also passed the environmental protection management system certification, and most of them have passed the certification of the energy management system.

### 环保预警及应急机制 Environmental warning and emergency response mechanism

为加强环保风险控制、规范环保事件报告机制、提高重大环境污染事件应急能力，通过制定《环保事件管理办法（重大突发环境事件应急预案）》，建立了相应的环保预警及应急机制并确保其有效运行。

In order to strengthen the environmental protection risk control, standardize the environmental incident reporting mechanism, and improve the emergency response capacity of major environmental pollution incidents, we have formulated the *Environmental Incident Management Measures (Emergency Plan for Major Environmental Emergencies)*, established the corresponding environmental warning and emergency response mechanism, and ensured its effective operation.

### 重点环境监管平台 Key environmental supervision platform

按照“共建、共享、共治”的原则及“平台化建设、专业化服务、市场化运营”模式，上线“宝武重点环境风险监管平台”，已完成宝钢股份宝山基地、武钢有限等在内的十大钢铁生产基地的数据稳定接入。

According to the principle of “co-building, sharing and co-governance” and the model of “platform-based construction, professional services and market-oriented operation”, we launched the “Baowu Key Environmental Risk Supervision Platform” and stably accessed the data of ten major steel production bases including Baoshan Base and Wuhan Iron & Steel of Baosteel.

### 清洁生产 Clean production

以清洁生产为抓手，全面对标《钢铁行业清洁生产评价指标体系》，推进节能降耗减污增效，推动各生产单位常态化开展清洁生产审核及审核报告编制工作。

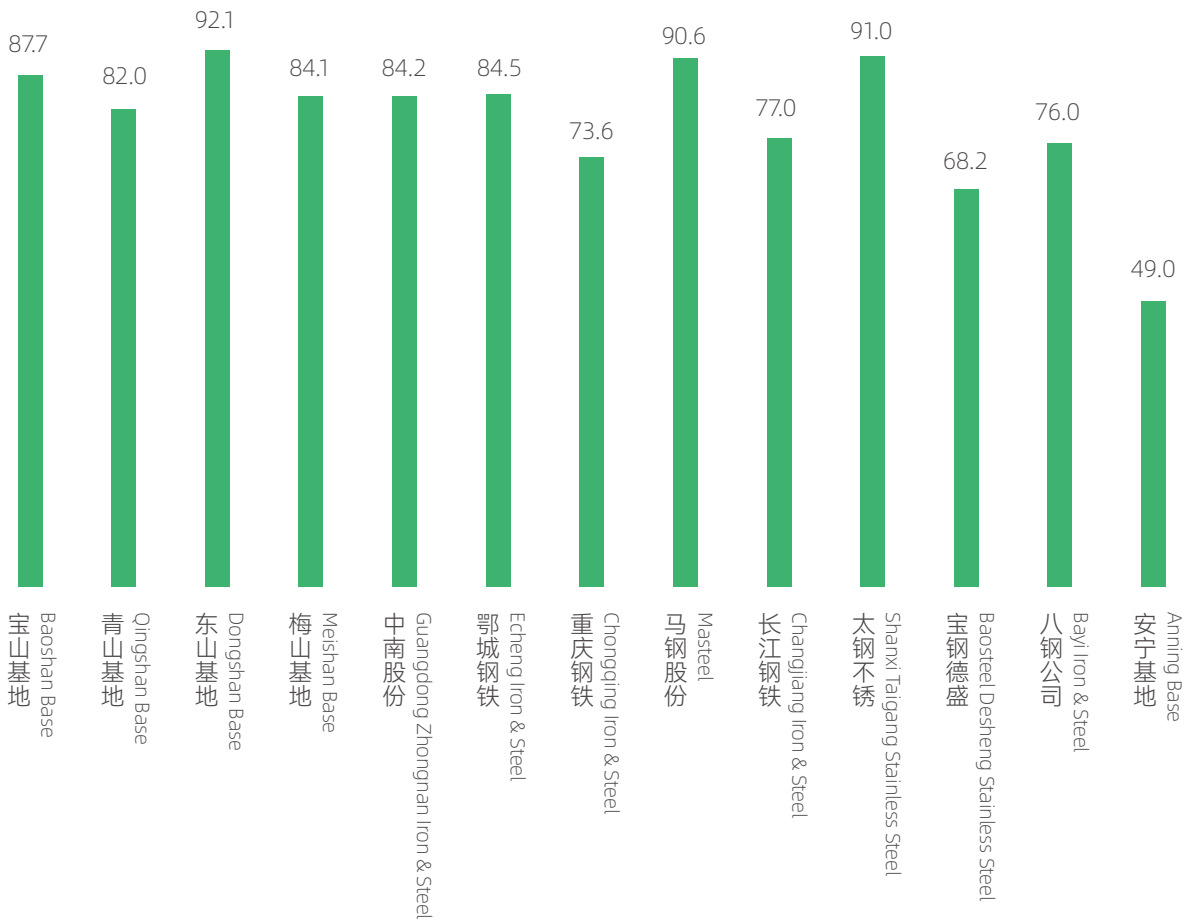
With clean production as the starting point, we comprehensively benchmarked the *Evaluation Index System of Clean Production in the Steel Industry*, promoted energy saving, consumption reduction, pollution reduction and efficiency improvement, and boosted the normalization of all production units to conduct cleaner production audit and the preparation of audit reports.

绿色指数  
Green index

按照“低碳发展”“绿色发展”两个维度修订长流程钢铁企业“绿色指数”评价指标体系，突出低碳引领，增加碳相关评价指标、增大碳相关指标评价权重。2022 年，参与评价的 13 个长流程钢铁生产企业平均得分较 2021 年增加 4.2 分，钢铁企业绿色发展水平持续提升。

We revised the “green index” evaluation index system for long-process steel enterprises from two dimensions of “low-carbon development” and “green development” to highlight the leading role of low carbon, add carbon-related evaluation indexes and increase the evaluation weights of carbon-related indicators. In 2022, the average score of the 13 long-process steel production enterprises participating in the evaluation was 4.2 higher than that in 2021, marking a continuous improvement in the green development level of the steel enterprises.

2022 年长流程钢铁企业绿色指数  
Green Indexes of Long-process Iron and Steel Enterprises in 2022



节约能源资源  
Saving energy and resources

能耗对标提升  
Improving energy  
consumption  
benchmarking



**推动能效标杆创建。**组织各钢铁子公司“因厂施策、一厂一策”制定能效标杆创建方案，组织编制《中国宝武 2022 年极致能效技术推荐目录》。

**We created benchmarks for energy efficiency.** We organized all steel subsidiaries to make the plan for creating energy efficiency benchmarks according to the principle of “adapting measures tailored to specific factories and making one policy for one factory”, and organized to prepare the *2022 Ultimate Energy Efficiency Technology Recommendation Catalogue of China Baowu*.



**“极致能效”劳动竞赛。**持续推进工序能耗对标工作，将对标结果运用于劳动竞赛。全年累计奖励焦炉、高炉、转炉、电炉能效“三甲”（冠军炉、亚军炉、季军炉）40 个和进步奖 16 个。在全国重点大型耗能钢铁生产设备节能降耗对标竞赛中，集团公司各钢铁单位在 7 个竞赛项目中共获得 5 个“冠军炉”、9 个“优胜炉”、11 个“创先炉”。

**“Ultimate Energy Efficiency” labor competition.** To constantly promote the process energy consumption benchmarking, we have applied the benchmarking results to labor competitions. In the whole year, we issued 40 “Top Three” (the first-place furnace winner, the second-place furnace winner and the third-place furnace winner) energy efficiency awards for coke ovens, blast furnaces, converters and electric furnaces, and 16 progress awards in total. In the energy conservation and consumption reduction benchmarking competition for national key large energy-consuming steel production equipment, the steel units of the Group Corporation obtained 5 “first-place furnace winners”, 9 “superior furnace awards” and 11 “innovative furnace awards” in 7 competitive events.

发展循环经济  
Developing a circular economy

“废水”变“活水”  
Turn “wastewater” into  
“flowing water”

太钢集团引入城市污水和市政中水作为生产用水水源，利用太钢集团自身配套的生活污水处理设施，将太钢集团周边尖草坪区域的居民生活污水进行收纳、处理后用于企业生产用水的补水。2022 年利用城市中水 1141 万 m<sup>3</sup>，处理城市污水 1527 万 m<sup>3</sup>，该实践获世界不锈钢协会（ISSF）“不锈钢工业奖”可持续发展奖金奖。

TISCO used urban sewage and municipal reclaimed water as the source of production water. It also used the domestic sewage of residents living in Jiancaoping area near TISCO as an auxiliary source of production water after collection and disposal by means of the domestic sewage treatment facilities developed by TISCO. In 2022, TISCO leveraged 11.41 million m<sup>3</sup> of municipal reclaimed water and disposed of 15.27 million m<sup>3</sup> of urban sewage. The International Stainless Steel Forum (ISSF) granted the Sustainable Development Gold Award of the “Stainless Steel Industry Award” to this practice.

上升管荒煤气余热回收  
Waste heat recovery of  
raw coke oven gas in the  
ascending tube

宝钢工程上升管荒煤气余热回收技术每年可以外送蒸汽量约 4.99 万吨、回收蒸汽折合 4883.35 吨标准煤、节约能源 12311.79 吨标准煤，相当于减少 CO<sub>2</sub> 排放量 32831.44 吨 / 年。

The waste heat recovery technology of raw coke oven gas in the ascending tube developed by Baosteel Engineering can deliver about 49900 tons of steam outward, recycle steam equivalent to 4883.35 tons of standard coal, and save energy equivalent to 12311.79 tons of standard coal, which is equal to reducing CO<sub>2</sub> emissions by 32831.44 tons per year.

循环宝助力循环物资处置  
Recycling Resources assists  
in the disposal of recyclable  
materials

2022 年，新钢集团在欧冶云商循环宝平台成交 295 个场次，涉及钢材可利用材、闲废设备、废旧资材、副产品等七大品类，实现交易规模 2.94 亿元。

In 2022, Xisteel made 295 successful transactions on the Recycling Resources platform of Ouyeel, covering seven categories including usable materials, idle and abandoned equipment, waste resources and materials and by-products. The transaction scale reached RMB 294 million.

降低污染排放

Reducing pollutant emissions

废气超低排

Ultra-low emission of  
exhaust gas

**加快推进改造，实现废气超低排。**继续以项目化推进落实废气超低排放改造工作要求，在改造难度较大的煤气精脱硫、热风炉治理上，宝钢股份宝山基地、梅钢公司以及中南钢铁鄂城钢铁已完成建设，极大提升了超低排放改造整体进度。

**We accelerated transformation to achieve ultra-low emission of exhaust gas.** Following the work requirements for project-based promotion in transformation of ultra-low emission of exhaust gas, Baoshan Base of Baosteel, Meishan Iron and Steel and Echeng Iron & Steel of Zhongnan Iron & Steel completed the construction of gas fine desulfurization and hot blast heater treatment with more difficulties in transformation, greatly improving the overall progress of the transformation of ultra-low emissions.

**开展结对帮扶，助力超低排改造。**建立 2022 年超低排放改造结对协同工作机制，通过结对帮扶，加快推进相关基地的超低排放改造、评估及公示工作。2022 年，宝钢股份宝山基地、湛江钢铁 3<sup>#</sup> 高炉、武钢有限（清洁运输），中南钢铁鄂城钢铁，马钢集团马钢股份（清洁运输）均已完成评估，并陆续在中国钢铁工业协会网上进行公示。

**We boosted the transformation of ultra-low emission of exhaust gas through paired assistance.** We established the paired and coordinated work mechanism for ultra-low emission transformation in 2022 to speed up the ultra-low emission transformation, evaluation and disclosure of relevant bases through paired assistance. In 2022, the Baoshan Base, No. 3 blast furnace of Zhanjiang Iron & Steel and Wuhan Iron & Steel (clean transportation) of Baosteel, Echeng Iron & Steel of Zhongnan Iron & Steel, and Masteel of Magang Group (clean transportation) finished the evaluation and made the results public on the website of China Iron and Steel Association.



湛江钢铁氮氧化物  
从7100吨下降至

**4700**吨

The oxynitride emissions of Baosteel Zhanjiang Iron & Steel were reduced from 7100 to **4700** tons

宝钢股份

Baosteel



湛江钢铁氮氧化物从 7100 吨下降至 4700 吨，颗粒物从 3500 吨下降至 2700 吨，成为广东省首家实现全流程超低排放、达到涉工业炉窑 A 级标准的企业。

The oxynitride emissions of Baosteel Zhanjiang Iron & Steel were reduced from 7100 to 4700 tons and the particulate matter emissions were reduced from 3500 to 2700 tons, making Zhanjiang Iron & Steel the first enterprise in Guangdong to achieve full-process ultra-low emissions and reach the A-level standard of furnaces involved in industry.

中南钢铁

Zhongnan Iron & Steel



鄂城钢铁推进大气污染防治设施超低排放改造，21 个主要排放口全部实现超低排放，颗粒物、二氧化硫主要污染物下降近 30%。

Echeng Iron & Steel upgraded air pollution prevention and control facilities for ultra-low emissions. All 21 major discharge outlets achieved ultra-low emissions, and the major pollutants, such as particulate matter and sulfur dioxide, fell by nearly 30%.



中南钢铁烧结脱硫脱硝装置

The sintering desulfurization and denitrification device of Zhongnan Iron & Steel

太钢集团

TISCO



推进转炉混合湿电除尘项目，使转炉烟气除尘、煤气净化能力大幅提升，烟气排放浓度远优于超低排放要求标准，实现了转炉煤气品质的再提升。

The hybrid wet electric dust removal project for converters has been promoted, which has greatly improved the flue gas dust removal and gas purification capacity of the converter, making the flue gas emission concentration far superior to the required standard for ultra-low emissions and further enhancing the gas quality of converter gas.



## 废水零排放

### Zero discharge of wastewater

**推进合作协同，提升“废水零排放”能力。**推进跨基地协同，加快“膜法分盐浓缩+MVR 结晶”先进工艺技术的应用，完成宝钢股份无取向硅钢产品结构优化配套废水处理站项目、马钢化工能源北区“废水零排放”项目建设；编制《中国宝武废水零排放评价指标体系》（试行版），加快“废水零排放”能力建设。

**We improved the ability of “zero discharge of wastewater” through cooperation and collaboration.** We promoted cross-base collaboration, accelerated the application of the advanced process technology of “salt separation and concentration by membrane + MVR crystallization”, and completed the construction of Baosteel’s supporting wastewater treatment station project for non-oriented silicon steel product structure optimization and the “zero discharge of wastewater” project of the North Area of Masteel Chemical Energy Technology. We also stepped up our efforts in improving our “zero discharge of wastewater” ability by preparing the *Evaluation Index System for Zero Wastewater Discharge of China Baowu (Trial)*.

**聚焦重点流域生态环境保护，推进落实各项任务。**组织学习《中华人民共和国黄河保护法》等，编制完成《中国宝武黄河流域生态环境保护总体规划》，太钢集团、宝武碳业完成并组织落实相关规划或行动方案；加强对长江流域相关企业生态环境保护工作的现场调研与督察检查，《中国宝武长江流域生态环境保护总体规划》各项规划举措进展顺利、约束性绩效指标达到规划目标进度要求。

**We focused on ecological and environmental protection in key river basins and proceed with the implementation of various tasks.** We organized to study the *Yellow River Protection Law of the People’s Republic of China* and finished the compilation of the *Master Plan for Ecological and Environmental Protection in the Yellow River Basin of China Baowu*. TISCO and Baowu Carbon completed and organized to implement relevant planning or action plans. We intensified efforts in the onsite investigation and supervisory inspection of the ecological and environmental protection of relevant enterprises in the Yangtze River basin. The planned measures in the *Master Plan for Ecological and Environmental Protection in the Yangtze River Basin of China Baowu* made progress smoothly and the obligatory performance indicators reached the schedule requirements of the planned goals.

### 宝钢股份

Baosteel

武钢有限精准施策《长江大保护行动方案》，将城市钢厂建设融入长江大保护，完成了 55 项节水减排项目。

Wuhan Iron & Steel took precise measures to implement the *Action Plan for Yangtze River Protection*, integrated the construction of urban steel mills into the Yangtze River protection, and finished 55 water conservation and emission reduction projects.

### 中南钢铁

Zhongnan Iron & Steel

鄂城钢铁利用智慧化手段基本实现废水零排放，吨钢耗新水、吨钢排水量达到了行业先进水平，获评湖北省节水示范项目。

Echeng Iron & Steel basically achieved zero discharge of wastewater by intelligent means, and the fresh water consumption per ton of steel and the water discharge per ton of steel both reached an industry-leading level. The project was awarded the Water Saving Demonstration Project of Hubei Province.

2022 年度标杆案例  
Benchmarking case in 2022

## 宝武水务

Baowu Water Technology

研发高浓度活性微生物精准控制脱碳除氮技术、高效膜循环资源化回用等关键核心技术，成功解决钢铁行业废水关键污染物控制的“卡脖子”难题。

Baowu Water Technology researched and developed key and core technologies such as the decarburization and nitrogen removal technology by precise control of active microorganisms with high concentration and the high-efficiency membrane recycling reutilization, which successfully solved the bottleneck problems in the key pollutant control of wastewater in the steel industry.



宝武水务承接的湛江钢铁外排水综合利用项目

The external drainage comprehensive utilization project of Baosteel Zhanjiang Iron & Steel undertaken by Baowu Water Technology





马钢集团北区废水深度处理综合利用项目

The advanced wastewater treatment comprehensive utilization project in the north area of Magang Group

## 固废不出厂

No solid waste leaving  
the factory

**全面完成目标，实现固废不出厂。**各长流程钢铁基地全面完成“固废不出厂”既定目标，宝钢股份四基地、中南钢铁三基地、马钢集团、太钢集团、八钢公司均实现“固废不出厂”，新进企业制订“固废不出厂”方案并按计划推进落实。

**We fully completed the targets and achieved no solid waste leaving the factory.** All steel bases with long process fully completed the set targets of “no solid waste leaving the factory”. Four bases of Baosteel, three bases of Zhongnan Iron & Steel, Magang Group, TISCO, and Bayi Iron & Steel all achieved the goal of “no solid waste leaving the factory”. Other newcomers formulated the plan for “no solid waste leaving the factory” and implemented it as planned.

**制定管理标准，实现规范化管理。**以标准制订为抓手，总结、提炼、分享“固废不出厂”经验，突出行业引领。2022 年 8 月，集团公司能源环保部牵头编制《钢铁企业固废不出厂管理指南》（T/SSEA 0220-2022）并正式发布。该标准填补了钢铁行业在固废管理领域标准空白，对指导钢铁行业降低固体废物环境风险、提高资源综合利用水平、促进规范化管理具有重要意义。

**We formulated management standards for standardized management.** With a focus on formulating standards, we summarized, extracted and shared our experience in “no solid waste leaving the factory” to take the lead in the industry. In August 2022, the Energy & Environmental Protection Department of the Group Corporation took the lead to prepare the *Guidelines for Management of “No Solid Waste Leaving Factory” of Iron and Steel Enterprises (T/SSEA 0220-2022)* and officially published it. The standard has filled the gap in the solid waste management standards of the iron and steel industry and is of great importance in guiding the industry to reduce the environmental risks from solid waste, improve the comprehensive utilization level of resources and promote standardized management.

## 绿色包装和运输

Green packaging and  
transportation

### 中南钢铁

Zhongnan Iron &amp; Steel



鄂城钢铁产品包装升级为具有可循环使用、可塑性强、保护性能出众等特点的金属包装；以新能源电动重卡置换传统燃油运输，共投放电动重卡 160 台，厂区建设 17 个充电桩、1 座换电站，总投资 2 亿元，每年减少碳排放 50 万吨。

Echeng Iron & Steel upgraded its product packaging to metal packaging with the characteristics of recyclable use, strong plasticity and outstanding protection capability. The conventional fuel transportation was replaced by new-energy electric-driven heavy trucks. A total of 160 electric-driven heavy trucks were put into use, and 17 charging piles and 1 battery swapping station were built within the factory. The total investment was RMB 200 million and 500000 tons of carbon emissions could be reduced per year.

### 马钢集团

Magang Group



马钢物流牵头置换了国 VI 及纯电车辆合计 649 台，每年可减碳 1214.4 吨，厂区清洁运输比例超 80%。

Magang Logistics took the lead to replace the old ones with a total of 649 national VI vehicles and pure electric vehicles. 1214.4 tons of carbon emissions could be reduced per year, and the proportion of clean transportation in the factory exceeded 80%.



宝钢工程苏州大方纯电动框架运输车

A transport vehicle with a pure electric frame of Suzhou Dafang Special Vehicle under Baosteel Engineering

### 宝钢工程

Baosteel Engineering



2022 年 4 月，苏州大方为中天钢铁、江苏星链交付了首批共 12 台自主研发的纯电动框架运输车，可满足全天候 24 小时连续运行条件，每年工作达 6000 小时以上。

In April 2022, Suzhou Dafang Special Vehicle delivered the first batch of 12 self-developed transport vehicles with a pure electric frame to Zenith Steel and Jiangsu Xinglian, which could meet the uninterrupted service condition around the clock and work for more than 6000 hours per year.



## 绿色精品

### High-quality green products

宝武秉持“宝武出品，必是精品”理念，全面推进钢铁材料升级工程。围绕高强度、高耐蚀、高效能，研发差异化产品，聚焦面大量广的同质化产品，持续优化质量管理体系，取得丰硕成果。

Adhering to the concept of “Baowu products are bound to be quality ones”, Baowu has promoted the steel material upgrading project in full swing. Centering on the requirements of “high strength, high corrosion resistance and high efficiency”, we have researched and developed differentiated products, focused on the homogenized products with a wide range and a large amount, continued to optimize the quality management system and made fruitful achievements.

## 绿色产品

### Green products

#### 宝钢股份

Baosteel

采用耐热刻痕取向硅钢 -B20HS070 制造的“超一级”立体卷铁心变压器，是绿色高效变压器的首选。无铬高铝锌铝镁 BaoAM FEVE 氟碳彩涂板，可用于严苛腐蚀环境下对耐蚀性、耐候性要求极高的建筑屋面和墙面。光伏支架用超级耐候钢 BWP800 具有高强度和高耐候的性能优势，是更经济、更低碳、更绿色、更长寿、更安全的全新一代光伏支架用材。

The “ultra first-grade” stereoscopic rolled core type transformer manufactured by heat-resistant scratching oriented silicon steel-B20HS070 is the preferred choice for green and efficient transformers. The chromium-free high-aluminum zinc-aluminum-magnesium BaoAM FEVE fluorocarbon prepainted steel sheets can be used for building roofs and walls that require extremely high corrosion resistance and weather resistance in harsh and corrosive environments. The super weathering steel for solar panel brackets BWP800 has the advantages of high strength and high weather resistance, which is a new generation of solar panel bracket materials that is greener, safer, more economical, lower-carbon and longer-serviced.

#### 马钢集团

Magang Group

建筑结构用高强超厚翼缘热轧 H 型钢不仅符合全生命周期设计理念的新型节能环保建筑材料要求，同时在构建绿色低碳产业链、助力我国钢结构建筑工业进入世界领先梯队方面发挥了积极作用。

High-strength super-thick flange hot-rolled H-shaped steel for building structures not only meets the requirements of new energy-saving and environmentally friendly building materials of the full life cycle design concept, but also plays a positive role in building a green and low-carbon industrial chain and helping China's steel structure construction industry enter the world's leading echelon.

#### 太钢集团

TISCO

与合作厂家开发液氢（-253℃）容器用不锈钢，成为目前国内液氢专用不锈钢唯一供货企业，实现板材、棒材、管材全系列产品的供应，产品在多家液氢容器制造厂家得到了批量应用，助力氢能产业链发展。

TISCO developed stainless steel for liquid hydrogen (-253℃) containers with partner factories and has become the only domestic supplier of stainless steel specially used for liquid hydrogen in China. TISCO has achieved the supply of a full series of products including sheets, bars and pipes, and its products have been applied in batches in many liquid hydrogen container manufacturers, thereby boosting the development of the hydrogen energy industry chain.



案例  
CASE

#### 宝武科技产品助力 2022 年北京绿色冬奥会成功举办

Baowu's technological products assisted in the successful hosting of the green Beijing Winter Olympic Games in 2022

2022 年，宝武供应了国家速滑馆“冰丝带”二氧化碳跨临界直冷制冰系统工程中的不锈钢螺纹钢筋材料；国家雪车雪橇中心的建设采用了宝武高耐腐蚀性、高韧性 Q355NHD；为丰宁抽水蓄能电站一期工程提供了关键核心材料高牌号无取向硅钢和高等级磁轭钢，为北京冬奥场馆实现 100% 绿电供应提供坚强保障。

In 2022, Baowu supplied the stainless thread reinforcement materials for the carbon dioxide transcritical direct cooling ice-making system project of the “Ice Ribbon”, i.e. the National Speed Skating Oval. The construction of the National Sliding Centre adopted Baowu's high-corrosion-resistance and high-toughness Q355NHD. Baowu also provided the key and core materials of high-grade non-oriented silicon steel and high-grade yoke steel for Phase I project of Fengning pumped storage power station. With these efforts, we provided a strong guarantee for a 100% green power supply to the venues for Beijing Winter Olympic Games.



太钢不锈钢助力国家速滑馆绿色制冰

Shanxi Taigang Stainless Steel assisted in green ice making of the National Speed Skating Oval

质量管理

Quality management

宝武始终坚持提供优质的产品和服务，加强源头质量管控，持续优化质量管理体系，不断推进高质量发展。

Baowu has always been committed to providing high-quality products and services, enhancing quality management from the source, constantly optimizing the quality management system, and keeping promoting high-quality development.

宝钢股份

Baosteel



按 IEC QC080000 建立有害物质管理体系并通过 BSI（英国标准协会）的体系认证，确保产品合规性过程控制的有效性。建立应急预案制度，通过模拟演练，持续积累和完善可能发生来自客户端的健康以及食品安全类突发事件应急处置能力。

Baosteel set up a hazardous substance management system as per IEC QC080000, which passed the British Standards Institution (BSI) system certification, and the effectiveness of process control for product compliance was hence ensured. Baosteel also established an emergency plan system and carried out drills to continuously accumulate and improve the capacity to make responses to emergencies relating to customers’ health and food safety.

马钢集团

Magang Group



马钢股份不断提升和完善质量管理体系，全产线产品的设计和制造均通过 ISO 9001:2015 质量管理体系认证。2022 年，合同完成率、顾客满意度、顾客端绩效等指标均得到了稳步提升。

Masteel has kept upgrading and improving the quality management system, and the design and manufacture of its products on all production lines has passed the ISO 9001:2015 quality management system certification. In 2022, a steady increase was seen in many indicators such as contract completion rate, customer satisfaction, and customer end performance.

宝武水务

Baowu Water Technology



完成“水处理工程、大气治理工程的技术咨询服务、设计、设备成套提供和工程总承包”业务、“大气治理、生活废水、工业废水处理设施的运营和维护服务”业务的质量管理体系认证。

Baowu Water Technology obtained the quality management system certification of the “technology consulting services, design, complete equipment supply and EPC of water treatment projects and air pollution treatment projects” business and the “operation and maintenance services for air pollution treatment, domestic wastewater and industrial wastewater treatment facilities” business.

绿色产业

Green industry

宝武围绕钢铁主业资源保障，聚焦发展绿色能源、绿色金融、绿色资源、绿色智慧服务等业务，抢占绿色低碳转型发展的先机，带动协同降碳，推动“一基五元”握指成拳。

To guarantee the resources of the main industry of steel, Baowu focuses on the development of green energy, green finance, green resources and green intelligent services to seize a head start in green and low-carbon transformation, drive coordinated carbon emissions reduction, and make “One Basis and Five Industries” create synergy.

绿色能源

Green energy

绿色低碳转型关乎宝武未来的生存，绿色清洁能源是宝武“双碳”战略落地的重要保障。宝武聚焦光伏与风能发电，驱动能源高科技原创技术开发，助力能源结构转型。

Green and low-carbon transformation is concerned with the future survival of Baowu. Green and clean energy is an important guarantee of the implementation of Baowu’s “dual-carbon” strategy. Baowu focuses on photovoltaic and wind power generation, drives the development of high-tech original energy technology, and helps transform the energy mix.



马钢集团开展绿电交易

2.8 亿千瓦时

Magang Group carried out green power trading of 280 million kWh

马钢集团

Magang Group



开展绿电交易 2.8 亿千瓦时；大力发展光伏发电，光伏发电总装机容量达到 50.35 兆瓦。

Magang Group carried out green power trading of 280 million kWh and vigorously developed photovoltaic power generation. The total installed photovoltaic power generation capacity reached 50.35 MW.

太钢集团

TISCO



持续推进光伏厂区、光伏矿山建设，自有光伏年发电达 1500 万千瓦时。

TISCO made sustained efforts in the construction of photovoltaic factories and photovoltaic mines. Its self-owned photovoltaic power generation reached 15 million kWh per year.



太钢集团厂房屋顶光伏项目启动大会

TISCO initiated the rooftop photovoltaic project for plant buildings



武钢集团

Wugang Group



在阳逻智造园与宝武生态圈伙伴企业共同建设的分布式屋顶光伏发电项目并网运营，面积已突破 16 万平方米，是华中规模最大的分布式屋顶光伏电站，实现了该园区绿色用电。

The distributed rooftop photovoltaic power generation project co-built by Wugang Group and other partner enterprises in Baowu's ecosystem at Yangluo Intelligent Manufacturing Park was connected to the grid for operation. With an area exceeding 160000 square meters, it is the largest distributed rooftop photovoltaic power station in Central China and provides green power to the park.

宝地资产

Baoland Real Estate Asset Management



根据厂房的产权、屋顶结构、用电结构等因素，综合研究分布式光伏项目的推广建设，做到“应铺尽铺”。2022 年，实质性推进分布式光伏项目 21 万平方米。

Baoland Real Estate Asset Management made a comprehensive study on the promotion and construction of distributed photovoltaic projects according to the factors such as the property right of the plant, roof structure and electricity structure, and laid photovoltaic devices at every possible site. In 2022, 210 thousand square meters of distributed photovoltaic projects were substantially advanced.



宝地资产金山溯源屋顶光伏项目，敷设面积达 30240 平方米，截至 2022 年底，总电量 233460 千瓦时。

Suyuan rooftop photovoltaic project in Jinshan District developed by Baoland Real Estate Asset Management laid photovoltaic devices covering an area of 30240 square meters. By the end of 2022, the total power generation was 233460 kWh.

宝武清能

Baowu Clean Energy



积极开发集团公司内各基地风光电资源，大力开拓集团公司外风光电资源和源网荷储一体化项目。截至 2022 年底，宝武清能在集团公司各基地共开发、摸排新能源项目资源近 1 吉瓦，其中投运 216 兆瓦，投运项目累计发电量达 9277.6 万千瓦时，投运项目总体超发 4%。以源网荷储一体化为特征的新能源基地布局、开发取得突破，重点分布在西藏扎布耶、河南三门峡、山西朔州、新疆巴州、内蒙古乌海等地。托管整合电力交易企业，探索绿电交易模式，2022 年累计完成交易电量共计 28.78 亿千瓦时，其中绿电交易量约 11.32 亿千瓦时。

Baowu Clean Energy actively developed the wind and photovoltaic power generation resources at all bases in the Group Corporation, and increased its efforts in exploring the wind and photovoltaic power generation resources and source-network-load-storage integrated projects outside the Group Corporation. By the end of 2022, Baowu Clean Energy had developed and investigated nearly 1 GW of new energy project resources at all bases of the Group Corporation, among which 216 MW was put into operation. The cumulative power generation of the projects put into operation reached 92.776 million kWh and the projects put into operation generated 4% more electricity in total. The layout and development of new energy bases characterized by source-network-load-storage integration made breakthroughs, mainly in Zabuye of Tibet, Sanmenxia of Henan Province, Shuozhou of Shanxi Province, Bayingol Mongolian Autonomous Prefecture of Xinjiang, and Wuhai of Inner Mongolia. Baowu Clean Energy was entrusted to manage the electricity trading enterprises, integrated them, and explored the green electricity trading model. In 2022, a total of 2.878 billion kWh of electricity was traded, of which the green electricity trading volume was about 1.132 billion kWh.

绿色金融

Green finance

宝武通过发展绿色金融产业，助力碳中和事业的发展。2022 年，宝武持续完善基于产业生态圈的绿色金融支撑服务体系，积极拓宽绿色金融融资渠道，撬动金融资本为包括钢铁业在内的产业转型提供支撑，助力绿色高质量发展。

Baowu propels carbon neutrality through green finance. In 2022, Baowu has constantly improved the green finance support and service system based on the industrial ecosystem, actively broadened the green financing channels, and leveraged financial assets to prop up the transformation of the industries including the steel industry, thus contributing to green and high-quality development.

华宝股权

Hwabao Equity Investment  
Fund Management



华宝股权作为宝武绿碳基金管理人，以绿色金融资本的高效运营，推动碳中和绿色产业的创新发展，2022 年完成宝武内外 6 个项目的投资，投资决策额超 16 亿元。

As the manager of Baowu Green Carbon Fund, Hwabao Equity Investment Fund Management promotes the innovative development of carbon neutral green industry with the efficient operation of green financial capital. In 2022, 6 projects within and out of Baowu were invested, with an investment decision-making amount of over RMB 1.6 billion.

华宝投资

Hwabao Investment



欧冶金服开发完成“宁碳惠”碳资产交易 平台，通过平台服务将绿色经济带来的生态资源转化为经济效益，实现宁洱县产业升级和百姓收入增长。

Ouyeel Finance developed the “Ning Tan Hui” carbon asset trading platform and turned the ecological resources brought by the green economy into economic benefits via the platform, achieving the industrial upgrading of Ning'er County and the income increase for local people.

华宝信托

Hwabao Trust



成立 ESG 系列——绿色主题投资 1 号集合资金信托，推动国内碳排放权交易市场建设。产品荣获第一届中国信托业“金牛奖”和“优秀碳金融实践奖”。

Hwabao Trust established the ESG series - Green Theme Investment No. 1 Assembled Funds Trust to promote the construction of the domestic carbon emissions permit trading market. The product won the First China Trust Industry's “Golden Bull Award” and the “Outstanding Carbon Finance Practice Award”.

华宝证券

Hwabao Securities



接洽多家龙头企业和地方政府开展绿色金融、碳金融咨询服务交流，援助云南首笔林业碳汇预期收益权质押贷款落地宁洱县。2022年，中国证监会批准了华宝证券自营参与碳排放权交易的资格。

Hwabao Securities approached multiple leading enterprises and local governments to carry out consulting services and exchanges on green finance and carbon finance, and promoted the expected earning right pledge loan of the first forestry carbon sink in Yunnan to be implemented in Ning'er County. In 2022, China Securities Regulatory Commission granted Hwabao Securities the qualification to participate in carbon emissions permit trading in a self-supporting way.

华宝基金

Hwabao WP Fund Management



成功发行华宝中证绿色能源ETF，建立ESG信息披露与数据集成机制，修订《绿色投资指引》（试行），建立股票型基金可持续投资尽责管理与产品规范；持续运作华宝绿色主题、华宝绿色领先、华宝生态中国、ESG基金LOF、华宝可持续发展等5只公募基金产品。

Hwabao WP Fund Management successfully issued the Hwabao Zhongzheng Green Energy ETF, established an ESG information disclosure and data integration mechanism, revised the *Green Investment Guidelines (Trial)*, and formulated the responsible management and product specifications of sustainable investment for stock funds. It continued to operate five public fund products including Hwabao Green Theme, Hwabao Green Leading, Hwabao Ecological China, ESG Fund LOF and Hwabao Sustainable Development.

宝武财务公司

Baowu Group Finance Company



逐步推出并落地了财政资金绿色贷款、绿色融资租赁、排污权贷款等创新型绿色信贷产品。2022年，宝武财务公司绿色金融发行规模260亿元，同比增长48%。

Baowu Group Finance Company gradually launched and implemented innovative green credit products such as fiscal fund green loans, green financial leasing and emission permit loans. In 2022, the green finance issuing scale of Baowu Group Finance Company reached RMB 26 billion, a year-on-year increase of 48%.



2022年，宝武财务公司绿色金融发行规模

260 亿元

In 2022, the green finance issuing scale of Baowu Group Finance Company reached RMB 26 billion



拥有各类基地

500 余个

为客户提供高质高效服务

超过 300 家

Now it owns more than 500 bases of different types and provides high-quality and high-efficiency services for more than 300 customers

宝武资源

Baowu Resources



发展绿色炉料加工产业，研究开发高品质冶金炉料产品与资源综合利用产品，推进实现全过程的极致节能降碳。积极打造绿色矿山，推进清洁能源利用，所属马钢矿业张庄矿、八钢矿业敦德矿、重钢矿业西昌矿、物流事业部马迹山港分别启动光伏发电项目的建设。

Baowu Resources has developed the green furnace charge processing industry, and researched and developed high-quality metallurgical furnace charge products and products with comprehensive utilization of resources, to advance the ultimate energy conservation and carbon reduction in the whole process. Moreover, Baowu Resources has actively built green mines and promoted the utilization of clean energy. Zhangzhuang Mine of Masteel Mining, Dundee Mine of Bagang Mining, Xichang Mine of Chonggang Mining, and Majishan Port of the Logistics Business Unit under Baowu Resources started the photovoltaic power generation project, respectively.

2022 年度标杆案例  
Benchmarking case in 2022

欧冶链金

Ouyeel Lianjin Recycling Resources Co., Ltd.



编制《炼钢铁素炉料（废钢铁）加工利用技术条件》标准及《再生钢铁原料》国家标准，独创“基地+平台”的商业模式，建设智慧服务交易平台，通过专业化运营，为各钢铁企业提供绿色炼钢原料保障。已拥有各类基地500余个，为超过300家客户提供高质高效服务，完成千万吨级钢厂全覆盖。

It participated in preparing the standard of *Iron and steel scraps technology conditions for steelmaking process* and the national standard of *Recycling iron-steel materials*, pioneered the business model of “base + platform”, and built an intelligent service trading platform. It provides a guarantee of green raw materials of steelmaking for steel enterprises through the professional operation. Now it owns more than 500 bases of different types and provides high-quality and high-efficiency services for more than 300 customers, covering all 10-million-ton-level steel mills.

绿色资源

Green resources

宝武落实国家资源能源战略，履行新型低碳冶金现代产业链链长责任，创新商业模式，提高产业链及绿色炉料保障能力；加大再生钢铁原料的兼并重组步伐，完善“五流合一”智慧监管平台、废钢智慧检判等系统，提高绿色资源保障能力；依托城市钢厂的装备优势，打造行业领先的资源利用与环保产业，促进制造板块高质量发展。

Baowu has implemented the national resource and energy strategies, assumed its responsibility as a leader of the new low-carbon metallurgical modern industrial chain, and innovated business models to improve the guarantee ability of industrial chain and green furnace charge. Moreover, we have intensified efforts in the merging and reorganization of raw materials of recycled steel and improved the “Five Flows in One” intelligent supervision platform, steel scrap intelligent inspection and judgment and other systems to enhance the ability to guarantee green resources. Relying on the equipment advantages of urban steel mills, we have created industry-leading resource utilization and environmental protection industry for the high-quality development of manufacturing.



欧冶链金马钢诚兴江边基地

Magang Chengxing riverside base of Ouyeel Lianjin Recycling Resources Co., Ltd.



## 宝武环科

Baowu Environment and Resource Technology



设立上海市首个区级中小企业危险废物收集贮存转运平台，大力推进上海多源固废协同处理和能源化工程技术研究中心建设，积极开展城市污泥资源综合利用。

It built the first district-level hazardous waste collection, storage and transfer platform for middle and small-sized enterprises in Shanghai, vigorously promoted the building of the Multi-source Solid Waste Collaborative Treatment and Energy Engineering Technology Research Center of Shanghai, and actively carried out the comprehensive utilization of urban sludge resources.

## 绿色智慧服务

## Green intelligent services

为应对环境挑战、实现绿色化发展，宝武积极助力绿色智慧服务产业发展，加速推动宝武由传统企业向以数字化、智能化、绿色化为主导的现代钢铁企业转型。

To cope with environmental challenges and achieve green development, Baowu made a positive contribution to the industrial development of green intelligent services to speed up the transformation of Baowu from a traditional enterprise to a modern iron and steel enterprise led by digitization, intellectualization and greenization.

## 太钢集团

TISCO



绿色低碳技术路线图正式发布，碳数据平台上线运行，成为国内采矿行业第一家拥有碳数据管理平台，具备“工序级”碳核算、管理和分析能力的企业。

The green and low-carbon technology roadmap was formally released. The carbon data platform went live for operation, making TISCO the first enterprise in the domestic mining industry with a carbon data management platform and the abilities of “process-level” carbon accounting, management and analysis.

## 宝信软件

Baosight



持续开展“工业互联网+双碳”研究，加快电磁热工低碳冶金技术的推广应用，充分利用绿色能源、信息化等低碳技术，打造基于 Smart-TPC 的智慧铁钢系统，碳排放显著下降、温降有效下降、周转率明显提升。

Baosight continued to carry out the research on “industrial Internet + dual-carbon”, accelerated the promotion and application of electromagnetic thermotechnical low-carbon metallurgical technology, and built an intelligent iron and steel system based on Smart-TPC by full use of green energy, information technology and other low-carbon technologies. Therefore, the carbon emissions decreased significantly, the temperature drop declined effectively, and the turnover rate increased significantly.

2022 年度标杆案例  
Benchmarking case in 2022

## 欧冶云商

Ouyeel



2022 年钢铁行业 EPD 平台累计注册用户

1066 人

In 2022, the EPD platform for the iron and steel industry has racked up **1066** users registered in.

由中国钢铁工业协会、宝武共同组织发起，欧冶云商建设和运维的钢铁行业 EPD 平台成功上线。2022 年平台累计注册用户 1066 人，完成认证企业 22 家，入驻第三方验证机构 14 家。以钢铁产品 EPD 发布为核心，不断开拓钢铁产品上下游产品种类，实现 6 份铁矿石 EPD 报告的首发，助力钢铁行业绿色低碳高质量发展。

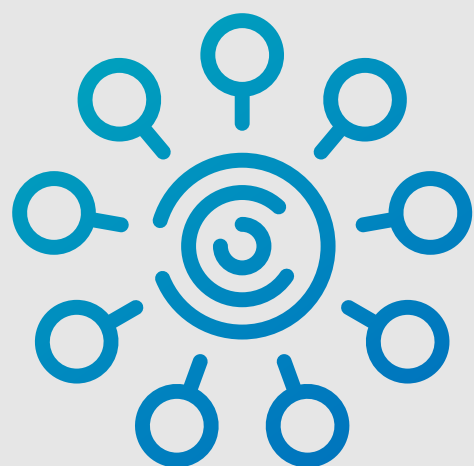
The EPD (Environmental Product Declaration) platform for the iron and steel industry, co-launched by China Iron and Steel Association and Baowu, and built, operated and maintained by Ouyeel, went live successfully. In 2022, there were 1066 registered users in total, 22 certified enterprises, and 14 third-party verification authorities on the platform. With the core of EPD release of steel products, Ouyeel kept exploring the upstream and downstream product categories of steel products and issued six iron ore EPD reports for the first time, boosting the green, low-carbon and high-quality development of the steel industry.



钢铁行业 EPD 平台首发仪式

The debut ceremony for iron and steel industry EPD programme





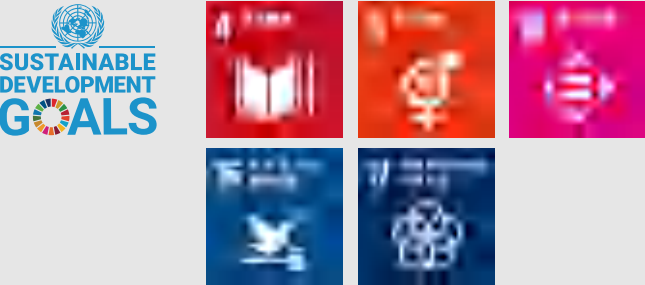
# 品牌卓著

彰显“强国重企”品牌影响力

## Create Outstanding Brands

to Highlight the Brand Influence of  
“Strengthening the Country with  
Powerful Enterprises”

回应可持续发展目标  
Response to SDGs



责任专题：深耕品牌建设  
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# 我们的理解

## What we know

产品是品牌的根基，品牌是产品的延伸，世界一流企业不仅能够以产品征服用户，更能通过享誉全球的品牌形象吸引潜在用户、获得优厚资源，并赋予产品以额外的价值和意义。

Products are the foundation of a brand, while the brand is an extension of products. For world-class enterprises, besides conquering users with their products, they can attract potential users and gain rich resources with a world-renowned brand image and endow the products with additional value and meaning.

### 品牌定位

Brand positioning

勇担重企强国使命，打造绿色、高端、智慧的高科技企业形象

Boldly shoulder the mission of building a stronger country by stronger enterprises and create a green, high-end and intelligent high-tech enterprise image



绿动未来（宝武将绿色视为企业的生命底色和战略基色，以绿色赓续钢铁文明、创造人类美好明天）

Green the Future (Baowu sees green as its survival background and strategic foundation, and strives to carry forward the civilization of steel and create a better future for mankind)

### 品牌口号

Brand slogan

### 品牌追求

Brand pursuit

提升宝武创建世界一流企业的全球知名度、美誉度

Enhance the global influence and reputation of Baowu in the process of building a world-class enterprise



# 关键绩效指标

## Key performance indicators

### 国际化指数

Internationalization index

| 指标<br>Indicator                     | 宝武<br>Baowu |      | 中国 100 大平均<br>Average value of Top 100 in China | 世界 100 大平均<br>Average value of Top 100 in the world |
|-------------------------------------|-------------|------|---|---|
| 年份<br>Year                          | 2022        | 2021 | 2021  | 2021  |
| 国际化指数<br>Internationalization index | 10.62       | 8.84 | 15.59   | 61.6  |

注：中国 100 大指在中国的 100 大跨国企业，世界 100 大指《财富》世界 100 强企业。

Note: “Top 100 in China” refers to the Top 100 transnational enterprises in China, while “Top 100 in the world” refers to the Fortune Top 100 enterprises in the world.

# 我们的实践

## What we do

宝武以凝心聚力的企业文化为品牌卓著的精神内核，不断彰显品牌自信、加速品牌出海，以宝武品牌硬实力的持续进步赋能品牌影响力、品牌价值的持续提升，打造央企品牌建设的新典范。

Regarding the corporate culture of pulling together efforts as its core spirit of outstanding brands, Baowu keeps exuding brand confidence, accelerates the “going abroad” process of brands, and continues to improve the brand influence and value with the hard power of Baowu brands to create a new paradigm for the building of central SOE brands.

### 品牌卓著

Outstanding brands

#### 全球品牌评级机构榜单宝武近三年排名

Rankings of Baowu on the lists of global brand rating agencies in the past three years

| 年份<br>Year | 世界品牌实验室 World Brand Laboratory                        |  |   | 品牌金融 Brand Finance  |
|------------|---|--|---|---|
|            | 世界品牌 500 强<br>The World's 500 Most Influential Brands | 亚洲品牌 500 强<br>Asia's 500 Most Influential Brands | 中国 500 最具价值品牌<br>China's 500 Most Valuable Brands | 全球最有价值的采矿和钢铁品牌<br>The World's Most Valuable Mining and Steel Brands |
| 2020       | 340   | 113  | 46  | 10  |
| 2021       | 333   | 106  | 43  | 7   |
| 2022       | 343   | 105  | 40  | 7   |

注：在国际品牌评级机构“世界品牌实验室”(World Brand Laboratory) 发布的 2022 年“世界品牌 500 强”榜单中，宝武以总排名第 343 位居钢铁品牌第 2 位。在英国品牌评估机构“品牌金融”(Brand Finance) 发布的 2022 年“全球采矿钢铁金属品牌价值 50 强”榜单中，宝武则以总排名第 7 位的成绩位居钢铁品牌第 4 位。

Note: On the list of “The World's 500 Most Influential Brands” in 2022 issued by World Brand Laboratory, an international brand rating agency, Baowu ranked 2<sup>nd</sup> in the category of steel brands with an overall ranking of 343<sup>rd</sup> place. On the list of “The World's Most Valuable Mining and Steel Brands” in 2022 issued by Brand Finance, a UK brand evaluation agency, Baowu ranked 4<sup>th</sup> among steel brands with a total ranking of 7<sup>th</sup>.

### 生态化指数

Ecologicalization index

该指标主要表征子公司专业化整合、平台化运营、生态化协同的情况，具体包括各子公司销售上平台指数、物流上平台指数、金融上平台指数、数据上平台指数和上网采购率等。2022 年，宝武生态化综合指数较上年度增长 13.8%，专业化整合创造协同效益超 35 亿元。

This index mainly characterizes the professional integration, platform-based operation, and ecological coordination of the subsidiaries, including the platform-based index in sales, logistics, finance, and data, and the online purchase rate. In 2022, the comprehensive ecologicalization index of Baowu increased by 13.8% compared with that of the past year, and the coordinated benefits created by professional integration of Baowu exceeded RMB 3.5 billion.

## 责任专题

### Column on Responsibility

## 深耕品牌建设，奏响钢铁强音

### Make More Efforts in Brand Building to Make Steel Brands Influential

品牌是企业内在生命力的主动表达，是我们对于生态圈伙伴、社会公众、员工的庄重承诺。品牌让企业不再是只有经济功能的商业组织，而进一步向着更具价值创造的社会公民角色转变。从优化品牌架构、完善品牌视觉识别，到创新品牌传播、增强品牌保护和注重品牌评价，我们深耕品牌建设，推动“品牌卓著”。

With brands, we take the initiative to express our inner vitality and make our earnest commitment to the ecosystem partners, the public, and our staff. Brands make an enterprise further transform into the role of a social citizen with a stronger value-creating ability instead of just a business organization with economic functions. We deeply advance brand building and make our brands more outstanding by optimizing the brand architecture, improving the brand visual identity, innovating brand spreading, enhancing brand protection and valuing brand evaluation.

### 完善制度保障，创建卓著品牌

#### Improving institutional guarantee and creating outstanding brands

为深入贯彻习近平总书记关于加强品牌建设的重要指示精神，全面落实党中央、国务院国资委有关决策部署，集团公司于2022年6月制订并下发《宝武创建卓著品牌的实施意见》，从总体要求、主要任务、工作保障等方面对宝武品牌建设作出了具体部署，是宝武创建卓著品牌的行动指南。

To thoroughly implement the important instructions and guidelines of General Secretary Xi Jinping on enhancing brand building and fully implement the relevant decisions and deployments of the Central Committee of the CPC and the SASAC of the State Council, the Group Corporation formulated and issued the *Opinions on the Implementation of Creating Outstanding Brands of Baowu* in June 2022. These opinions make specific deployments on Baowu's brand building from the overall requirements, main tasks and work guarantee, as the guidelines to action for Baowu to create outstanding brands.

### 创新品牌传播，讲好宝武故事

#### Innovating brand spreading and well telling the stories of Baowu

我们为中国钢铁行业的正面形象鼓与呼，通过创新品牌传播唱响宝武好声音，讲好钢铁发展历史故事、绿色本色故事、文明基石故事和美好愿景故事，改变社会大众对钢铁属性“黑色”的固有认知。

We applaud the positive image of China's iron and steel industry and give Baowu voice by innovating brand spreading. We endeavor to well tell stories about the development history of steel, green development, civilization and bright vision to change people's established cognition of the "black (less eco-friendly)" property of steel.

### 加强媒体传播

#### Strengthening media communication

通过“央媒+自媒”“线上+线下”“行业+社会”等多种宣传渠道，《人民日报》、新华社、中央电视台等头部央媒聚焦“绿色、高端、智慧”主线，宣传宝武在重要关键领域取得的实践成果，取得良好反响。

We have publicized the practices and achievements of Baowu in important and key fields through multiple publicity channels such as "central media + we media", "online + offline", and "industry + society". Leading central media including the *People's Daily*, the Xinhua News Agency and CCTV have also focused on the mainline of "green, high-end and intelligent". These efforts made favorable responses.



2021年2月和2023年3月，宝武高层领导接受中央电视台财经频道《开局之年访央企》《中国经济大讲堂》节目采访。

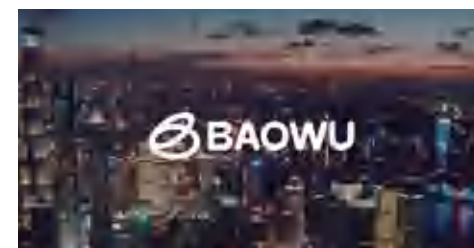
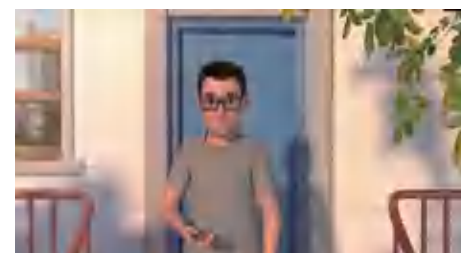
In February 2021 and March 2023, senior leaders of Baowu accepted the interviews of CCTV-2 programs, i.e. "Visits to Central Enterprises at the Start of the 14<sup>th</sup> Five-Year Plan Period" and "Lectures on Chinese".

### 创新传播方式

#### Innovating communication ways

策划制作宝武宣传片《Hi，你好，我是中国宝武》、绿色宣传片《原来钢铁是绿色的》、动画片《如果没有钢铁》等传播作品，以柔性视角展现绿色宝武、人文宝武之美，传递宝武温情与担当，获得行业内外一致好评。

We made the promotional video of Baowu titled "Hi, I am China Baowu", the green-themed promotional video "It Turns out that Steel is Green", the animation "If There Was No Steel", and other communication works. These videos show the beauty of a green and people-centered Baowu flexibly and convey the warmth and conscientiousness of Baowu, winning unanimous praise in and beyond the industry.



扫描二维码，观看宣传片  
Scan the QR code to watch the promotional video



## 推动品牌效应向外延伸

Extending the brand effect outward

围绕“大国顶梁柱 奋进新征程”主题，策划宝武国企开放日系列活动。组织参加“奋进新时代”主题成就展、中国品牌日展览等高规格展览展示活动。通过举办全球低碳冶金创新联盟成立大会、全球低碳冶金创新论坛等重大活动，提升行业影响力和国际影响力。

With “Forge Ahead in the New Journey as a Backbone of Our Powerful Country” as the theme, we planned a series of activities such as SOE Open Day of Baowu, and organized and participated in high-standard exhibitions such as “Forge Ahead in a New Era” themed accomplishment exhibition and the China Brand Day Exhibition. We have improved our influence in the industry and the world through such major events as the inaugural ceremony of the Global Low-carbon Metallurgical Innovation Alliance and the Global Low-carbon Metallurgical Innovation Forum.



中南钢铁连续七届在韶关举办“穿越工农渠”传统赛事活动，实现重温钢铁报国初心使命与全民健身活动的良好融合。

Zhongnan Iron & Steel held the “Crossing Industrial and Agricultural Canals” traditional competition event for consecutive seven sessions in Shaoguan, achieving good integration of remaining the original aspiration of serving the country with steel and national fitness activities.



欧冶工业品立足“欧贝平台”品牌传播，积极参与和策划具有广泛社会影响力的品牌活动。

Based on the brand communication of Obei platform, Obei carried out brand communication and actively participated in and organized brand activities with a broad social impact.

## 增强品牌保护，捍卫品牌价值

Enhancing brand protection and defending brand value

品牌是企业无形的资产和财富，需要以久久为功的理念捍卫品牌价值、增益品牌价值。宝武建立健全品牌法律保护体系，不断加强商标、字号和域名保护。加强品牌商标侵权监测，加大品牌维权保护力度。强化品牌经营保护，完善并严格执行品牌标志使用授权制度。2022 年宝武入选“中央企业品牌建设能力 TOP30”，位列第 22 位，较上一年度提升 21 位，受到国务院国资委通报表扬。

Brands are an intangible asset and wealth of an enterprise, so we should work persistently to defend and add our brand value. Baowu has established and improved a legal protection system for brands and constantly strengthened the protection for trademarks, brand names and domain names. Moreover, we have intensified efforts to monitor brand and trademark infringement and protect brand rights. Besides, we have enhanced the protection for brand operations, and improved and strictly executed the authorized system for the use of brand marks. In 2022, Baowu was selected in the list of “TOP 30 Central SOEs with the Best Brand-building Ability” and ranked 22<sup>nd</sup>, up 21 places from the previous year, receiving a notice of commendation from the SASAC of the State Council.



宝钢股份打造第十届中国花博会“宝钢花园”，荣获“最具人气奖”。

Baosteel built a “Baosteel Garden” for the 10<sup>th</sup> China Flower Expo and won the “Most Popular Award”.



# 绘就员工幸福画卷

Drawing a picture of happiness for employees

人才兴则企业兴，人才强则企业强。宝武全面深入实施人才强企，深化人才发展体制机制，持续打造人才高地；坚持成果共享，落实员工权益保障，打造开放共赢的企业发展氛围，构筑“有钱、有闲、有趣”的美好生活，凝聚全体员工“同一个宝武”归属感，提升员工获得感、幸福感、安全感。

An enterprise can be thriving and strong only when its personnel are thriving and strong. Baowu has comprehensively and thoroughly implemented the strategy of making the enterprise stronger through talents, deepened the talent growth system and mechanism, and continued to build a highland for talents. We have insisted on sharing the achievements and taken concrete measures to protect the employees' rights and interests to foster an open and win-win enterprise development atmosphere, create a good life with "wealth, leisure and interest", and rally the sense of belonging of "One Shared Baowu" for all staffs to enhance their sense of gain, happiness and security.

## 保障员工权益

Protecting the rights and interests of employees

### 平等雇佣

Equal employment

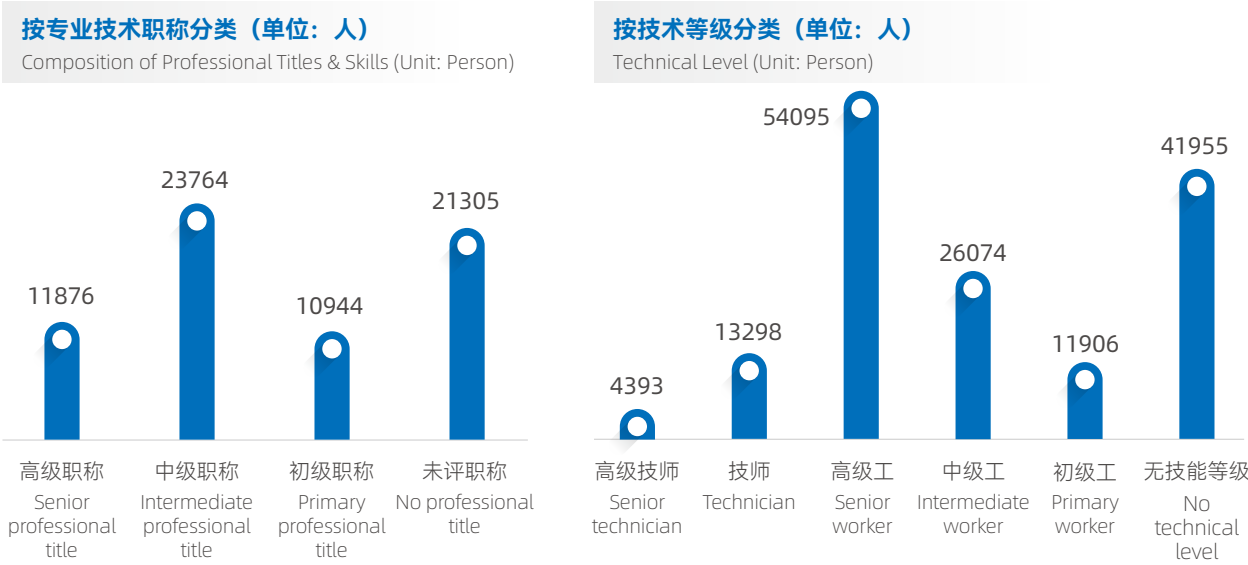
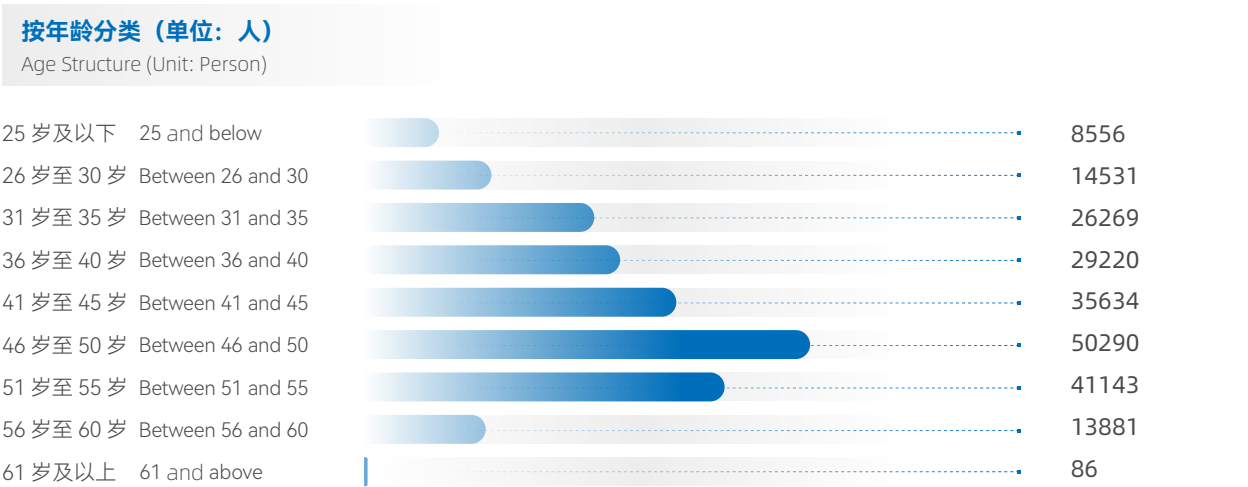
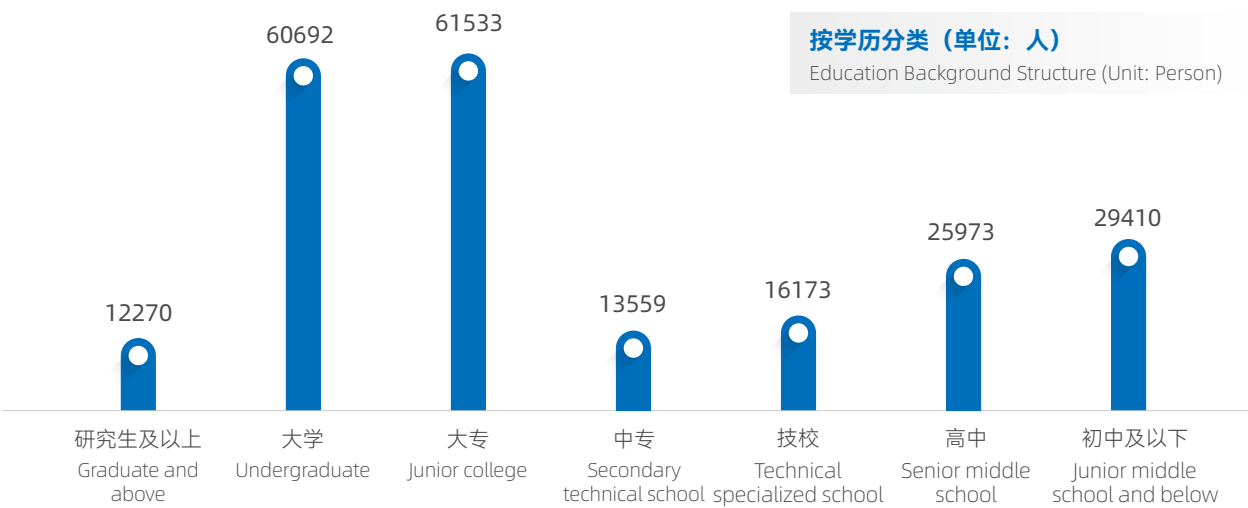
宝武严格遵守《劳动法》《劳动合同法》等法律法规，坚持平等雇佣原则，倡导多元化和机会平等，反对任何形式的强迫劳动和骚扰虐待，依法与员工签订劳动合同，按照规定缴纳社会保险，持续完善劳动用工管理。截至 2022 年底，员工总数为 219610 人。

Baowu strictly abides by the *Labor Law*, *Labor Contract Law* and other laws and regulations, adheres to the principle of equal employment, advocates diversity and equal opportunity, opposes any form of forced labor, harassment and abuse, signs labor contracts with employees according to the law, and pays social insurance in accordance with regulations to continuously improve labor and employment management. By the end of 2022, there were 219610 employees in the Group Corporation.



截至 2022 年底  
By the end of 2022

员工总数为  
**219610** 人  
there were **219610** employees in the Group Corporation



注：以上数据不含托管单位昆钢公司和重钢集团。  
Note: The above data excludes that of the units that are managed by Baowu upon entrustment, i.e. Kunming Iron & Steel and Chongqing Iron & Steel Group.





## 案例 CASE

### 积极响应国家号召，带动地方就业

Respond to the national call to promote local employment

2022 年，宝武贯彻落实国务院国资委关于促进高校毕业生就业的相关要求和工作部署，不拘一格广纳贤才，为“稳岗扩就业”作出了应有的贡献。启动宝武全球校招“国宝生”计划，开展“1+6”线上系列主题宣讲活动，为高校毕业生提供丰富的就业岗位；组织宝武旗下各一级子公司提供近 1000 个就业岗位，并与 3238 名高校毕业生签订三方就业协议；积极参与西藏、青海、新疆“三地”举办的线上专场招聘活动，共有 50 余名西藏、新疆籍学生入职宝武；在乡村振兴帮扶对口县举办了多场专场招聘活动，宝武碳业与宁海县职业高级中学合作开展为期 2 年“授渔”订单班，毕业后优先录用就业。

In 2022, Baowu implemented the relevant requirements and work deployments of the SASAC of the State Council on the employment of university or college graduates, recruited able people without overstressing qualifications, and made a due contribution to “stabilizing and expanding employment”. Baowu’s “Graduates of National Importance” program for global campus recruitment was initiated and the “1+6” online themed publicity campaign series were carried out to provide more jobs for university or college graduates. Baowu organized its first-tier subsidiaries to offer nearly 1000 posts and signed tripartite employment agreements with 3238 graduates. Moreover, we took an active part in the online special recruitment events for graduates from Tibet, Qinghai and Xinjiang, and more than 50 graduates native to Tibet and Xinjiang were employed by Baowu. We also held many special recruitment events in the paired counties for rural revitalization assistance. Baowu Carbon held a two-year “Teach the Fishing” Order Class in cooperation with Ning’er County Vocational High School, and students from the class could be given preference in employment after graduation.



宝武全球校招“国宝生”海报

The poster of Baowu’s “Graduates of National Importance” program for global campus recruitment



9 名宁海籍学生正式入职宝武碳业浙江宝旌

9 students native to Ning'er County were officially employed by Zhejiang Baojing under Baowu Carbon

## 薪酬福利

### Salary and welfare

2022 年，宝武聚焦发展第一要务、创新第一动力、人才第一资源，合理有序匹配激励资源，持续营造强绩效文化氛围，深化中长期激励机制，强化科技创新激励保障，不断挖掘薪酬激励效能，积极构建与世界一流企业相契合的收入分配新格局。

In 2022, Baowu emphasized the role of development as the primary task, innovation as the primary engine, and talent as the primary resource. We allocated incentive resources in a reasonable and orderly way, continued to create a cultural atmosphere of highlighting performance, deepened the mid- and long-term incentive mechanism, and strengthened to guarantee scientific and technological innovation incentives to keep tapping into the efficiency of salary incentives and actively build a new pattern for income distribution in harmony with our goal of building a world-class enterprise.

严格执行国家和地方工资支付政策规定，坚持市场化薪酬激励导向，坚持“既要尽力而为，又要量力而行”激励资源投放，坚持分层分类精准激励，充分激发员工工作活力。

We strictly enforced the regulations of national and local salary payment policies, insisted on market-oriented salary incentives, invested incentive resources under the principle of “giving the maximum within the limit of our resources”, and implemented hierarchical and classified targeted incentives to fully arouse the employees’ vitality and momentum.

#### 员工薪酬管理

Employees’ salary management

#### 企业年金计划

Enterprise annuity plan

高度关注企业年金运作情况，督促受托机构及时采取措施，有效防范投资风险，全力保障年金资产安全，全年投资收益大幅跑赢企业年金市场大盘。

We highly valued the operation of the enterprise annuity, supervised and urged the trustee organization to take timely measures, effectively guard against investment risks, and spared no effort to ensure the safety of annuity assets. In this way, our annual investment income greatly outperformed the enterprise annuity market.

#### 员工假期保障

Guarantee for employees’ leaves

严格执行《劳动法》《劳动合同法》《职工带薪年休假条例》等法律法规要求，切实保障职工正常休息休假，为公司职工增加 1 天带薪休假。

We strictly implemented the requirements of the Labor Law, Labor Contract Law, Regulations on Paid Annual Leave for Employees and other laws and regulations to effectively protect the normal rest and leave of employees, and provided employees with an extra day of paid leave.

## 民主管理

### Democratic management

宝武实施国有资本投资公司职代会优化试点，对“资本运作层”职代会进行重新设计，完善与管控模式相适应的企业民主管理体系；按照会期衔接、人员衔接、工作衔接模式，将集团公司职代会与集团公司党委全委会、年度工作会统筹举办，提高了职代会运行的效率、效能和效果，有效保障了职工代表的知情权、参与权、表达权、监督权。2022 年，集团公司范围内的所有独立用工单位均经过平等协商签订集体合同，集体合同覆盖率达 100%。

Baowu has set up pilots for optimizing the employees' congress of a national capital investment company, re-designed the employees' congress at the capital operation level, and improved the enterprise's democratic management system fitting the management and control mode. By dovetailing the meeting date, personnel and work, we held the employees' congress of the Group Corporation together with the plenary session of the Party committee and the annual working conference of the Group Corporation, thereby enhancing the efficiency, effectiveness and effects of the operation of the employees' congress and effectively guaranteeing the right to know, to participate, to express and to supervise of the employees' representatives. In 2022, all independent employers within the Group Corporation signed collective contracts through equal negotiation, and the coverage rate of collective contracts reached 100%.



2022 年 1 月 14 日，宝武召开一届五次职代会，团结凝聚广大职工为实现企业高质量发展建言献策、建功立业。

On January 14, 2022, we held the fifth session of the First Employees' Congress to unite our employees in offering advice and making contributions to the realization of the high-quality development of Baowu.

## 职业健康

### Occupational health

通过新入职大学生培训、在岗职工全员轮训、班组学习、“健康宝武”公开课等多种形式和载体，提升职工健康素养；评选首届宝武“健康达人”202 名，示范带动更多职工热爱健康、追求健康、促进健康。围绕身体健康和心理健康，推进落实“健康乐学”“健康乐动”“健康乐心”“健康乐习”“健康乐享”等五个行动计划，有力构建了全方位全链条全周期的职工健康管理体系。

We have enhanced the employees' health literacy through many forms and carriers such as the training for newly recruited college students, rotation training for all staff on the job, team and group learning, and the “Healthy Baowu” open class. We have selected the first batch of 202 Baowu “Healthy Experts” to set an example for more employees and guide them to love, pursue and promote health. Focusing on physical and psychological health, we have propelled five action plans, including “healthy for funny learning”, “healthy for funny exercise”, “healthy for funny heart”, “healthy for funny practice” and “healthy for funny enjoyment”, strongly building an employees' health management system covering all dimensions, the whole chain and the full cycle.

## 关爱女性员工

### Caring for female employees

凝聚“她”力量，逐梦新征程。宝武积极为女职工搭建创新交流、共同成长的平台。2022 年，集团公司工会女职工委员会开展“金玫瑰”奖章和奖状评选表彰活动，共 21 名个人和 12 个集体获奖。

Pooling the Strength of Females to Pursue Dream in the New Journey, Baowu has actively built platforms for innovation exchanges and the common growth of female employees. In 2022, the Female Employees' Committee of the Labor Union of the Group Corporation conducted the selection and commendation activities of “Golden Rose” medals and certificates, awarding 21 individuals and 12 collectives.



2022 年 3 月 8 日，宝武召开“凝聚她力量 逐梦新征程”——纪念“三八”国际妇女节 112 周年主题活动暨巾帼创新论坛，并表彰了女职工先进集体和个人。

On March 8, 2022, Baowu held the themed commemoration for the 112<sup>th</sup> Anniversary of International Women's Day on March 8 and the Females' Innovation Forum themed “Pooling the Strength of Females to Pursue Dream in the New Journey”, and commended the advanced collectives and individuals of female employees.

## 关心少数民族职工

### Caring for ethnic minority employees

八钢公司持续深入开展“民族团结一家亲”和民族团结联谊活动，推进民族团结结对子互助。2022 年，八钢公司共结成民族团结结对子 3943 个，结对覆盖率达到 100%；结合“我为群众办实事”项目，共为身边职工办实事好事 827 件。

Bayi Iron & Steel has continued to deeply carry out the “ethnic unity as a family” and ethnic unity fellowship activities, and promoted the ethnic unity by pairing assistance. In 2022, Bayi Iron & Steel formed 3943 ethnic unity pairs, with pairing coverage of 100%. The “Doing Practical Things for the Masses” project provided 827 times of practical assistance for the employees around us.



八钢公司开展“民族团结一家亲”活动

Bayi Iron & Steel carried out the “ethnic unity as a family” activity



八钢公司开展民族职工法制培训

Bayi Iron & Steel conducted legal training for ethnic employees



# 助力员工发展

## Supporting employee development

### 人才培养体系 Personnel cultivation system

宝武高度重视人才高地建设，加快推动组织及人力资源体系建设；着力推进管理人才、高科技人才、高技能人才、高潜核心人才、高效总部员工队伍建设；强化培训网络平台建设，多维度策划、多渠道拓展线上培训，为打造宝武人才高地、建设世界一流企业提供坚强的人才保证。

Baowu attaches great importance to the construction of a talent highland, accelerates the building of organizational and human resources system, and focuses on building a management talent team, high-tech talent team, high-skilled talent team, high potential and core talent team, and efficient headquarters staff team. Moreover, we strengthen the building of online training platforms, plan and expand online training from multiple dimensions and through multiple channels, providing strong talent support for Baowu to build a talent highland and a world-class enterprise.

### 职业发展通道 Career promotion channel

我们为员工提供技术业务与管理序列的双通道发展机制：为技术人才设立“首席师”制度；实施核心人才培养工程，打造“三层三型”人才梯队（集团公司战略研究型宝武科学家、子公司专业型首席 / 专家、基层技术型带头人）；建立技术业务与管理序列的流动机制，打通“H”型员工职业发展通道。

We provide our employees with a dual-channel development mechanism of technical business and management sequence. Specifically, we have established a “Chief Engineer” system for technical talents, implemented core talent cultivation projects to build a “three-layer and three-type” talent echelon (strategic research-oriented Baowu scientists of the Group Corporation, professional chiefs/experts of subsidiaries, and leading technical staff at the grass-roots level), and established a flowing mechanism for technical business and management sequence to open the “H-shaped” career promotion channel for employees.

我们还为员工提供自我实现的更多可能。为员工提供钢铁及相关制造业与服务业、产业不动产业务、产业金融业务等多种职业发展方向。通过内部职业流动的竞争性平台，员工可以得到充分的能力施展机会。员工将有机会从事援藏、援青、援滇的干部挂职工作；有机会参与“博士生服务团”，赴企业担任重要岗位；有机会赴政府机构挂职锻炼或是岗位调动；有机会远赴海外在国际组织中担任职务，开拓海外视野。

In addition, we have provided our employees with more possibilities for self-actualization and multiple career development directions in steel industry and relevant industries of manufacturing, services, industrial real estate business, and industrial finance business. The employees can gain the opportunity to give full play to their ability via the competitive platform of internal occupational mobility. They can serve as temporary cadres for aiding Tibet, Qinghai and Yunnan, participate in the “Service Group with Doctoral students” to take important positions in enterprises, go to government agencies for temporary training or post transfer, and go abroad to take positions in international organizations to expand their overseas horizons.

### 员工培训体系 Employee training system

#### 干部队伍建设

Cadre team building

持续开展管理人员履职培训，推进高潜人才培养。2022 年，选调 1370 余名干部参加外部培训，全集团公司各级管理干部培训投入共 2705.24 万元。

We have continued to provide training for the management on performing their duties to cultivate more high potential talents. In 2022, we selected and transferred more than 1370 cadres to attend external training and invested a total of RMB 270524 million in the training of management cadres at all levels of the Group Corporation.

#### 高科技人才培养

Cultivation of high-tech talents

针对重点专业族群，实施专业培训。2022 年全集团公司技术业务人员培训投入共 6177.89 万元，共计 218.73 万人次参与培训。

We have conducted professional training for key professional groups. In 2022, the Group Corporation invested a total of RMB 61.7789 million in the training of technical personnel and 2.1873 million person-times participated in the training cumulatively.

#### 高技能人才培养

Cultivation of high-skilled talents

开展一线员工全员轮训，提升作业长、班组长现场基础管理水平，推进宝武职业技能等级认定体系建设，落实高技能人才遴选推优。全集团公司操作技能人员培训投入共 10650.77 万元，共计 383.99 万人次参与培训。

We have carried out rotation training of all frontliners, improved the basic on-site management level of the operation heads and shift leaders, promoted the building of Baowu’s professional skill level identification system, and selected and recommended the best high-skilled talents. The Group Corporation invested a total of RMB 106.5077 million in the training of skilled operators and 3.8399 million person-times participated in the training cumulatively.

#### 生态圈共建人才培养

Cultivation of talent for co-building the ecosystem

完成 53 人挂职锻炼（岗位见习）中期跟踪和总结分析，完成 1310 人次跨单位交流实习；积极推动“乡村振兴”人才培养工作，全年累计培训基层干部、乡村振兴带头人、专业技术人才等 2.29 万人次。

We have finished the interim tracking and summary analysis for 53 persons assuming a temporary post for personal training and development (job probation) , and the cross-unit exchanges and internships for 1310 person-times. We have actively promoted the cultivation of “rural revitalization” oriented talents, and trained for 22900 person-times among community-level cadres, rural revitalization foregoers, and professional and technical personnel.



## 落实安全生产

### Ensuring workplace safety

#### 安全生产管理体系

##### Workplace safety system

宝武坚持人民至上、生命至上，践行“违章就是犯罪、隐患就是事故”的安全管理理念，系统提升安全生产管理体系能力。制定下发《2022 年度安全生产工作要点》《2022 年安全生产管理评价方案》，完善安全生产责任体系与管理机制；签订《2022 年度安全生产与消防工作责任书》，落实企业安全生产主体责任，形成在专业化整合过程中行之有效的矩阵式安全管理模式。

Baowu insists on the principle of “people and life foremost” and the workplace safety management concept of “violation is a crime and hidden danger is an accident” to systematically improve the workplace safety management system and ability. We established and issued the *Key Work Points in Workplace Safety in 2022 and the Evaluation Plan for Workplace Safety Management in 2022* to improve the workplace safety responsibility system and management mechanism. We signed the *Letter of Responsibilities for Workplace Safety and Fire Prevention in 2022*, implemented the primary responsibility for the enterprise’s workplace safety, and formed an effective matrixed safety management model in the process of professional integration.

#### 安全应急管理机制

##### Safety emergency management mechanism

宝武坚守预防为主、预防与应急相结合的原则，全力防范和减少突发事件的发生，控制、减轻和消除突发事件引起的社会危害，严保员工和人民生命财产安全。出台《中国宝武冶金煤气系统安全管理指南》，提升冶金煤气系统全方位、全天候、精准化、智能化的安全感知、监测、预警和应急处置管理水平。

Adhering to the principle of prevention first and combining prevention with emergency response, we have made every effort to prevent and reduce the occurrence of emergencies, control, mitigate and eliminate the social hazards caused by emergencies, and strictly protect the safety of life and property of employees and people. We unveiled the *Metallurgical Gas System Safety Management Guide of China Baowu* to improve the all-round, all-weather, accurate and intelligent safety perception, monitoring, early warning, and emergency management level of the metallurgical gas system.

#### 安全宣贯与培训

##### Publicity, implementation and training on safety

宝武推进学习贯彻习近平总书记关于安全生产重要论述，开展“落实全员安全生产责任制”劳动竞赛；开设“安全生产大讲堂”专区并组织各单位在线学习；开展矿山安全管理网络培训与职业卫生管理网络培训，4000 名安全管理人员参加网上培训；完成特种作业类初 / 复证培训 3176 人次，特种设备类初 / 复证培训 641 人次，其他认证类培训 1825 人次；3229 人次接受了安全内容直播面授学习；举办公开课程，272196 人次参加学习；举办专项班，192346 人次参加学习。

Baowu increased efforts to learn and implement the important remarks of General Secretary Xi Jinping on workplace safety. We carried out the “Implement Accountability System for Workplace Safety of All Staff” labor competition, set up a special column called “Workplace Safety Lecture”, and organized all units to attend the online study. We held online training on mine safety management

#### 隐患排查与专项整治

##### Hidden danger investigation and special rectification

and occupational health management, with 4000 safety managers attending the training. We finished the training for 3176 person-times on applying for the special operation certificates for the first time or second time, training for 641 person-times on applying for the special equipment certificates for the first time or second time, and the training for 1825 person-times on employees applying for other certificates. 3229 person-times accepted the face-to-face safety instruction through live-streaming. We held open courses with 272196 person-times taking the course. We also set up special classes with 192346 person-times taking the course.

宝武聚焦安全生产重要领域和安全风险较大的生产关键环节，实行全覆盖大检查，共发现问题 2231 项，2022 年完成整改 2178 项，其余按计划整改推进；印发《2022 年安全督导工作方案》，全面深化安全专项督导，着力解决薄弱环节和突出问题，发现隐患 1028 项，完成整改 915 项，其余按计划整改推进。

Baowu has conducted a fully-covered overall inspection by focusing on the important areas of workplace safety and key production links with greater safety risks, in which 2231 issues were found. In 2022, 2178 items were rectified and the rest were under rectification as planned. We issued the *Safety Supervision Work Plan 2022* to fully deepen the special supervision for workplace safety. We redoubled efforts to address the weak spots and prominent problems. 1028 hidden dangers were found, 915 were rectified, and the rest were under rectification as planned.

## 营造幸福生活

### Creating a happy life

2022 年 12 月 23 日，宝武迎来第二个“公司日”，一系列活动进一步凝聚了“同一个宝武”共识，激发广大员工迎难而上的自信心和干事创业的精气神，汇聚起全体宝武人练好内功再出发的无穷动力。

On December 23, 2022, Baowu saw its second “Company Day”. A series of activities further built the consensus of “One Shared Baowu”, aroused the confidence of the employees to rise to the challenge, motivated the employees to make achievements, and gathered the endless power of all Baowu people to get skilled before forging ahead.



2022 年 12 月 23 日，宝武开展“公司日”活动。

On December 23, 2022, Baowu carried out the “Company Day” activity.



## 困难员工帮扶

### Assistance for employees in difficulties

2022年，全集团公司开展各类慰问119565人次，“送温暖”金额6779.37万元。其中，日常帮困111306人次，帮困金额5015.09万元；医疗帮困6797人次，帮困金额1459.98万元；助学帮困1462人次，帮困金额304.30万元。

In 2022, the Group Corporation conducted various visits to 119565 person-times with a “Supporting Needy People” investment of RMB 67.7937 million in total, in which, daily assistance and support were provided to 111306 person-times in the sum of RMB 50.1509 million, medical assistance and support were provided to 6797 person-times in the sum of RMB 14.5998 million, and study assistance and support were given to 1462 person-times in the sum of RMB 3.043 million.



2022年 集团公司开展各类慰问

**119565** 人次

“送温暖”金额

**6779.37** 万元

In 2022, the Group Corporation conducted various visits to **119565** person-times with a “Supporting Needy People” investment of RMB **67.7937** million in total

## 关爱员工生活

### Caring for employees' life

聚焦职工多样化、个性化的“三有”（有钱、有闲、有趣）需求，积极为员工创造舒适温馨的办公环境，开展后勤物业改善。组织开展普及性、群众性，多平台、多载体的各类文体赛事活动，增进员工交流、促进团队融合，营造健康积极的工作生活氛围，不断提升员工的参与感、获得感、认同感和幸福感。

In consideration of the diversified and personalized demands on “Three Haves” (wealth, leisure and interest) of the employees, we have actively created a comfortable and cozy office environment for the employees and improved the logistics and property services. We have organized widespread and people-oriented cultural and sports activities via various platforms and carriers to promote employees' communication and team integration, foster a healthy and positive work and living atmosphere, and continuously improve the employees' senses of participation, gain, identity and happiness.



集团公司开办“三有”托育园

The Group Corporation set up a “Three Haves” Nursery



宝钢金属开展女神节活动

Baosteel Metal carried out activities on International Women's Day



宝钢包装组织员工徒步走团队活动

Baosteel Packaging organized the staff walking team activity



八钢公司开展全员健身活动

Bayi Iron & Steel conducted the fitness activity for all staff



## 筑强产业链 生态圈

### Reinforcing the industrial chain and ecosystem

宝武积极践行“共建产业生态圈推动人类文明进步”的使命，立足于提供钢铁及先进材料综合解决方案和产业生态圈服务的高科技企业定位，稳步推进战略迭代，持续优化产业结构布局；高质量推进战略合作与联合重组、专业化整合，携手客户、供应商等生态圈伙伴共建共享蓬勃发展的产业生态圈，不断提高产业生态圈服务能力。

Baowu actively practices its mission of “jointly build an industrial ecosystem and promote the progress of human civilization”, takes root in its positioning of a high-tech enterprise to provide integrated solutions to steel and advanced materials and industrial ecosystem services takes steady steps in promoting strategic generation upgrading, and continues to optimize the industrial structure and layout. We promote strategic cooperation, consolidation and reorganization, and professional integration to collaborate with our customers, suppliers and other ecosystem partners to jointly build and share a booming industrial ecosystem and constantly increase our service ability for the industrial ecosystem.

## 推进联合重组 整合协同

### Advancing consolidation, reorganization, integration and collaboration

与中钢集团、新钢集团联合重组，生态圈进一步扩容、影响力进一步提升。通过扎实推动专业化整合，系统盘点存量项目，持续推进资产关系、业务关系、管理关系“三统一”，2022 年“应整尽整率”为 100%；整合融合协同效益超 35 亿元。

We have consolidated and reorganized Sinosteel and Xisteel to further expand the ecosystem and increase our influence. With concrete steps in promoting professional integration, we have systematically taken stock and continued to promote the unification of the asset, business and management relationships. In 2022, the “maximum integration rate” reached 100% and the coordinated benefits created by integration exceeded RMB 3.5 billion.

以“同一个宝武”为目标，对兼并重组企业实施业务、技术、管理的全覆盖，重组后的企业经营状况得到极大改善，员工获得感、满意度、认同感明显提升。

With the goal of “One Shared Baowu”, we implemented the full coverage of business, technology and management for the merged and reorganized enterprises. As a result, the operating conditions of the reorganized enterprises were greatly improved, and employees’ senses of gain, satisfaction and identity were enhanced.



2022 年“应整尽整率”为

**100** %

整合融合协同效益超

**35** 亿元

In 2022, the “maximum integration rate” reached **100%** and the coordinated benefits created by integration exceeded RMB **3.5** billion

## 产城融合发展

### Integrated development of industry and city



八钢公司消纳城市污水  
处理厂生活污水

**3695** 吨

Bayi Iron & Steel consumed **3695** tons of domestic sludge from the urban sewage treatment plant

宝武资源产城融合改造  
工程投资

**3000** 余万元

Baowu Resources invested more than RMB **30** million for industry-city integration renovation project

宝武坚持走“与城共融”之路，立足“一基五元”的特点及优势，积极探索创新不同行业产城融合新模式。

On the path of “integration with the city”, Baowu has actively explored new models for the integrated development of industry and city in different industries based on the characteristics and advantages of “One Basis and Five Industries”.

#### 八钢公司

Bayi Iron & Steel

积极消纳城市污水和固体废物，坚持利用烧结炉窑处置头屯河区城市污水处理厂的城镇污泥，2022 年消纳八钢公司生活区城镇污水 64 万平方米，消纳城市污水处理厂生活污水 3695 吨。

Bayi Iron & Steel made active efforts to consume the urban sewage and solid waste, and disposed the municipal sludge from the urban sewage treatment plant of Toutunhe District by using the sintering furnace. In 2022, 640000 square meters of urban sewage in the living area of Bayi Iron & Steel and 3695 tons of domestic sludge from the urban sewage treatment plant were consumed.

#### 宝武资源

Baowu Resources

武钢资源鄂州球团以产城融合为目标，坚持让绿于民、还景于民，与城市共享“绿廊”，投资 3000 余万元，开启主入口产城融合改造工程，打造一步一景、步移景异的现代化城市工厂。

Ezhou Pelletizing of Wugang Group Resources has insisted on the goal of pursuing the integrated development of industry and city and sharing the “Green Corridor” with the city to bring the green landscape back to people. It invested more than RMB 30 million to start the renovation project for industry-city integration at the main entrance to build a modern urban plant that brings visitors the experience of “appreciating different landscape in every different zone”.

#### 宝武环科

Baowu Environment and Resource Technology

围绕打造“无废钢厂+城市钢厂+无废城市”服务模式，从“服务钢厂”向“服务城市”延伸，努力培育和形成特色亮点和有益经验。2022 年，入选上海市第一批现代环境治理体系试点名单。

Around the service model of “waste-free steel mill + urban steel mill + waste-free city”, it extended from “serving the steel mill” to “serving the city” and tried to foster and form features, highlights and beneficial experiences. In 2022, Baowu Environment and Resource Technology was selected in the list of Shanghai’s first batch of modern environmental governance system pilots.



## 保障客户权益

### Protecting rights and interests of customers

宝武坚持从客户需求出发，不断完善客户服务管理体系，优化客户服务细节，全面提升客户体验。

Persisting on giving priority to customers' demands, Baowu keeps improving the customer service management system and optimizing the details in serving customers to fully improve the customer experience.

#### 太钢集团

TISCO

通过线上授课探讨、线下用户现场服务等方式对经销、使用太钢集团钢材产品的 72 家用户 500 多人进行了产品、标准、技术和业务等方面的常规技术指导和培训。

TISCO provided regular technical guidance and training on products, standards, technologies and services for more than 500 people from 72 users that distributed and used the steel products of TISCO through online teaching and discussion and onsite services for users.

#### 欧冶云商

Ouyeel

积极进行广告法普及宣传与自查，落实合规宣传；加强信息安全管理，强化客户信息保护能力；积极响应客户诉求，2022 年客户投诉解决率 100%。

Ouyeel actively carried out publicity and self-examination of the Advertising Law, and implemented compliance publicity. It enhanced information security management and the ability to protect customers' information, and actively responded to the customers' demands. In 2022, the customer complaint resolution rate was 100%.

#### 西藏矿业

Tibet Mineral Development

制定《用户异议处理管理程序》，落实用户异议投诉立案、调查、处理、结案等处理流程，提高用户满意度。

Tibet Mineral Development prepared the *Management Procedures for Users' Objections* to implement the processing flows of registration, investigation, handling and settlement of users' objections and enhance users' satisfaction.

## 打造负责任供应链

### Building a responsible supply chain

宝武秉承诚信经营、公平竞争和公平贸易原则，依托旗下欧冶工业品建设全新工业品供应链生态平台，落实集中采购、公开采购和阳光采购，实现智慧化采购；完善供应商管理相关制度，动态优化供应商的准入、评价、退出机制；强化供应商社会责任管理，在供应商队伍中大力推行绿色低碳理念，打造绿色环保的采购供应链和负责任供应链。

Adhering to the principles of integrity management, fair competition and fair trade, Baowu has implemented centralized procurement, open procurement and transparent procurement and achieved intelligent procurement by relying on new supply chain and ecological platform for industrial products made by Obei. We have improved the relevant supplier management systems to dynamically optimize the access, evaluation and exit mechanisms of suppliers. We have strengthened the management of suppliers' social responsibility and advocated the green and low-carbon concepts among suppliers to build a green and environmentally-friendly procurement supply chain and a responsible supply chain.

## 建设全新工业品供应链生态平台

### Building a new supply chain and ecological platform for industrial products

集团公司旗下欧冶工业品为整合宝武采购资源和能力组建而成，致力于建设全新工业品供应链生态平台。为集团公司和生态圈伙伴提供稳定、高效、规模化的集采供应链服务，提供线上线下一体化、数智化的供应链生态服务。

Obei under the Group Corporation was established for integrating Baowu's purchasing resources and abilities. It is committed to building a new supply chain and ecological platform for industrial products, providing centralized procurement and supply chain services that are stable, efficient and scaled for the Group Corporation and the ecosystem partners, and rendering online-offline integrated, digital and intelligent ecological services for supply chains.

### 构建低碳供应链

Building a low-carbon supply chain

编制工业品供应链“双碳”行动方案，开展绿色低碳冶金装备技术研究，总结梳理 29 项低碳冶金装备及技术。推进全周期绿色低碳供应链管理，形成引导供应商开展碳核算工作机制。研究仓储物流环节碳排放核算标准规则，完成对各钢铁基地仓储物流环节碳排放调查。全面启动“欧贝零碳”平台建设，为欧贝生态伙伴提供工业品产品碳足迹计算服务，构筑了行业领先的工业品碳核算规模化、平台化、生态化服务能力。

We worked out the "dual-carbon" action plan for the supply chain of industrial products, researched the green and low-carbon metallurgical equipment and technologies and summarized 29 of them. We promoted green and low-carbon supply chain management covering the full cycle, and developed the working mechanism to guide the suppliers to implement carbon accounting. We researched the carbon emissions accounting standards and rules in warehousing and logistics, and finished the survey on carbon emissions from the warehousing and logistics process of the steel bases. The building of the "OBEI Zero Carbon" platform was initiated on a broad scale, providing carbon footprint calculation services for industrial products to OBEI eco-partners as well as the capability of industry-leading, scaled, platform-based and ecological carbon accounting services for industrial products.

### 推动数字化运营

Promoting digital operation

2022 年以欧贝物流 4SP1.1 升级上线为契机，全面推进从传统物流向智慧物流转变，为物流运营的全国统一管理、统一调度、统一面客创造了条件，也为平台“四流耦合”、线上线下业务贯通以及打通物流“最后一公里”奠定了基础。

In 2022, taking the launch of the upgraded version of Obei Logistics 4SP1.1 as an opportunity, we transformed from traditional logistics to intelligent logistics in full swing, setting the stage for the nationwide unified management, scheduling and customer service of logistics operation and laying a foundation for the "four flow coupling" of the platform, the interconnection of online and offline services, and opening up the "last kilometer" of logistics.

欧贝零碳  
OBEI Zero Carbon



**924** 家  
服务企业数  
924 enterprises  
receiving services

**1992** ↑  
服务产品数  
1992 products  
receiving services

**1222** ↑  
产品碳足迹报告  
1222 product carbon  
footprint reports

**3587** ↑  
零碳模型数  
3587 zero-carbon  
models

碳足迹报告突破  
**1000** 份  
More than **1000** carbon  
footprint reports

# “授渔” 助力乡村振兴

## Contributing to rural revitalization through the “Teach the Fishing” Plan

宝武深入贯彻落实习近平总书记系列重要指示，认真落实党中央、国务院决策部署，按照国家乡村振兴局、国务院国资委社会责任局工作要求，全面深入实施乡村振兴“授渔”计划，聚焦产业振兴、人才振兴、文化振兴、生态振兴、组织振兴五个方面，推进构建共建产业生态圈助力乡村振兴工作格局；积极开展援疆援藏援青工作，扎实推进农村农业现代化建设，谱写乡村振兴新篇章。宝武连续四年被国务院扶贫开发领导小组、中央农村工作领导小组考核评价为最高等次“好”，排名位列中央企业前 20%。

Baowu has comprehensively deepened the implementation of the “Teach the Fishing” Plan for rural revitalization by thoroughly implementing a series of important instructions of General Secretary Xi Jinping, earnestly accomplishing the decisions and plans of the Central Committee of the CPC and the State Council, and following the work requirements of the National Rural Revitalization Administration and the Bureau of Social Responsibility of the SASAC of the State Council. Centering on the revitalization of industry, talent, culture, ecology and organization, we have made efforts to build the work pattern of boosting rural revitalization by jointly building an industrial ecosystem, actively provided assistance for Xinjiang, Tibet and Qinghai, and made solid progress in rural and agricultural modernization to write a new chapter of rural revitalization. Baowu has been evaluated as “excellent” (the highest level) by the Poverty Alleviation and Development Leading Group of the State Council and the Central Rural Work Leading Group for four consecutive years, ranking top 20% among central SOEs.

### 宝武乡村振兴定点帮扶县

Baowu provides the designated assistance for rural revitalization in the following counties

云南省宁洱县、云南省镇沅县、云南省江城县、云南省广南县、湖北省罗田县、广西壮族自治区上林县、内蒙古自治区翁牛特旗

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 county, Inner Mongolia Autonomous Region

## 加强组织领导

### Strengthening organizational leadership

集团公司领导班子成员深入定点帮扶县调研考察，实现定点帮扶县全覆盖。召开乡村振兴工作领导小组会议，印发《中国宝武钢铁集团有限公司 2022 年定点帮扶和对口支援年度计划》。制定印发《中国宝武定点帮扶工作管理办法》，进一步完善“统一管理、分级负责、上下联动”工作机制。

Leading members of the Group Corporation visited all of the designated assistance counties for survey and investigation. We held the Meeting of the Leading Group for Rural Revitalization and issued the 2022 Annual Plan for Designated and Paired Assistance of China Baowu Steel Group Corporation Limited. We also formulated and issued the Management Measures for Designated Assistance Work of China Baowu to further improve the working mechanism of “unified management, layered accountability, and coordination at different levels”.

## 选派优秀干部

### Selecting and assigning excellent cadres

按期完成普洱市、罗田县和上林县三地 4 名挂职帮扶干部的压茬交接工作；完成新任干部备案和任前培训，落实任期届满干部的回任安排；8 名挂职帮扶干部和 5 名驻村第一书记接续奋斗，确保年度工作任务有序衔接和高质量完成。

The handover work of four temporary assistance cadres in Pu'er City, Luotian County and Shanglin County was completed as scheduled. The record filing and pre-appointment training of the new cadres were finished and the cadres whose terms expired were arranged to return to their original posts. Eight temporary assistance cadres and five first secretaries of villages continued to devote themselves to the assistance work to ensure the orderly connection and high-quality completion of the annual tasks.

## 促进乡村振兴

### Promoting rural revitalization

### 严格落实“四个不摘”要求 Strictly implementing the requirements of “Four Maintains”

2022 年，宝武共投入帮扶资金 1.25 亿元，同比增长 10%，其中无偿帮扶资金 9106.2 万元；引进帮扶资金 9564 万元，同比增长 17%，其中有偿帮扶资金 8449 万元；持续关注、倾斜支持国家乡村振兴重点帮扶县广南县的资金投入，投入帮扶资金 2760 万元，引进帮扶资金 2010.79 万元，均高于 2021 年水平。

In 2022, Baowu invested a total of RMB 125 million in assistance, a year-on-year increase of 10%, including RMB 91.062 million in free assistance. We introduced RMB 95.64 million of assistance funds, with a year-on-year growth of 17%, including RMB 84.49 million for paid assistance. In addition, we continued to pay attention to and incline to the fund support for Guangnan County, a key assistance county for national rural revitalization, by investing RMB 27.6 million in assistance funds and introducing RMB 20.1079 million in assistance funds, both higher than those in 2021.

#### 名词解释

Terms interpretation

“四个不摘”：摘帽不摘责任、摘帽不摘政策、摘帽不摘帮扶、摘帽不摘监管

“Four Maintains”：help the impoverished out of poverty while maintaining responsibility, maintaining policy, maintaining assistance, and maintaining supervision



2022 年  
In 2022

共投入帮扶资金  
**1.25** 亿元

We invested a total of RMB **125** million in assistance, including RMB **91.062** million in free assistance

其中无偿帮扶资金  
**9106.2** 万元

引进帮扶资金  
**9564** 万元

We introduced RMB **95.64** million of assistance funds, including RMB **84.49** million for paid assistance

其中有偿帮扶资金  
**8449** 万元



## 多措并举落实

### “五大振兴”任务

#### Taking multiple measures to implement the “Five Significant Revitalization Tasks”

#### 助力产业振兴

Boosting industrial revitalization

为定点帮扶县引进 52 个帮扶项目、招商引资 4550 万元，立足宝武产业优势积累，汇聚生态圈合力，聚焦林业碳汇开发、搬迁安置区后扶车间建设、智慧农业和数字乡村治理等宝武优势帮扶项目助其产业发展壮大，带动脱贫人口转移就业 2391 人，直接招用脱贫人口 19 人。

We introduced 52 assistance projects and attracted RMB 45.5 million of investment for designated assistance counties. Based on the accumulation of Baowu's industrial advantages, we pooled the efforts of the ecosystem to focus on Baowu's advantageous assistance projects such as carbon sink development in the forestry, the construction of follow-up support workshops in the resettlement area, intelligent agriculture and digital rural governance, to make the relevant industries stronger. 2391 people who had been lifted out of poverty were provided with job opportunities, and 19 were directly recruited.

#### 助力人才振兴

Promoting personnel revitalization



培训基层干部

**7772** 人次

乡村振兴带头人

**2430** 人次

各类专业技术人才

**9421** 人次

We have trained **7772** person-times of community-level cadres, **2430** person-times of rural revitalization foregoers, and **9421** person-times of professional and technical personnel

#### 助力文化振兴

Driving cultural revitalization

探索校企合作办班新模式，加大专业人才培养力度，辐射带动脱贫地区中青年稳定就业；培训基层干部 7772 人次、乡村振兴带头人 2430 人次、各类专业技术人才 9421 人次；对国家乡村振兴重点帮扶县广南县继续加大培训支持力度，培训干部人才 1932 人次，同比增长 44.7%。

We have explored new models for school-enterprise cooperation in running classes to put more effort into cultivating professional personnel and drive the stable employment of the young and middle-aged from poverty-stricken areas. We have trained 7772 person-times of community-level cadres, 2430 person-times of rural revitalization foregoers, and 9421 person-times of professional and technical personnel. In addition, we continued to increase training support for Guangnan County, a key assistance county for national rural revitalization, training for 1932 person-times among cadres and personnel, a year-on-year increase of 44.7%.



宝武碳业和宁洱县人民政府合作开办“订单班”，共建教学团队

Baowu Carbon set up an “Order Class” in cooperation with the People's Government of Ning'er County and co-built a teaching team



案例  
CASE

#### 宝武帮助宁洱县打造咖啡全产业链可持续商业模式

Baowu helps Ning'er County to build a sustainable business model for the whole industrial chain of coffee

2022 年，宝武投入无偿帮扶资金 340 万元建设宁洱县现代咖啡产业创新园项目。下属子公司宝武碳业在宁洱县注册“宁小豆”咖啡品牌，并与县内“宁碳惠”碳汇交易平台合作，将“宁小豆”打造为“零碳咖啡”，突出品牌特色。“宝武授渔匠”团队以推动“宁小豆”咖啡商业模式落地见效为创新项目，参加 2022 联合国全球契约青年 SDG 创新者项目暨第二届中国青年 SDG 创新挑战赛，以综合排名第一获得“SDG 创新解决方案”“最具创新性方案奖”两项大奖，进一步帮助国产普洱咖啡走向全球。

In 2022, Baowu invested RMB 3.4 million of free assistance funds to build the modern coffee industrial innovation park in Ning'er County. Baowu Carbon, a subsidiary of Baowu, registered a coffee brand called “Ning Xiaodou” in Ning'er County and highlighted the feature of “Ning Xiaodou” as a kind of “zero-carbon coffee” in cooperation with the “Ning Tan Hui” carbon sink trading platform in Ning'er County. Baowu's “Teach the Fishing” team participated in the UNGC Young SDG Innovator Program and the Second China Youth SDG Innovation Challenge with the innovation program of implementing the “Ning Xiaodou” coffee business model and achieving results. The team won two grand awards of SDG Innovation Solution and Most Innovative Solution Award with the first place in the overall ranking, further pushing forward the domestic Pu'er Coffee to the world.



“宝武授渔匠”团队在 SDG 创新挑战赛中荣获大奖

Baowu's “Teach the Fishing” team won a grand prize in the China Youth SDG Innovation Challenge

## 助力生态振兴

Contributing to ecological  
revitalization

在资金投入方面,投入改善农村人居环境资金 1158.5 万元,实施农村厕改 3778 户,帮助 7 个村实施生活垃圾和污水治理,投入完善农村生活设施资金 1905.9 万元。宝武碳业实施“宁碳惠”项目,推进碳资源开发、碳产业孵化能力、培育碳管理专业人才,建立从碳供给到碳消费、从资金人力扶贫到打造绿色低碳产业的乡村振兴新路径,助力宁洱县成功创建国家林业碳汇试点县。

In terms of funds investment, a total of RMB 11.585 million was invested to improve the rural living environment, renovating 3778 rural toilets and helping 7 villages govern household garbage and sewage. And we also invested RMB 19.059 million to improve rural living facilities. Baowu Carbon launched the “Ning Tan Hui” project to promote the development of carbon resources, enhance the incubation capacity of the carbon industry, and cultivate professionals in carbon management. A new path for rural revitalization in the green and low-carbon industry was formed, which shifted from carbon supply to carbon consumption and from poverty alleviation by funds and manpower to the development of green and low-carbon industries. The project has assisted Ning'er County in successfully becoming a national forestry carbon sink pilot county.



投入改善农村人居环境资金

**1158.5** 万元

A total of RMB **11.585** million was invested to improve the rural living environment

投入完善农村生活设施资金

**1905.9** 万元

We invested RMB **19.059** million to improve rural living facilities

2022 年度标杆案例  
Benchmarking case in 2022



宝武碳业助力宁洱县入选国家林业碳汇试点县

Baowu Carbon assisted Ning'er County to be selected as a national forestry carbon sink pilot county

## 助力组织振兴

Assisting in organizational  
revitalization

集团公司下属企业与帮扶县开展支部结对共建 35 对,参与结对共建脱贫村 27 对,助力基层党组织和党员队伍建设;党员干部捐款捐物 82 万余元;帮助培育新型农业经营主体,发展壮大农村集体经济,扶持龙头企业 22 个,扶持农村合作社 20 个,帮助建立帮扶车间 20 个。

Our subsidiaries jointly constructed 35 pairs of Party branches with the designated assistance counties and participated in the joint construction of 27 pairs of poverty alleviation villages, assisting the construction of community-level Party organizations and Party members' teams. Party members and cadres donated more than RMB 820000 of funds and goods. In addition, we helped cultivate new types of agricultural operation entities to develop and expand the rural collective economy, supporting 22 leading enterprises and 20 rural cooperatives, and helping in the building of 20 assistance workshops.

## 奏响社会和谐乐章

### Playing a louder chorus of harmonious society

宝武积极履行企业公民责任,营造健康安全的厂区环境,倡导绿色低碳的工作和生活方式,投身公益慈善事业,在社会公益、疫情防控等领域持续发力,开展促进社区建设、科教、文体、环保事业发展的活动。

Baowu has actively performed its responsibility as a corporate citizen to create a healthy and safe factory environment and advocate a green and low-carbon work style and lifestyle. We have devoted ourselves to public welfare and made sustained efforts in the fields of social welfare and epidemic prevention and control by carrying out activities to promote community building, science and education, culture and sports, and environmental protection.

## 建设城市钢厂

### Building urban steel mills

宝武坚定不移走绿色发展道路,以循环经济为理念,旗下各生产基地深入推进“三治四化”,营造健康安全的生产和生活环境,加快建设绿色城市钢厂。

Baowu has unswervingly insisted on the path of green development and made its subordinate production bases deepen the “Three Treatments and Four Doing” based on the concept of a circular economy, to build a healthy and safe production and living environment and accelerate the building of green urban steel mills.



马钢股份工业旅游景区正式挂牌,成为以钢铁为主题的国家 3A 级旅游景区

The Industrial Tourist Area of Masteel was established officially and became a national 3A-level tourist attraction with a theme of steel





宝钢股份提升改造后的厂区景观

Baosteel's factory landscape after improvement and renovation



截至 2022 年底，已有宝钢股份梅钢工业文化旅游区、中南钢铁鄂城钢铁工业旅游景区、中南钢铁“多彩韶钢——工业文化园景区”获评国家 AAA 级旅游景区。

By the end of 2022, the Industrial Culture Tourist Area of Meishan Iron and Steel of Baosteel, the Industrial Tourist Area of Echeng Iron & Steel of Zhongnan Iron & Steel, and “Colorful Shaogang—Industrial Culture Park Scenic Area” of Zhongnan Iron & Steel had been rated the national 3A-level tourist attraction.

## 倡导绿色生活

### Advocating a green lifestyle

#### 节约用能

Saving energy

通过倡导随手关灯、室温适宜时不使用空调、调低电脑屏幕亮度等绿色办公的方式，减少非必要能耗，杜绝浪费。

We advocate green office modes such as turning off lights when leaving, not using air conditioning when the room temperature is suitable, and reducing the brightness of the computer screen, thus reducing unnecessary energy consumption and eliminating waste.

#### 提升能效

Improving energy efficiency

将高能耗设备替换为节能装置，引入智能化控制系统以实现能效的自动化管理，高效使用办公空间、减少建筑面积占用。

We have replaced equipment with high energy consumption with energy-saving devices and introduced the intelligent control system for automatic management of energy efficiency, so as to efficiently leverage the office space and reduce the occupation of the building area.

#### 绿色办公 Green office

#### 节约耗材

Saving consumables

减少非必要打印，鼓励使用可再生循环利用的办公产品，如使用再生纸、再生硒鼓等。

We minimize unnecessary printing and encourage the use of renewable and recycled office products, such as recycled paper and recycled toner cartridges.

#### 减少差旅

Reducing business trips

提倡召开视频会议，减少差旅碳排放和能耗。

We advocate holding video conferences to reduce carbon emissions and energy consumption during business trips.



2022 年 6 月 30 日，全新升级的宝武 OA 4.0 新办公平台上线发布，助力办公智能化和绿色化。

On June 30, 2022, the newly upgraded Baowu OA 4.0 office platform went live, assisting in creating an intelligent and green office.



2022 年 11 月 25 日，宝武清能启用新总部办公楼，新办公楼采用绿色、低碳的设计理念和前沿环保技术，楼宇屋面总计铺设装机容量约 400 千瓦的光伏板，发电量基本满足总部日常办公、照明等用电需求。

On November 25, 2022, Baowu Clean Energy put the new headquarters building into use. The new office building adopts green and low-carbon design concepts and cutting-edge eco-friendly technologies. Photovoltaic panels with a total installed capacity of 400 kW were laid on the building roof. The power generation basically meets the daily work and lighting demands of the headquarters.



## 生物多样性保护

### Biodiversity protection

集团公司严格遵守运营所在地相关法律法规，对建设与运营全流程均参照相关要求，进行环境影响评估和土地利用评估。宝钢股份将生物多样性保护列入其《可持续发展基本政策》中，并于报告期内开展了生物多样性风险评估、参与生态环境修复、探索废弃物生态保护应用场景等多项生态保护工作。

The Group Corporation strictly abides by the relevant laws and regulations of the place where it operates and conducts environmental impact assessments and land use assessments for the whole process of construction and operation with reference to relevant requirements. Baosteel included biodiversity protection in its *Basic Policy for Sustainable Development* and carried out a series of work related to ecological protection during the reporting period, such as biodiversity risk assessment, participation in ecological environment restoration, and exploration of waste application scenarios for ecological protection.

## 环保宣贯

### Publicity and implementation of environmental protection

集团公司全面贯彻落实习近平生态文明思想，宣传宝武绿色低碳发展理念，结合“5.22 国际生物多样性日”“6.5 环境日”等开展义务植树、环保培训和宣传、绿色骑行等活动，弘扬绿色低碳发展的价值导向，进一步增强全体员工的环境意识、节约意识、生态意识。

The Group Corporation fully implements Xi Jinping’s thought on ecological civilization and advocates the green and low-carbon development philosophy of Baowu. We carried out voluntary tree planting, environmental protection training and publicity, green cycling and other activities on the International Day for Biological Diversity on May 22 and World Environment Day on June 5 to carry forward the value orientation of green and low-carbon development and further enhance the environmental awareness, conservation awareness and ecological awareness of all staff.



马钢集团义务植树活动

Magang Group conducted the voluntary tree planting activity



中南钢铁“一张地图的旅行”绿色公益活动

“Travelling on One Map” green public benefit activity organized by Zhongnan Iron & Steel



西藏矿业“清捡垃圾，美化母亲河”志愿者服务

Tibet Mineral Development's volunteer service themed “Picking up Garbage for a More Beautiful Mother River”



华宝信托开展绿色骑行活动

Hwabao Trust carried out the green cycling activity



发起“零碳公司日”活动，助力实现“双碳”目标

We launched the “Zero Carbon Company Day” event to boost the realization of the “dual-carbon” goal

## 践行慈善公益

### Carrying out charitable activities

### 对外捐赠

#### External donations

2022 年，宝武对外捐赠 25132.714 万元。其中，用于乡村振兴 12589.89 万元；用于防疫救灾专项 9768 万元；用于公益慈善、教学助学、其他（改善社区关系等）2774.824 万元。

In 2022, Baowu donated a total of RMB 251327140, including RMB 125898900 for rural revitalization, RMB 97.68 million for epidemic prevention and control and disaster relief, and RMB 27748240 for charity, education assistance and others (e.g. improving the relationship with the local community).



## 企业基金会

### Corporate foundation

2022 年，宝钢教育基金公益支出 1282.26 万元，107 所高校的 497 名学生、272 名教师获得宝钢教育奖。截至 2022 年，全国共计 100 余所高等院校、26875 名师生获宝钢教育奖，用于教育奖励和资助金额累计 2.7 亿元。

In 2022, 497 students and 272 teachers from 107 colleges and universities won the Baosteel Education Award with RMB 12.8226 million of public welfare expenditure in the Baosteel Education Fund. By 2022, a total of 26875 teachers and students from more than 100 colleges and universities nationwide had won the Baosteel Education Award, with a total amount of RMB 270 million for education rewards and subsidies.

## 社会公益事业

### Public welfare

宝武热心参与社会公益事业，广泛开展志愿服务及爱心奉献活动。截至 2022 年底，志愿者人数 12054 人；志愿者活动项目数量 2368 个；志愿者活动参与 26785 人次；志愿者活动总时长 45200 小时。

Baowu has made earnest efforts to participate in public welfare activities and broadly carried out volunteer services and dedication activities. By the end of 2022, Baowu had 12054 volunteers who had carried out 2368 volunteer activities with 26785 person-times for a total of 45200 hours.



中钢集团职工积极参与北京冬奥会志愿服务

Sinosteel's staff took an active part in the volunteer service in the Beijing 2022 Olympic Winter Games



新钢集团开展“便民服务进社区”的学雷锋志愿服务活动

Xinsteel conducted “Learning from Lei Feng” volunteer service activities themed “Providing Handy Services for the Community”



宝武重工捐资助学广南县民族职业高级中学

Baowu Heavy Industry donated money to Minzu Vocational High School in Guangnan County for assistance in study



宝武财务公司进社区普及金融知识

Baowu Group Finance Company popularized financial knowledge in the community

## 应对公共危机

### Response to public crisis

宝武坚决扛起央企的责任担当，把疫情防控当作当前头等大事，最大限度做到疫情防控和生产经营两手抓、两不误、两手硬、两手赢。

重庆发生山火灾情期间，中南钢铁重庆钢铁迅速响应当地政府号召，联合宝武环科、宝武智维、重钢集团、中冶宝钢等生态圈企业立即行动起来，英勇逆行，积极参加抢险救援。

Baowu firmly takes on the responsibility of a central SOE and regards epidemic prevention and control as a cardinal task. We have lived up to our responsibilities and attached equal attention to and made progress in both epidemic prevention and control and production and operation at the same time without delay to the greatest extent.

When the mountain fire disaster occurred in Chongqing, Chongqing Iron & Steel of Zhongnan Iron & Steel responded quickly to the calls of the local government and took immediate action together with the ecosystem enterprises such as Baowu Environment and Resource Technology, Baowu Equipment Intelligent Technology, Chongqing Iron & Steel Group, and MCC Baosteel to actively participate in emergency rescue by putting themselves in harm's way.



宝钢股份组建青年志愿者队伍共筑疫情防线

Baosteel organized a young volunteer team to build a line of defense against COVID-19



宝武清能保供上海医用氧

Baowu Clean Energy supplied medical oxygen for Shanghai



中南钢铁等单位驰援重庆山火抢险

Zhongnan Iron & Steel and other units rushed to mountain fire rescue in Chongqing

# 开启国际化新征程

## Embarking on a new journey of internationalization

国际化发展是宝武践行国家“一带一路”倡议、承担央企使命的责任所在，也是宝武建设世界一流企业的应有之义。宝武持续推进海外投资建设，聚焦“一带一路”，不断健全国际化投资体制机制；重视海外履责，创造经济、社会、环境综合价值。

International development is the responsibility of Baowu to implement the Belt and Road Initiative of China and shoulder the mission as a central SOE, and also an integral part of building Baowu into a world-class enterprise. Baowu has continued to promote overseas investment and construction, focused on the Belt and Road Initiative, constantly improved the international investment system and mechanism, and attached importance to performing responsibilities overseas to create economic, social and environmental value comprehensively.

## 健全治理机制

### Building a sound governance mechanism

为推进国际化发展，宝武建立海外工作推进领导小组，在集团层面建立双组长推进机制；建立例会交流制度，交流经验、对标找差，全集团协同联动、上下同欲推进国际化发展。

To bolster international development, Baowu has established a Leading Group for Overseas Work Promotion and established a dual-team-leader promotion mechanism at the group level. We have set up the exchange system on regular meetings to exchange experiences and seek the gap by benchmarking, so as to promote international development through coordination and linkage of the whole group and unity at all levels.



集团公司开展国际化发展能力提升培训

The Group Corporation carried out the training to improve international development ability

## 持续创造价值

### Constantly creating value

#### 中钢集团

Sinosteel

截至 2022 年底，中钢海外及所属企业员工总数近 12000 人，其中海外企业外籍员工超过 11000 人，本地化雇佣率 99%。

By the end of 2022, the total number of employees of Sinosteel Overseas Resources and its affiliated enterprises reached nearly 12000, including more than 11000 foreign employees in overseas enterprises, with a localization employment rate of 99%.

#### 宝钢股份

Baosteel

宝钢激光拼焊国际有限公司在德国、意大利、瑞典、土耳其拥有 6 个激光拼焊工厂，在美国、墨西哥和加拿大三个国家与美国华新顿公司合资拥有 10 个工厂。截至 2022 年底，属地招聘人数达 399 人，为增加当地就业贡献力量。

Baosteel Laser Welding Co., Ltd. owns six laser welding factories in Germany, Italy, Sweden and Turkey and ten factories in a joint venture with Worthington, an American company, in America, Mexico and Canada. By the end of 2022, 399 local people had been recruited, contributing to driving local employment.

#### 马钢集团

Magang Group

马钢股份下属 3 家海外全资子公司共计缴纳属地税款约 2800 万元。截至 2022 年底，位于法国的马钢瓦顿公司共有 344 名员工，其中 340 名欧盟员工、4 名非欧盟员工。

Three over seaswholly-owned subsidiaries of Masteel paid a total of about RMB 28 million in local taxes. By the end of 2022, MG-Valdunes in France had a total of 344 employees, of which 340 were EU employees and 4 were non-EU employees.

#### 宝武资源

Baowu Resources

聚焦澳洲和非洲两大重点区域推进矿产项目。2022 年，资源澳洲及控制子公司向澳洲政府纳税超 700 万澳元。

It has focused on promoting mineral projects in two key regions, Australia and Africa. In 2022, Resources Australia and its controlled subsidiaries paid more than AUD 7 million in taxes to the Australian government.



案例  
CASE

## 宝钢包装国际化发展重点项目开工，持续为当地创造价值

Baosteel Packaging's key project for international development started, continuing to create value for the local society

2022 年 4 月 29 日，作为宝钢包装国际化发展重点项目，柬埔寨宝钢制罐智能化铝制两片罐生产线项目正式开工。该项目计划总投资约 7800 万美元，年设计产能逾 10 亿罐，建成投产后将为广大客户提供质量可靠、成本最优的产品，并为柬埔寨当地创造 150 人以上的就业岗位。

On April 29, 2022, as a key project of Baosteel Packaging in international development, the intelligent aluminum two-pieced can production line project of Cambodia Baosteel Can Making was officially started. The project was planned to have a total investment of about USD 78 million and a designed production capacity of more than 1 billion cans per year. After it is completed and put into operation, it will provide customers with products of reliable quality and the lowest cost, and create more than 150 jobs for local Cambodians.



## 推进社会交融

Promoting social  
integration中钢集团  
Sinosteel

中钢 Samancor 铬业积极融入当地社区发展，投入资源助力当地教育、卫生事业。累计投资超 1930 万兰特（约合 735 万元），共惠及 5 所学校数百名儿童；Bokamoso 自来水和卫生项目，改善了 2000 多名居民的饮用水条件。

Samancor Chrome has actively participated in the development of local communities and invested resources to help with local education and health undertakings. The cumulative investment exceeded ZAR 19.3 million (about RMB 7.35 million), benefiting hundreds of children in five schools. The Bokamoso water and sanitation project has improved the drinking water conditions for more than 2000 residents.



中钢 Samancor 铬业为当地修建 200 万立方米水库

Samancor Chrome built a 2-million-cubic-meter reservoir for the local community

2022 年度标杆案例  
Benchmarking case in 2022

中钢 Samancor 铬业为南非当地小学维修教室

Samancor Chrome renovated classrooms for local primary schools in South Africa

## 相关方评价

Stakeholders' evaluation



“在项目建成之前，生活很艰难。我们必须步行到 4 公里外去取水，现在只需要步行 200 米，就能得到安全健康的生活用水。”

“Before the completion of the project, we had a hard life and needed to walk for over four kilometers to get water. Now safe and healthy water is just 200 meters' walk from us.”

——当地居民 Calvin Mashinye 先生和 Philetso Malepe 先生

—Local residents Mr. Calvin Mashinye and Mr. Philetso Malepe

## 宝武资源

Baowu Resources

2018 年至今，利比里亚邦矿项目部积极参与邦州邦镇社区共建，每月向邦镇社区清扫队提供约 2000 美元的清洁工具或资金，用于改善社区卫生环境。武钢中非配合所在地政府及社区开展疫情防控工作，主动为当地捐赠防疫物资，保障员工和当地民众生命健康。

Since 2018, the Bong Mine Project Department in Liberia has actively participated in co-building the community of Bong County and Bong Town. About USD 2000 of cleaning tools or funds were provided to the Bong Town Community's cleaning team per month to improve the community's hygienic conditions. Wugang Central Africa cooperated with the local government and community in epidemic prevention and control, and proactively donated epidemic prevention supplies to the local area to protect the life and health of employees and local people.



宝武资源向邦矿项目所在地捐赠口罩、消毒液和大米

Baowu Resources donated masks, disinfectant and rice to the site of the Bong Mine project

## 守护绿色生态

Protecting the  
green ecology

## 中钢集团

Sinosteel

所属企业将保护生物多样性作为决策基本考虑因素，中钢海外在澳公司制定了动植物保护目标及保护措施；中钢国际 EPC 总承包俄罗斯 MMK250 万吨 / 年焦化项目，预计项目投产后，每年可减少 220 万吨二氧化碳排放量，MMK 的碳足迹也将因此下降 8.5%。

Its affiliated enterprises regard biodiversity protection as a fundamental consideration in decision-making. The subsidiaries of Sinosteel Overseas Resources in Australia have formulated the protection objectives and measures for animals and plants. Sinosteel Engineering & Technology contracted the coking project of MMK in Russia with a capacity of 2.5 million tons/year in an EPC manner. After being put into operation, the project is expected to reduce carbon dioxide emissions by 2.2 million tons per year, thereby reducing MMK's carbon footprint by 8.5%.

## 宝钢包装

Baosteel Packaging

以技术创新挑战产品主材减薄，实现产品持续轻量化、可回收，擦亮绿色产品“底色”；推行“绿色合作伙伴计划”，打造绿色供应链。马来西亚宝钢制罐受邀参加马来西亚环境与水利部、绿色科技与气候变化局举办的 2022 年“中马绿色发展论坛”，积极践行共建“一带一路”绿色发展理念。

Baosteel Packaging has attempted to make the main materials of the product thinner with innovative technologies to make the products light-weighted, recyclable and greener. It has promoted the "Green Partnership Program" to build a green supply chain. Baosteel Can Making (Malaysia) was invited to attend the 2022 China-Malaysia Green Development Forum held by the Ministry of Environment and Water Resources of Malaysia and the Green Technology and Climate Change Bureau of Malaysia to actively practice the concept of green development for co-building the Belt and Road.



宝钢包装马来西亚宝钢制罐参加 2022 年“中马绿色发展论坛”

Baosteel Can Making (Malaysia) under Baosteel Packaging attended the 2022 China-Malaysia Green Development Forum





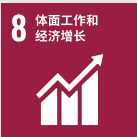
# 创新领先

铸就科技自立自强“钢铁长城”

## Pursue Leading Innovation

to Build a “Great Wall of Steel”  
Through Self-reliance and Self-  
improvement in Science and  
Technology

回应可持续发展目标  
Response to SDGs



责任专题：勇闯低碳“无人区”  
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# 我们的理解

## What we know

创新能力是企业核心竞争力的主要来源，是世界一流企业区别于一般企业的最重要标志，也是从“大”到“强”的关键因素。真正的大国重器，一定要掌握在自己手里，国有企业要勇挑重担、敢打头阵，勇当原创技术的“策源地”、现代产业链的“链长”。

Innovation capacity is a main source of an enterprise's core competitiveness, the most important character that distinguishes world-class enterprises from ordinary ones, and a key factor for an enterprise developing from a “big” one to a “strong” one. We shall hold the pillars of a great power in our own hands. A state-owned enterprise shall be brave to shoulder the heavy burden and take the lead to be a source of original technologies and a leader of the modern industrial chain.

# 我们的实践

## What we do

宝武坚持创新驱动发展战略，以国家战略需求为导向，持续完善科技创新体系，开展科技创新生态工程建设，积极打造原创技术策源地，加快推进关键核心技术攻关，为实现高水平科技自立自强贡献宝武力量。

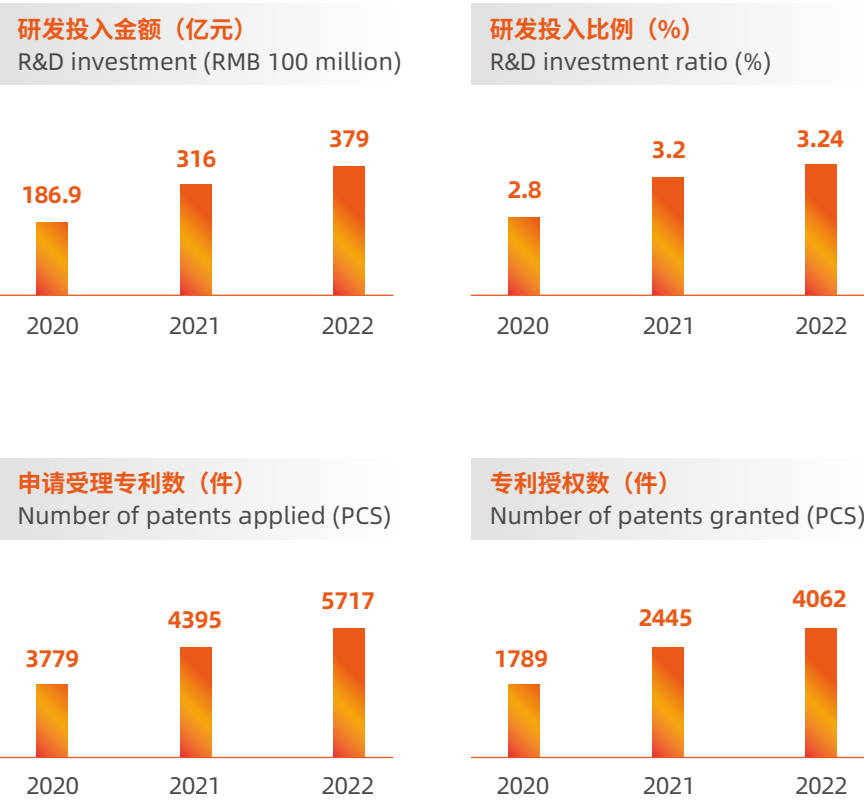
With the innovation-driven development strategies in mind and the national strategic needs as the guidance, Baowu keeps improving the scientific and technological innovation system, carries out the construction of ecological projects to foster scientific and technological innovation, and actively builds the source of original technologies, so as to accelerate to make breakthroughs in the key and core technologies and contribute to the realization of high-level scientific and technological self-reliance and self-improvement.

# 关键绩效指标

## Key performance indicators

### 创新力：研发和专利技术能力

#### Innovation capacity: capacities in R&D and patented technology



### 智慧制造指数

#### Intelligent manufacturing index

在“四个一律”智慧制造指数基础上，引入“三跨融合”要求，在建设智慧工厂的同时，进一步强化产业、基地的互联互通，推动人机融合，实现人、基地、产业等不同生态圈主体的数据共享、互通融合。

We incorporate the requirements of “Three-cross Integration” into the Intelligent manufacturing index based on the “Four Uniforms” indexes, to enhance the connectivity among the business sectors and bases while building intelligent factories, promote the human-machine integration, and ultimately achieve the data sharing, connectivity and integration among different actors within the ecosystem, such as people, bases and business sectors.

### 2022年各钢铁子公司智慧制造指数

#### Intelligent manufacturing indexes of subsidiaries engaging in iron & steel businesses in 2022

| 子公司<br>Subsidiaries        | 四个一律<br>Four Uniforms | 三跨融合<br>Three-cross Integration | 智慧制造指数<br>Intelligent manufacturing index |
|----------------------------|-----------------------|---------------------------------|---|
| 宝钢股份 Baosteel              | 73.8                  | 13.6                            | 87.4                                      |
| 中南钢铁 Zhongnan Iron & Steel | 67.2                  | 8.9                             | 76.1                                      |
| 马钢集团 Magang Group          | 72.7                  | 12.1                            | 84.8                                      |
| 太钢集团 TISCO                 | 71.9                  | 9.2                             | 81.0                                      |
| 八一钢铁 Bayi Iron & Steel     | 68.2                  | 9.6                             | 77.8                                      |

名词解释  
Terms  
interpretation

“四个一律”：操作室一律集中（ACC）、操作岗位一律机器人（AOM）、运维一律远程（AMI）、服务环节一律上线（ASP）。

“Four Uniforms”: all operating rooms are uniformly centralized (ACC), all operating posts uniformly adopt robots (AOM), the operation and maintenance of all equipment are uniformly managed remotely (AMI), and all services are uniformly online (ASP).

“三跨融合”：聚焦生态化平台应用和数据互联互通，支撑“一总部多基地”管理模式，推动“人机一体”及“操检维调”合一为特征的“跨人机界面”的互通融合。

“Three-cross Integration”: it focuses on ecological platform applications and data connectivity, provides supports to the “one headquarters and multiple bases” management model, and promotes the connectivity and integration of “cross human-machine interface” with characteristics of “human-machine integration” and integration of “operation, inspection, maintenance and debugging”.



## 责任专题

### Column on Responsibility

## 勇闯低碳“无人区”，实现科技创新突破

### Dare to Blaze New Trails in Low-carbon Development and Make Breakthroughs in Science and Technology Innovation

宝武贯彻落实习近平总书记关于央企要勇当现代产业链链长、原创技术策源地的指示精神，积极发挥作为新型低碳冶金现代产业链链长的主体支撑和融通带动作用，勇闯低碳“无人区”，引领带动全产业链实现低碳工艺革新。

Baowu implements General Secretary Xi Jinping's directive that central SOEs should act as the leaders of the modern industrial chains and the sources of original technologies, actively plays a leading role in supporting and promoting the integration of the new low-carbon metallurgical modern industrial chain, proactively explores new ground for the low-carbon development, and leads the entire industrial chain to achieve low-carbon technological innovation.

### 首创 HyCROF 新工艺

#### The innovative HyCROF technology

宝武积极探索和建立适应我国长流程钢铁生产工艺的降碳解决方案，致力于突破钢铁行业低碳发展重点难点问题。

Baowu actively explores and establishes carbon reduction solutions that adapt to China's long-process steel production, and devotes itself to addressing the key and difficult challenges faced by the steel industry on the journey to low-carbon development.

2020年7月15日，在八钢公司建立的低碳冶金试验平台，承载着宝武推进碳达峰碳中和的政治责任和历史使命。2022年7月，这一全球首台400立方米工业级HyCROF点火投运，标志着宝武低碳冶金技术试验进入了全氧、煤气自循环的新阶段，充分体现了宝武带头践行绿色发展理念、助力生态文明建设的勇毅担当。

The low-carbon metallurgical testing platform set up at Bayi Iron & Steel on July 15, 2020 further fulfills Baowu's political tasks and historical mission in promoting carbon peak and carbon neutrality. In July 2022, the world's first 400 m<sup>3</sup> industrial grade HyCROF was put into operation, marking that Baowu's low-carbon metallurgical technology test has entered a new stage of full oxygen and gas self-circulation and fully reflecting Baowu's courage and conscientiousness as a trailblazer in practicing the concept of green development and fostering the construction of ecological civilization.

### 案例 CASE

#### HyCROF 实现全球绿色低碳冶金技术新突破

HyCROF makes a new breakthrough in global green and low-carbon metallurgical technology

2022年7月6日，全球钢铁冶金绿色低碳三期试验及应用项目——HyCROF在八钢公司正式点火开炉。生产试验表明，HyCROF固体燃料消耗降低达30%，碳减排超过21%，代表着宝武在低碳冶金原创技术策源地建设中迈出了坚实一步，实现了全球绿色低碳冶金技术新突破。

On July 6, 2022, the HyCROF (Hydrogen-enriched carbonic oxide recycling oxygenate furnace), namely the global green and low-carbon test and application project for steel metallurgy (phase III), was officially ignited and put into operation at Bayi Iron & Steel. Production experiments showed that the HyCROF has reduced solid fuel consumption by up to 30% and reduced carbon emissions by over 21%, indicating that Baowu has taken a solid step in building the source of low-carbon metallurgical original technology and made a new breakthrough in global green and low-carbon metallurgical technology.



HyCROF 全景  
Panorama of HyCROF

### 建设国内首套百万吨级氢基竖炉

#### Building the first million-ton hydrogen-based shaft furnace in China

氢冶金是宝武碳中和的六大技术方向之一。宝钢股份湛江钢铁勇担“双碳”使命，高质量建设国内首套百万吨级氢基竖炉项目，是首套集成氢气和焦炉煤气进行工业化生产的直接还原生产线，也是后续自主集成并研发全氢冶炼技术的创新平台，对推动钢铁行业绿色低碳转型、推进钢铁新生态绿色化、促进区域清洁能源优化和经济发展具有重要意义。

Hydrogen metallurgy is one of the six major technological directions of carbon neutrality in Baowu. Baosteel Zhanjiang Iron & Steel bravely undertook the mission of “dual-carbon” and built the first million-ton hydrogen-based shaft furnace project in China with high quality. It is the first direct reduction production line that integrates hydrogen and coke oven gas for industrial production, and also an innovation platform for independent integration and development of all-hydrogen smelting technology in the future. It is of great significance for promoting the green and low-carbon transformation of the steel industry, promoting the new ecological greening of steel, and accelerating regional clean energy optimization and economic development.

### 案例 CASE

#### 宝钢股份湛江钢铁零碳示范工厂百万吨级氢基竖炉开工

The construction of a million-ton hydrogen-based shaft furnace was started at the zero-carbon demonstration plant of Baosteel Zhanjiang Iron & Steel

2022年2月15日，宝钢股份湛江钢铁零碳示范工厂百万吨级氢基竖炉开工。该项目总投资18.9亿元，预计2023年底建成，投产后可对比传统铁前全流程高炉炼铁工艺同等规模铁水产量，每年可减少二氧化碳排放50万吨以上。

On February 15, 2022, the project of million-ton hydrogen-based shaft furnace was kicked off at the zero-carbon demonstration plant of Baosteel Zhanjiang Iron & Steel. The total investment of this project is RMB 1.89 billion, and it is expected to be completed by the end of 2023. After being put into operation, it can reduce carbon dioxide emissions by more than 500000 tons per year, compared to the iron-making technology of the traditional pre-iron-making full-process blast furnace at the same molten iron production capacity.

### 推进低碳冶金创新基金项目

#### Promoting the low-carbon metallurgy innovation fund project

宝武持续推进低碳冶金创新基金项目，坚持以技术创新引领钢铁低碳发展。2022年，宝武聚焦氢冶金、智能化炼铁、生物质能、资源化利用等前瞻性技术研究，依托低碳冶金创新联盟技术委员会和行业专家，经过公开、公平、公正的严格评选，共有22个项目获得了首期基金资助，资助总额3875万元。

Baowu continues to promote the low-carbon metallurgy innovation fund project and adheres to leading the low-carbon development of steel industry through technological innovation. In 2022, Baowu focused on the research of the forward-looking technologies such as hydrogen metallurgy, intelligent iron making, biomass energy and resource-based utilization, and granted a total amount of RMB 38.75 million as initial funds to 22 projects, which were strictly selected in a transparent, fair and just manner by the Technical Committee of the Low-carbon Metallurgical Innovation Alliance together with the industry experts.

### 案例 CASE

#### 2022 年度宝武低碳冶金创新基金项目指南发布

The 2022 Baowu Guide for Low-carbon Metallurgy Innovation Fund Projects was released

2022年11月16日，新一轮宝武低碳冶金创新基金项目指南在全球低碳冶金创新联盟大会上正式发布。该项目指南聚焦传统流程低碳冶金、氢冶金、能源替代、冶金资源综合利用等领域，鼓励高效、可持续的钢铁及相关领域新材料、新产品、新技术、新工艺等基础及应用基础研究。

On November 16, 2022, the updated Baowu Guide for Low-carbon Metallurgy Innovation Fund Projects was officially released at the Conference of Global Low-carbon Metallurgical Innovation Alliance. This Guide focuses on traditional process based fields such as low-carbon metallurgy, hydrogen metallurgy, energy substitution and comprehensive utilization of metallurgical resources, in order to encourage the basic and applied research on new efficient and sustainable new materials, new products, new technologies and new processes in steel and related fields.

## 强化技术创新

### Strengthening technological innovation



2022年  
In 2022

研发投入

**379** 亿元

R&D investment: RMB **37.9** billion

研发投入比例

**3.24** %

R&D investment ratio: **3.24**%

专利申请

**5717** 项

Patent applications: **5717**

发明专利

**4062** 件

Invention patents: **4062**

宝武围绕原创技术策源地要求和高科技企业转型的发展战略，提出建设“开放、自主、引领”型技术创新体系的目标，进一步优化科技创新体系。2022年，研发投入共计379亿元，研发投入比例3.24%，专利申请5717项，其中发明专利4062件，创历史新高。科技创新成果硕果累累，2022年，42个项目荣获冶金科学技术奖，牵头项目“欧冶炉熔融还原炼铁工艺技术研究”荣获唯一特等奖，5个牵头项目获得一等奖；宝武牵头或参与的项目在特等奖、一等奖项目中占比58.3%。完成2022年度宝武技术创新重大成果奖评选，共有48项成果获得表彰，其中宝信软件“中国宝武工业互联网平台”项目获特等奖。

Baowu puts forward building an “open, independent and leading” technology innovation system according to the requirements for building a source of original technologies and the development strategies for promoting the high-tech enterprise transformation, to further optimize the technology innovation system. In 2022, a total of RMB 37.9 billion was invested in research and development, with a R&D investment ratio of 3.24%. We filed 5717 patent applications, including 4062 invention patents, reaching a record high. We made many great achievements in scientific and technological innovation. In 2022, 42 projects won the Metallurgical Science and Technology Award, among which the project “Research on Furnace Melt Reduction Iron Making Technological Process at Ouyee” led by Baowu won the only special prize, and 5 projects led by Baowu won the first prize. The projects led or participated by Baowu accounted for 58.3% of the special and first prizes. After the selection of the 2022 Baowu Major Technology Innovation Great Achievements Award, a total of 48 achievements entered the final list, among which Baosight’s “China Baowu Industrial Internet Platform” project won the special prize.



2022年12月23日，宝武举办科技成果发布会

On December 23, 2022, Baowu held a press conference on scientific and technological achievements

## 关键核心技术攻关

### Making breakthroughs in core and key technologies

围绕重点领域需求，面向空天、能源、交通、海工、装备等五大产业群，重点聚焦航空、航天、核电、舰船、兵器、高铁六大关系国家战略和安全的行业领域，组建使命担当攻关小组，形成重点攻关任务和管理支撑举措，加快形成关键核心材料配套能力，支撑国家重大工程建设。

Centering on the needs of key fields, targeting five major industrial clusters (aerospace, energy, transportation, marine engineering and equipment manufacturing), focusing on six major industrial sectors crucial to national strategies and security (aviation, aerospace, nuclear power, naval ships, weapons and high-speed railway), we organized corresponding task teams for making breakthroughs, formulated key tasks and management supporting measures, and accelerated the development of key and core material supporting capabilities, to support the construction of national critical projects.



宝钢股份助力“华龙一号”核电关键设备

Baosteel made contributions to the construction of critical nuclear power equipment of “Hualong One”



宝武碳业承接快舟-11号固体运载火箭一级发动机燃烧室壳体项目

Baowu Carbon undertook the combustion chamber shell project of the first stage engine of the Kuaizhou-11 Solid-fuel Carrier Rocket



宝钢股份为郑渝高铁提供钢轨，占总用轨量的近80%

Baosteel provided steel rails for the Zhengzhou-Chongqing High-speed Railway, accounting for nearly 80% of the total rail used



宝钢金属自主研发的2060兆帕钢丝大规模应用于粤港澳大湾区超级工程深中通道伶仃洋大桥

The 2060MPa steel wire independently developed by Baosteel Metal was applied on a large scale to the mega project in the Guangdong-Hong Kong-Macao Greater Bay Area, namely the Lingdingyang Bridge Section of Shenzhen-Zhongshan Bridge

## “卡脖子”材料攻关

### Developing key materials that rely heavily on foreign technologies

全面推进使命担当工程，圆满完成国务院国资委“1025专项”一期攻关任务，承接“1025专项”二期三项攻关任务；为“福建舰”提供建造材料，保障相关国家重大工程材料供应；突破薄膜型LNG船/罐用不锈钢相关关键技术瓶颈，为我国薄膜型LNG运输船/罐的国产化提供有力支撑；高低温韧性AISI4145H钻杆用钢助力“深地一号”定向井井深最深达到9300米，刷新亚洲纪录；为航空、航天等尖端科技领域用高温合金的冶炼提供高端纯铁基材；液氢专用不锈钢产品填补国内民用液氢压力容器用不锈钢的空白。



We comprehensively promoted the mission-critical projects, successfully completed the first phase of the “1025 Special Project” of the SASAC of the State Council, and undertook 3 tasks of the second phase of the “1025 Special Project”. We also provided construction materials for the “Fujian Warship” according to the requirements for securing the supply of materials for national megaprojects. Moreover, we addressed the key technical bottleneck of stainless steel for membrane LNG ships/tanks, providing strong support for the localization of membrane LNG ships/tanks in China. Our AISI4145H drill pipe steel with high and low temperature toughness assisted the “Deep Underground Extraction Project No.1” directional well reaching a maximum depth of 9300 meters, creating a new Asian record. We provided high-end pure iron substrates for the smelting of high-temperature alloys used in cutting-edge technology fields, such as aviation and aerospace. Our special stainless steel products for liquid hydrogen filled the gap in the stainless steel used for domestic civilian liquid hydrogen pressure vessels.

“1025 专项”  
“1025 Special Project”

2021 年 12 月，国家知识产权局联合国务院国资委组织实施了“1025 专项”专利导航专项行动，宝武围绕 7 个关键核心技术领域，为 320 余件高价值专利布局提供按需审查，规避风险点数十项，助力央企加快打造原创技术策源地、成长为现代产业链“链主”。

In December 2021, the China National Intellectual Property Administration and the SASAC of the State Council organized and implemented the “1025 Special Project” patent navigation special action. Baowu provided on-demand review for the arrangement of more than 320 high-value patents in seven key core technology fields, evaded dozens of risk points, and helped Central SOEs to speed up the building of sources of original technologies and grow into the owners of the respective modern industrial chains.

案例  
CASE 超级电容器关键电极材料实现国产化  
Localization of key electrode materials for super capacitors

超级电容器在轨道交通、智能装备和国防军工等领域发挥着十分重要的作用。然而，我国超级电容器关键电极材料还存在着“卡脖子”问题，亟需实现关键材料的国产化。2019年，中钢矿院和中国工程物理研究院共同承担了安徽省重大专项“超级电容器用碳气凝胶材料产业化关键技术研究”，完成了碳气凝胶产品由实验室克级产品到低成本、吨级产业化制备，打破了该领域电极材料的国外垄断，为我国新能源产业发展和国防工业安全作出重要贡献。2021年，中钢矿院先进粉体材料产业园开工建设，碳气凝胶材料的产业化是该园区的重要项目之一。2022年，300吨/年的碳气凝胶生产线建成，产品在超级电容器厂家进行试用，试用效果优异。

Super capacitors play a very important role in critical fields, such as rail transportation, intelligent equipment, national defense and military industry. However, China’s key electrode materials for super capacitors still heavily rely on foreign products and technologies, and it is urgent to achieve the localization of key materials. In 2019, Sinosteel Institute and the China Academy of Engineering Physics jointly undertook the major special fund project “Research on Key Technologies for Industrialization of Carbon Aerogel Materials for Super Capacitors” of Anhui Province, realized the industrial production of carbon aerogel in tons shifting from the laboratory preparation in grams, broke the foreign monopoly of electrode materials in this field, and made important contributions to the development of China’s new energy industry and the security of national defense industry. In 2021, the Industrial Park for Advanced Powder Materials of Sinosteel Institute started construction and the industrialization of carbon aerogel materials was one of the important projects in this park. In 2022, a carbon aerogel production line with an annual capacity of 300 tons was built, and the products were used for trial by the super capacitor manufacturers and achieved good effects.

2022 年度标杆案例  
Benchmarking case in 2022

案例  
CASE 攻关特种冶金材料，助力国家重大工程  
We addressed key problems in special metallurgical materials to help the construction of critical national projects

宝武特种冶金材料在使命类产品研发生产方面发挥独特作用，研发大型运载火箭用合金、新一代发动机用高温合金，保障了关键核心材料安全。宝武特冶研发超长镍基合金管材，守卫大火箭航天发动机这一“动力心脏”的“大动脉”，是国内唯一一家能够高质量批量稳定制造此类材料的特冶企业。为长征五号系列运载火箭(“胖五”)飞天、为“嫦娥五号”探月、我国探月工程“绕、落、回”三步走作出积极贡献。

The special metallurgy materials of Baowu played a unique role in the research, development and production of mission-critical products. The research and development of alloys for heavy-lift launch vehicles and high-temperature alloys for new-generation engines ensured the security of key and core materials. Baowu Special Metallurgy researched and developed ultra-long nickel based alloy tubes, to guard the “main artery” of the “power heart” (airspace engine) of heavy-lift launch vehicle. It is the only special metallurgy enterprise in China that can stably manufacture such high-quality materials at scale. It had made great contributions to the launching of Long March V Series Carrier Rockets, the Chang’e 5 moon exploration, and the three-step (flying around the moon, landing on the moon, and returning to earth) moon exploration project of China.



多元产业科技  
创新

Technological  
innovation  
in diversified  
industries

宝武高度重视多元产业创新驱动发展，推动“一基五元”握指成拳，力争形成具有强大市场竞争优势的生态圈合力。集团公司大力支持各多元子公司建立完善以技术中心为核心的科技创新体系，不断推动科技创新工作走深走实。

Baowu attaches great importance to the innovation-driven development of diversified industries, promotes the synergistic interaction among the “One Basis and Five Industries”, and strives to build an ecosystem fully utilizing the strong market competitive advantages of all actors. The Group Corporation vigorously supports various diversified subsidiaries to establish and improve a technology centers based technology innovation system, for the ultimate purpose of fully and effectively carrying out the technology innovation work.



创新突破传统的钢铁行业信息化系统架构，采用“云、边、端”扁平化的三层体系架构，打造iPlat和ePlat两大平台套件，支撑智慧制造、智慧服务、智慧治理三类智慧场景，为企业创新开创无限可能。

We adopted a flat three-layer system architecture integrating the “cloud, edge and end” beyond the steel industry’s traditional information system architecture, and built two platform suites, iPlat and ePlat, to support the intelligent manufacturing, intelligent services and intelligent governance, which can maximize opportunities for enterprise innovation.

数字孪生  
工厂  
Digital twin  
factory

宝钢股份宝山基地2号连铸机数字孪生工厂正式投运，标志着宝武作为流程制造行业从数字化交付到数字化运营的跨越，向产线装备“系列化、标准化、数字化”的战略目标迈出了坚实一步。

The digital twin factory of Baosteel Baoshan Base No. 2 Continuous Casting Machine was officially put into operation, marking the leap of Baowu as a process manufacturer from digital delivery to digital operation, and a solid step towards the strategic goal of “serialization, standardization and digitization” of production line equipment.

中间相沥青  
碳纤维工业示范  
线平台

The industrial demonstration  
production line platform of  
intermediate phase asphalt  
carbon fiber

宝武碳业示范产线成功建成投产并进入设备调试阶段，纺织出碳纤维原丝，为宝武增强碳纤维生产的核心竞争能力奠定坚实基础。

This demonstration production line of Baowu Carbon was successfully completed and put into operation, and now at its debugging stage. The ability of making carbon fiber raw silk lays a solid foundation for Baowu to enhance its core competitiveness in carbon fiber production.

高应力幅  
锌铝钢丝  
High stress amplitude  
zinc-aluminum  
steel wire

宝钢金属开发了Φ5mm1860MPa高应力幅锌铝钢丝（600MPa疲劳应力幅），制索后成功应用在贵州天文台“天眼”换索项目。

Baosteel Metal developed Φ5mm 1860MPa high stress amplitude zinc-aluminum steel wire (600MPa fatigue stress amplitude) and successfully applied it in the cable replacement project of the Five-hundred-meter Aperture Spherical radio Telescope (FAST) in Guizhou after cable manufacturing.



宝钢股份与宝钢工程携手打造首个连铸数字孪生工厂  
Baosteel and Baosteel Engineering jointly built the first continuous casting digital twin factory

# 数智化转型 赋能

## Empowered by digital and intelligent transformation

宝武加快推进数智化建设，充分发挥数字技术在产业发展中的赋能引领作用。深化生态圈统一信息基础设施建设，云计算品牌“宝之云”完成全国布局，工业互联网平台“宝联登”全面升级，大数据中心平台建设和应用全面提速，有效支撑了“三重智慧”建设。智慧制造向“One Mill”和极致效率加速发展，近千名“宝罗”机器人快速上岗。智慧服务加速向数据驱动的平台化服务模式演进，宝武智维云、欧冶云商生态运营平台、欧冶工业品欧贝平台入选上海市服务型制造示范平台，宝武数科公司挂牌成立。以全球司库、大数据审计、办公OA 4.0为代表的一批系统重构，实现了寓管理于共享服务、数字赋能的穿透式监督，智慧治理能力稳步进阶。

Baowu accelerated the construction of digital intelligence by fully leveraging the empowering and leading role of digital technology in industrial development. We also deepened the construction of the unified information infrastructure for the ecosystem, completed the nation-wide deployment of the cloud computing brand “baocloud”, fully upgraded the Industrial Internet platform “xin³Plat”, and accelerated from all respects the construction and application of the big data center platform, effectively supporting the construction of “triple intelligence”. The intelligent manufacturing was accelerated towards “One Mill” and extremely high efficiency, with nearly a thousand of “BAOLUO” robots quickly taking up their positions. The intelligent services were evolving toward a data-driven platform based service model. Baowu Equipment Intelligent Technology Cloud, Ouyeel’s Ecological Operation Platform, and Obei’s Obei Platform were listed as “Shanghai Service-oriented Manufacturing Demonstration Platform”, and Baowu Sharing Service Company was established. A series of system restructuring initiatives, represented by global treasurer, big data audit and office OA 4.0, realized penetrating supervision integrating management with shared services and digital empowerment, and promoted the intelligent governance capability to a new and stable level.

名词解释

Terms interpretation

“One Mill”即“一个工厂”，指多个基地、多个厂借助于智慧制造的专业化整合。

“One Mill” refers to that multiple bases and factories are professionally integrated into “One Mill” by means of intelligent manufacturing.



2022 年子公司智慧制造工作亮点  
Work highlights of subsidiaries in intelligent manufacturing in 2022

宝钢股份  
Baosteel

开发出全球首创无人SmartTPC智慧铁水运输系统（SmartHIT），快速实现物流体系“宝罗”上岗，大幅提升劳动效率和安全本质化程度。

It developed the world’s first unmanned SmartTPC intelligent molten iron conveying system (SmarrHIT), and rapidly completed the deployment of “BAOLUO” robots in the logistics system, significantly improving labor efficiency and inherent safety level.

2022 年度标杆案例  
Benchmarking case in 2022

太钢集团、  
宝信软件  
TISCO and  
Baosight

应用“宝罗”机器人打破传统手工操作的方式，实现了钢铁成品物理性能检测的“少人化、无人化”的目标，推动钢铁成品物理性能检测的“产业智慧化”。

They adopted the “BAOLUO” robots to break the traditional manual operation method, achieved the goal of “less-man and unmanned” physical property testing of steel finished products, and promoted the “industrial intelligence” of such testing.

2022 年度标杆案例  
Benchmarking case in 2022

宝武资源  
Baowu Resources

通过矿山管控中心建设和智能感知技术、智能界面技术运用，建成集“生产指挥、生产操作、质量管理、安环管理、报表汇总、设备运控”等六大管理功能为一体的管控中心，实现传统矿山向数字化智慧矿山的转型。

It established a control center integrating six major management functions (production command, production operation, quality management, safety and environment management, report consolidation and equipment operation control) through the construction of a mine control center and the application of intelligent perception technology and intelligent interface technology, and realized the transformation from traditional mines to digital intelligent mines.

2022 年度标杆案例  
Benchmarking case in 2022

宝武智维  
Baowu Equipment  
Intelligent  
Technology

“宝武智维云”平台先后入选工信部新一代信息技术与制造业融合发展试点示范、服务型制造平台示范；《钢铁行业设备智能运维系统解决方案研究及应用》项目荣获2022年冶金科学技术奖一等奖。

The “Baowu Equipment Intelligent Technology Cloud” platform was identified as a pilot demonstration for the integration of new generation information technology and manufacturing, as well as a demonstration for service-oriented manufacturing platforms, by the Ministry of Industry and Information Technology. Its project *Research and Application of Artificial Intelligence in Intelligent Operation & Maintenance System Solutions for Equipment in Iron & Steel Industry* won the first prize of 2022 Metallurgical Science and Technology Award.

欧冶链金  
Ouyeel Lianjin  
Recycling Resources  
Co., Ltd.

发布国内首个金属再生资源智慧工厂成果；废钢智能检判系统成功实现商业应用；智慧平台+SaaS业务系统服务模式已在4家子公司上线应用。

It released the results of the first intelligent metal resources recycling factory in China, realized the commercial application of intelligent scrap steel inspection and assessment system, and applied the intelligent platform + SaaS business system service model in four subsidiaries.

欧冶工业品  
Obei

构建面向社会的工业品数智化生态平台，为工业品产业生态圈打造全生命周期智慧制造和服务的体系架构，2022年宝武工业品生态平台交易规模超过3500亿元。

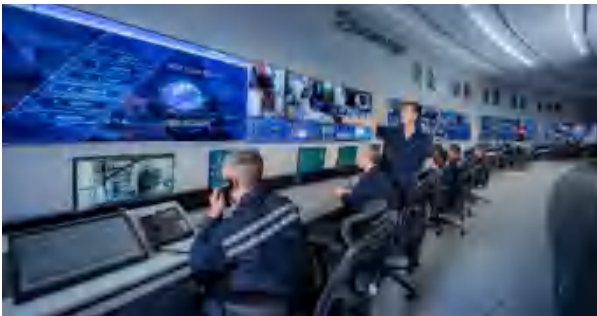
It built a digital and intelligent ecological platform for community-oriented industrial products, built a system and architecture for intelligent manufacturing and services throughout the entire lifecycle of the industrial product ecosystem, and realized more than RMB 350 billion of turnover through Baowu Industrial Product Ecological Platform in 2022.



宝钢股份：智慧铁水运输打造行业新标杆  
Baosteel: SmarrHIT created a new benchmark in the industry



太钢集团、宝信软件：钢铁成品物理性能检测的智慧化革新  
TISCO and Baosight: intelligent in the physical property testing of steel finished products



宝武资源：装上“智慧大脑”，让矿山变“金山”  
Baowu Resources: “intelligent brains” turned mines into “gold mountains”



欧冶链金：2022 智慧制造集控中心  
Ouyeel Lianjin Recycling Resources Co., Ltd.: 2022 Intelligent Manufacturing Centralized Control Center

## 统筹创新管理

### Coordinating innovation management



“惟有创新才能驱动发展，只有创新才有宝武的未来。一定要把科技创新作为企业发展的第一动力，作为各项工作的重中之重，加大推进力度，以高水平科技自立自强实现公司高质量发展。”

“Only innovation can drive development and only innovation can bring Baowu a bright future. We must regard scientific and technological innovation as the primary driving force for the enterprise's development and the top priority among all tasks, increase efforts to promote innovation, and achieve the high-quality development of the company with high-level self-reliance and self-improvement in science and technology.”

——党委书记、董事长 胡望明

—Hu Wangming, Secretary of CPC, Chairman



## 科技创新战略 规划引领

### Guiding the technological innovation led by strategic planning

在《中国宝武“十四五”科技专项规划》基础上，聚焦碳中和前瞻性技术创新、钢铁材料升级与先进材料创新、能源高科技技术创新、数智化技术创新等战略性任务，布局若干项重大技术，加快实现技术引领，形成《2022—2027年科技创新规划》。

On the basis of the China Baowu 14<sup>th</sup> Five-Year Special Plan for Science and Technology, we focused on our strategic tasks, such as forward-looking technological innovation of carbon neutrality, steel material upgrading, advanced material innovation, high-tech energy oriented technological innovation and digitalization & intelligence based technological innovation, made strategic arrangements for several critical technologies, accelerated the work toward technological leadership, and formulated the 2022-2027 Scientific and Technological Innovation Plan.

## 加快打造原创 技术策源地

### Speeding up the building of a source of original technologies

按照国务院国资委方案编制要求，围绕钢铁绿色低碳技术领域，开展国内外发展情况梳理、技术基础和能力分析、技术谱系图编制、研发任务分解及推进体制机制策划，初步形成了工业绿色低碳领域原创技术策源地实施方案。

According to the requirements of the SASAC of the State Council for the preparation of the implementation plan, we centered on the green and low-carbon technology field of iron and steel industry, made clear the domestic and foreign development situation, analyzed the technical bases and capabilities, generated a technology pedigree chart, broke down the research and development tasks, pushed forward the system and mechanism related planning work, and preliminarily developed the implementation plan for incubating original technologies applicable to the green and low-carbon industrial fields.

## 强化中央研究院 组织保障能力

### Strengthening the organizational support capacity of the Central Research Institute

在宝武中央研究院成立基础研究与应用创新中心，开展钢铁及新材料领域应用基础研究，同时牵头推进开源合作生态及相关体制机制建设；成立数智技术研究中心，以数据+AI为核心，通过平台化建设、生态化协同、专业化发展模式开展以“数智化自主核心技术+场景综合解决方案”的网络化模式拓展应用，推动宝武产业智能化和智慧产业化。

We set up a basic research and application innovation center in the Central Research Institute of Baowu to carry out the basic research on the application of steel and new materials, and took the lead in promoting the construction of open source cooperation ecosystem and related frameworks and mechanisms. We also established a digital intelligence technology research center. Centered on the “Data + AI”, we carried out network expansion and application based on the “digitalization & intelligence based independent core technologies + scenario based comprehensive solutions” model through the platform construction, ecological collaboration and professional development, to promote the intelligent transformation of industries and the industrialization of intelligent technologies within Baowu.

## 建设科技创新 激励保障机制

### Setting up the mechanisms for incentivizing and supporting technological innovation

出台《关于新时代科技创新激励保障机制建设指导意见》，从项目管理、评价引导、激励驱动、保障支撑等方面进一步加强科技创新激励保障机制建设，充分激发科技人员创新创造活力，鼓励科技人员在新时代创新创造中奋勇建功，助力宝武实现高质量发展。

We issued the *Guiding Opinions on the Incentives and Guarantee of Science and Technology Innovation in the New Era*, to further strengthen the construction of incentive and supporting mechanisms for science and technology innovation from project management, evaluation guidance, incentive driving and support, fully stimulate the innovation and creation vitality of technicians and engineers, and encourage them to make heroic contributions in innovation and creation in the new era, helping Baowu achieve high quality development.

## 职工岗位创新

### Encouraging on-the-job innovation

全面推进职工岗位创新和价值创造，加强岗位创新体系建设，形成“以建强创新主链为要、以做优创新平台为基、以培育创新人才为本”的工作机制，激发全员创新活力。

We fully promoted the on-the-job innovation and value creation by all workers and employees, strengthened the construction of on-the-job innovation system, and set up a work mechanism that “focuses on building and improving a main innovation chain, relies on the continuous optimization of innovation platforms, and aims at fostering creative talent”, to stimulate the innovation vitality of all workers and employees.



集团公司工会发布《中国宝武职工岗位创新工作报告》

The Labor Union of the Group Corporation released the *China Baowu On-the-job Innovation Work Report*





职工献计  
**85.3** 万条

Good ideas contributed by workers and employees: **853000** pieces

采纳实施率提升  
**56%**

Adoption and implementation rate increased by: **56%**

## 建强创新主链

### Building and improving a main innovation chain

畅通职工自主献计渠道，全年度职工献计85.3万条，采纳65.9万条，实施58.5万条，采纳实施率提升了56%。紧扣岗位创新定位，评选第二届“中国宝武优秀岗位创新成果奖”。推进知识产权增值，荣获巴黎国际发明展、省部优秀发明选拔赛多个奖项。

We provided convenient and efficient channels for all workers and employees to contribute their good ideas actively. In 2022, 853000 ideas were contributed by the workers and employees, among which 659000 were adopted, and 585000 were implemented, resulting in a 56% increase in the adoption and implementation rate. We also recognized their great contributions by granting the 2<sup>nd</sup> China Baowu Excellent On-the-job Innovation Achievement Award. Moreover, we promoted the value realization of intellectual property rights and won multiple prizes at the Concours Lépine International, as well as the Provincial and Ministerial Excellent Invention Selection Competition.



第二届“中国宝武优秀岗位创新成果奖”颁奖仪式

Awards ceremony of the 2<sup>nd</sup> China Baowu Excellent On-the-job Innovation Achievement Award

## 做优创新平台

### Continuously optimizing the innovation platforms

强化“有形覆盖”，发动子公司为具备条件的劳模创建工作室，资助新建职工创新基地1个；坚持以评促建，评选宝武“绿色低碳技术攻关创新工作室”18个，推荐1个基地申报工匠学院；探索“岗位创新联盟”建设，连点成线，促进同领域同工序创新工作室共建共享共进。

We strengthened the “tangible coverage”, called all subsidiaries to build studios for qualified model workers, and invested in establishing one new employee innovation base. We also adhered to promoting construction through evaluation, identified 18 “Green and Low-carbon Technology Innovation Studios”, and recommended one base to apply for the Craftsmanship College. Furthermore, we explored the construction of the “On-the-job Innovation Alliance” as a hub to promote the joint building, sharing and progress of innovation studios in the same field or in the same process step.

## 培育创新人才

### Fostering innovative talent

健全创新人才梯队，评选“宝武工匠”10名、提名奖26名，授予36名职工“岗位创新新人奖”，推荐高技能人才参评省部及行业工匠；强化培训赋能，选送22人次参与省部及以上工匠研修，内部开展系列培训、训练营。开展岗位创新课题研究，规划未来发展方向，推动职工岗位创新持续迭代升级。

We reinforced the construction of innovative talent team, designated 10 workers/employees as the “Baowu Craftsman”, identified 26 workers/employees in the finalist, awarded 36 workers/employees the “New Star of On-the-job Innovation”, and recommended highly skilled talent to participate in provincial, ministerial and industry craftsmanship evaluations. We also strengthen the training for empowerment, and selected and sent 22 person-times to participate in craftsman training sessions held at the provincial level and above, and carried out a series of internal knowledge imparting and training camps. Moreover, we carried out researches on the on-the-job innovation topics, and planned the future development directions, to promote the continuous iterative upgrading of the on-the-job innovation.



宝武科技管理人员专题培训活动

Baowu's special training for managers responsible for science and technological affairs





# 治理现代

推动新时代“宝武之治”落实落地

## Promote Modern Governance

to Drive the Implementation of  
“Governance of Baowu” in the  
New Era

回应可持续发展目标  
Response to SDGs



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## 我们的理解 What we know

治理现代化是企业发展的保障，也是加快建设世界一流企业的护航舰。具有优秀治理能力的企业，具备“基业长青”的潜质，能够妥善应对企业发展不同阶段的各种形态，能够因应变化管控战略，能够有效防范化解各类风险实现稳健经营，能够吸引优秀人才激发员工工作激情，且能够形成可复制可推广的企业管理模式。

The modernization of governance is essential for an enterprise in ensuring its continuous growth, and is critical for accelerating the building of a world-class enterprise. Only an enterprise doing well in corporate governance can practically realize the goal of “Built to Last”, properly respond to various forms of enterprise development at different stages, accordingly adjust the management and control strategies, effectively prevent and mitigate all risks to ensure the stable operation, successfully attract excellent talents and inspire the passion of employees, and establish a replicable business management model which can be widely applied.

## 我们的实践 What we do

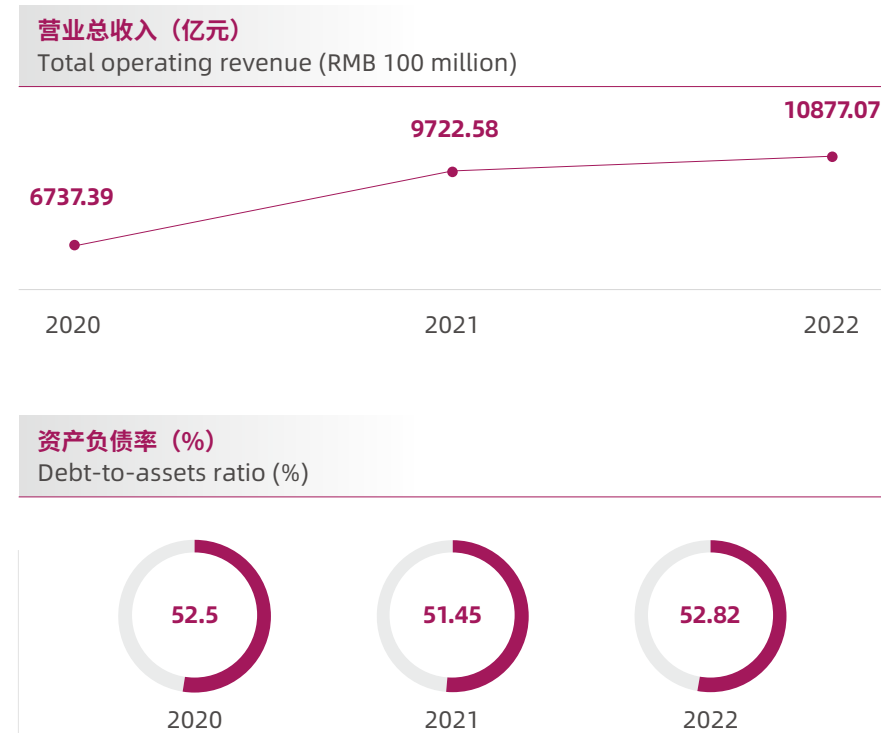
宝武不断夯实治理根基、落实国企改革、健全审计体系、深入推进全面从严治党，不断提升治理能力，防范经营风险，全面推进建设世界一流企业。

Baowu insists on consolidating the foundation of corporate governance, promoting the reform of SOE, improving the audit system, practicing full and strict governance over the Party, improving capabilities of corporate governance, and preventing and controlling operational risks, in order to build a world-class enterprise.

## 关键绩效指标 Key performance indicators

### 治理能力：抗风险能力

Governance capacity: risk resistance capacity



完成改革任务

**109** 项

**109** reform tasks were fulfilled and **155** reform measures were implemented

完成改革举措

**155** 项

下属

**227** 家子公司董事会 **100%** “应建尽建”

The boards of directors were built as required for all **227** subsidiaries (**100%**)

“一基五元”混合所有制改革齐头并进，成功引入社会资本

**69.98** 亿元

The mixed ownership reform according to the “One Basis and Five Industries” guidelines was carried out in parallel, and RMB **6.998** billion of social capital was attracted successfully

钢铁制造业人均产钢量

**1334** 吨

同比提升

**10.9%**

The per capita output of steel in the iron and steel manufacturing sector was increased by **10.9%** on a YOY basis to **1334** tons

## 责任专题

### Column on Responsibility

## 凝心聚力铸初心，笃行不怠开新局

### Bear in Mind the Original Intention Jointly and Use Every Effort to Make a Fresh Start

坚持党的领导，加强党的建设，是国有企业的“根”和“魂”，也是我们建设世界一流企业的“根”和“魂”，是国有企业创建世界一流企业的政治优势和政治保证。我们要充分发挥这一政治优势，不断提升集团公司的凝聚力和战斗力。

Upholding the leadership of the Communist Party and strengthening Party building are the "root" and "soul" of state-owned enterprises and our aiming at building a world-class enterprise, as well as the political advantages and political guarantees for state-owned enterprises in building world-class enterprises. We shall fully leverage this political advantage to continuously enhance the cohesion and competitiveness of Group Corporation.

#### 2022年

宝武有党组织

**3809** 个

其中党委

**346** 个

党总支

**277** 个

党支部

**3186** 个

党员

**90110** 名

In 2022, Baowu has set up **3809** Party organizations, **346** Party committees, **277** general Party branches, and **3186** Party branches, covering **90110** Party members

### 全面推动学习宣传贯彻党的二十大精神走深走实

Comprehensively implementing the guiding principles of the 20<sup>th</sup> CPC National Congress through wide publicity and deep study

宝武深入领会党的二十大精神的核心要义、精神实质、丰富内涵和实践要求，对全体宝武人学习宣传贯彻党的二十大精神作出部署和要求，举办宝武党委理论学习中心组（扩大）学习暨宝武领导人员学习贯彻党的二十大精神专题辅导培训班，举行学习贯彻党的二十大精神座谈会、读书班等，多措并举推动党的二十大精神贯彻落实。

Baowu thoroughly grasped the core significance, spiritual essence, profound connotation and practical requirements of the guiding principles of the 20<sup>th</sup> CPC National Congress, and made arrangements and raised requirements for all people in Baowu to study, publicize and implement the guiding principles. It organized the Baowu Theory Studying Central Group of Party committee (Expanded) and Baowu leaders to learn and implement the guiding principles of the 20<sup>th</sup> CPC National Congress through thematic guiding and training courses, and held various activities such as symposiums and reading classes to study and implement the guiding principles of the 20<sup>th</sup> CPC National Congress, with multiple measures to promote its implementation.



举办深入学习贯彻党的二十大精神读书班

A reading class organized for adequately comprehending and practicing the guiding principles of the 20<sup>th</sup> CPC National Congress



收看收听党的二十大开幕

Watching and listening to the opening ceremony of the 20<sup>th</sup> CPC National Congress



学习贯彻落实习近平总书记重要讲话指示批示精神  
Studying and implementing the spirit in the important speeches, instructions and directions by General Secretary Xi Jinping

深入学习贯彻习近平总书记重要讲话、重要指示批示精神，认真落实党委会“第一议题”制度，构建以党委常委会“第一议题”常态学、党委理论中心组学习深入学和集团公司领导日常自己学为一体的学习体系。围绕学习贯彻党的二十大精神、关于力戒形式主义官僚主义重要论述等，开展党委理论学习中心组学习14次；学习传达总书记重要讲话、指示批示和上级重要文件会议精神24次。

Baowu thoroughly studies and implements the spirit in the important speeches, instructions and directions by General Secretary Xi Jinping, strictly carries out the “First Topic” system during the Party committee's meeting, and builds a studying system that integrates the normalized studying of “First Topic” at the meetings held by the standing committee of Party committee, the deep studying at the workshops/training sessions organized for the Theory Studying Central Group of Party committee, and the daily self-learning by the members of leading group. Baowu has organized 14 workshops/training sessions for the Theory Studying Central Group of Party committee, and 24 seminars for comprehending and communicating the spirit in the important speeches by General Secretary Xi Jinping, instructions and directions, as well as in the documents issued by the superior departments, focusing on the guiding principles conveyed by the 20<sup>th</sup> CPC National Congress, and the important words about resisting formalism and bureaucracy.

2022年

开展党委理论学习中心组学习

14次

In 2022, Baowu has organized **14** workshops/training sessions for the Theory Studying Central Group of Party committee, and **24** seminars for comprehending and communicating the guiding principles in the important speeches by General Secretary Xi Jinping, instructions and directions, as well as in the documents issued by the superior departments

学习传达总书记重要讲话、指示批示和上级重要文件会议精神

24次

全面加强党的领导，统领创一流工程  
Comprehensively strengthening the leadership of the Party, and taking the lead in building a top-ranking enterprise

坚持“两个一以贯之”，把党的领导融入、党的组织内嵌于企业治理结构和企业经营管理全过程，发挥党委“把方向、管大局、保落实”作用。始终牢记总书记对国有企业“六种力量”的历史定位和央企的使命担当，坚决贯彻党中央决策部署，于国家的发展战略中确立并调整自己的发展定位。

Baowu adheres to the principle of “Two Consistencies”, embeds the leadership and the organizations of the Party into the governance structure and the whole business management process of the enterprise, and gives full play to the Party committee in “setting the right direction, keeping in mind the big picture, and ensuring the implementation of Party policies and principles”. Baowu always keeps in mind the historical positioning of the state-owned enterprises in terms of the “Six Forces” as pointed out by General Secretary, as well as the mission and responsibilities of a central state-owned enterprise, uncompromisingly implements the decisions and deployments of the CPC Central Committee, and adapts its own development positioning strategies to the nation's general plans.

充分发挥政治优势，打造世界一流企业  
Fully leveraging the political advantages to build a world-class enterprise

强化思想政治建设和企业文化建设

Strengthening ideological and political construction and corporate cultural building

旗帜鲜明地宣传企业使命、愿景、价值观，弘扬“钢铁报国、开放融合、严格苛求、铸就强大”的企业精神，将思想政治和企业文化建设成果转化为推动集团公司改革发展的竞争优势。

We take a clear-cut stand in promoting our mission, vision and values, uphold the corporate spirit of “Dedication, Integration, Perfection and Greatness”, and transform the achievements in ideological and political construction and corporate culture building into competitive advantages to push forward the reform and development of the Group Corporation.

打造高素质的干部人才队伍

Building a quality team of cadres and talents

充分发挥党管干部、党管人才的政治优势，筑牢人才工作组织保证；创新机制，以公开透明、事业激励、物质激励营造惜才育才的良好氛围；强化赋能授权，落实落细人才服务保障。

We give full play to the political advantages of “placing cadres and talents under the Party's supervision”, and solidify the organizational foundation for executing the talent management work; we innovate mechanisms to create a good atmosphere of cherishing and utilizing talents through openness, transparency, career promotion and material incentives; and we strengthen the empowerment and enabling mechanisms to ensure that all talent service policies are carried out in place at all levels.

全面加强基层党建和工会群团组织建设和

Comprehensively strengthening the Party building, the construction of trade unions and mass organizations at the primary level

持续推进党建责任和经营责任有机统一，充分发挥基层组织（包括党组织、工会组织、群团组织等）团结凝聚广大员工的比较优势，为宝武创建世界一流企业源源不断输送先锋力量。

We continuously promote the organic unity of Party building responsibilities and business operation responsibilities, fully leverage the comparative advantages of grassroots organizations (including Party organizations, trade unions and mass organizations) to unite and gather employees, and continuously provide vanguard forces required by Baowu to grow into a world-class enterprise.

推进全面从严治党向纵深发展

Extending the full and strict governance over the Party down to the grassroots

聚焦“国之大者”推动政治监督具体化常态化；贯彻落实“持续深化国企反腐败工作”部署，切实加大正风肃纪反腐工作力度；开展为基层减负“回头看”，持续推进形式主义官僚主义整治；持续改进文风会风，严格执行履职待遇规定，厉行勤俭节约；全面深化党风廉政建设和反腐败工作，厚植廉洁文化，打造“廉洁宝武”。

We focus on “the matters of national significance” to promote the concretization and normalization of political supervision; act in full accordance with the work arrangement concerning “continuously and deeply promoting anti-corruption in state-owned enterprises”, and effectively increase the efforts in the rectification, discipline and anti-corruption work; reduce the burden on the grassroots according to the principle of “regular self-examination” to continuously promote the rectification of formalism and bureaucracy; continuously improve the style of work in relation to the wording of official documents and behaviors at meetings, strictly implement the regulations on job performance and remuneration, and act in full compliance with the diligence and thrift rules; and comprehensively deepen the construction of Party conduct and clean government, as well as anti-corruption work, to cultivate a culture of integrity in Baowu.

# 全面从严治党

## Full and strict governance over the Party

2022年，集团公司党委、纪委坚持一体推进不敢腐、不能腐、不想腐，党风廉政建设和反腐败工作取得新的成效。

In 2022, the Party committee and Discipline Inspection Commission of the Group Corporation promoted the anti-corruption work through strengthening the ideological constraints, behavioral constraints and institutional constraints, and made great achievements in enhancing Party conduct, government integrity and anti-corruption.

# 强化政治监督

## Strengthening political supervision

政治监督常态化

Normalization of political supervision

推动各级党委坚决执行好“第一议题”制度，组织学习习近平总书记重要讲话和指示批示精神，并建立任务台账实行销号落实。

We urge the Party committees at all levels to firmly implement the “First Topic” system, organize the study of General Secretary Xi Jinping’s important speeches and instructions, and establish accountability ledgers for tracking the execution of relevant tasks.

政治监督具体化

Concretization of political supervision

开展习近平总书记考察调研宝武时重要讲话精神和关于宝武碳达峰碳中和重要批示精神贯彻落实情况“回头看”，贯通融合纪检、巡视、审计、财务、合规等各类监督。

We carry out regular self-examination for implementing the spirit in the important speeches by General Secretary Xi Jinping from his inspection in Baowu and the spirit in the important instructions on Baowu’s carbon peak and carbon neutrality, and integrate various types of supervision such as disciplinary inspection, inspection, audit, finance, and compliance.

政治监督精准化

Precision of political supervision

聚焦加强对“一把手”和领导班子监督，完善“四责协同”工作机制，完成对二级单位“一把手”全覆盖监督谈话。

We focus on strengthening the supervision over top leaders and leading group, improve the “four responsibilities coordination” work mechanism, and complete the talks for full supervision on the leaders directly in charge of subordinate units.

# 完善大监督体系

## Improving the overall supervision system

贯通融合纪检、巡视、审计、合规等各类监督，探索建立“上下联动、区域管理、交叉监督”工作机制，增强监督合力。编制宝武大数据监督数字化建设路线图并纳入集团公司数智治理总体规划，加强招投标过程中腐败风险监督与防控，聚焦重点领域关键环节开发建设大数据监督体系，组织推动6家单位开发系统，助力反腐。

We integrate various types of supervision such as disciplinary inspection, inspection, audit and compliance management, explore a work mechanism supporting “coordination between the upper and lower levels, regional management, and cross-supervision”, and enhance the supervision synergy. We also develop a Big Data Supervision Digital Construction Roadmap of Baowu and incorporate it into the Group Corporation overall digital and intelligent governance plan, to strengthen the supervision and prevention of corruption risks in the bidding process. Moreover, we develop and build a big data supervision system with focus on key links in key areas, and organize six units to develop the corresponding systems to facilitate the anti-corruption work.

# 一体推进“三不腐”

## Promoting the anti-corruption work towards the “dare not, cannot and wish not commit corruption” goal

加大执纪审查力度，全年立案256件，同比增长14%；自主办案214件，同比增长13%；主动发现问题线索231件，同比增长38%。召开警示教育会550余场，接受教育3.4万人次；制定《加强新时代廉洁文化建设实施意见》，推动廉洁宝武建设。

We intensified disciplinary performance and inspection. As a result, 256 cases were filed throughout the year, increased by 14% YOY; 214 cases were handled independently, increased by 13% YOY; and 231 clues were discovered actively, increased by 38% YOY. Moreover, we held more than 550 warning education meetings, covering 34000 person-times. We also developed the *Opinions on Strengthening the Construction of Integrity Culture in the New Era* to push forward the corruption combating and integrity promoting work in Baowu.

名词解释

Terms interpretation

“三不腐”：不敢腐、不能腐、不想腐

“Dare not, cannot and wish not commit corruption” goal means that endeavors should be made to create a political climate in which officials “dare not, cannot and wish not commit corruption”



持续纠治“四风”

Proceeding the work against the “Four Malfeasances”

查办违反中央八项规定精神问题线索57件，立案32件，给予纪律处分32人次、采取组织处理59人次；深入整治形式主义、官僚主义问题，严肃问责不担当、不作为等责任落实不到位问题，问责各级管理人员63名；持续深化“违规经商办企业”治理。

57 clues of cases involving violation of the CPC Central Committee’s eight-point decision on improving conduct were investigated and dealt with; 32 cases were filed; 32 person-times were punished with disciplinary actions; and 59 person-times were punished with organizational measures. We took further actions to eradicate formalism and bureaucracy, seriously looked into the inadequate implementation of responsibilities such as lack of responsibility and inaction, and hold 63 managers at different levels accountable for their failure to fulfill their responsibilities and duties. We also proceeded with the work against “carrying out business activities without prior approval by competent authorities”.

|                      |  |
|----------------------|--|
| 名词解释                 | “四风”：形式主义、官僚主义、享乐主义和奢靡之风   |
| Terms interpretation | “Four Malfeasances”: favoring form over substance, bureaucracy, hedonism, and extravagance |

深化政治巡视

Deepening political inspection

开展3家单位党组织的常规巡视，完成巡视工作五年全覆盖任务；推进巡审联动，探索“同巡同审”“先审后巡”等工作方式；强化上下联动，深化中央巡视和集团公司党委巡视整改。

We carried out routine inspections on Party organizations of three units, and completed the task of arranging inspection work fully for five years. Moreover, we promoted the linkage between inspection and audit to explore different working methods such as “inspection and audit executed in parallel” and “inspection after audit”. We also strengthened the linkage between the upper and lower levels, deepened the rectification work according to the opinions from the inspections by the Central Committee and the Party committee of the Group Corporation.

强化队伍建设

Strengthening the team construction

完善政治学习机制

Improving the political education mechanism

组织纪检监察干部深入学习贯彻党的二十大精神、习近平总书记关于提高一体推进“三不腐”能力和水平重要讲话精神、中央纪委国家监委部署要求等。

We organized the cadres responsible for discipline inspection and supervision to thoroughly study and implement the guiding principles of the 20<sup>th</sup> CPC National Congress, the spirit in important speeches of General Secretary Xi Jinping on improving the capabilities and abilities for promoting the integrated anti-corruption work towards the “dare not, cannot and wish not commit corruption” goal, and the deployments and requirements of the Central Commission for Discipline Inspection of the CPC and the National Supervision Commission of China.

开展全员培训

Carrying out training for all employees

共计开展6期纪检监察业务集中研修，培训1200余人次。

A total of 6 centralized training sessions on disciplinary inspection and supervision were held, covering over 1200 person-times.

推进重点工作项目化

Promoting the project-based key tasks

强化执纪审查全流程管控，防治“灯下黑”，处置涉及纪检干部的问题线索13件，给予纪律处分3人次，采取组织处理11人次。

We strengthened the control of the whole process of disciplinary performance and inspection to prevent the “dead angles”, and handled 13 clues involving cadres responsible for disciplinary inspection, with disciplinary actions against 3 person-times and organizational measures against 11 person-times.

夯实治理根基

Laying a solid foundation for corporate governance

宝武坚持加强党的领导和完善公司治理相统一，围绕建设规范高效的董事会，夯实制度基础，优化运行机制，与各公司治理主体高效沟通、积极协调，持续提升董事会运行效能。

Baowu sticks to the integration between strengthening the leadership of the Party and improving corporate governance, attaches importance to building a standardized and efficient board of directors to consolidate the institutional foundation, and optimizes the operating mechanisms to ensure the effective communication and active coordination with governance parties of all companies, and continuously improves the operational efficiency of the board of directors.

完善董事会制度建设

Improving the board system

董事会由8名董事组成，其中外部董事5名。外部董事均由国务院国资委从企业外部选聘符合条件的人员担任，均具有履行董事职责的大型企业管理经历、丰富经验和专业知识，确保每一个方面如财务会计、行业背景等，都至少有一名外部董事具有专长。

The board of directors consists of 8 members, including 5 outside directors. These outside directors are all qualified individuals recruited outside the Group Corporation and appointed directly by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council. They all have the management experience in large enterprises and professional knowledge to fulfill their duties as directors, so as to ensure that at least one outside director has expertise in each domain, such as financial accounting and industry background.

名词解释

Terms interpretation

“三重一大”即认真贯彻民主集中制原则，凡属重大决策、重要干部任免、重要项目安排和大额度资金的使用，必须经集体讨论作出决定。

The “Three Majors and One Large” refers to that any major decisions, the appointments or removals of any major cadres, the arrangements of any major projects and the use of large funds shall be discussed and decided collectively in strict accordance with the principle of democratic centralism.

董事会进一步理清理顺董事会、党委、经理层的权责关系，持续完善权责法定、权责透明、协调运转、有效制衡的公司治理机制，修订公司章程，在系统评估重大事项决策体系运行效果的基础上，推动完善董事会授权管理方案、“三重一大”决策制度实施办法、重大事项决策权责清单，进一步健全决策事项、细化职责权限、完善授权管理、优化决策流程，确保董事会运作有章可循、有法可依，不断提升董事会建设规范化、科学化水平。

The board of directors further defines and clarifies the authority-responsibility relationships among the board of directors, Party committee and management team; continuously improves the corporate governance mechanism based on the statutory authorities and responsibilities, transparency, coordination, and effective counterbalance; and revises the articles of association of the Group Corporation. It improves the board of directors' authorization management rules, the implementing measures for the “Three Majors and One Large” decision-making principle and the list of major decision-making related authorities and responsibilities, based on the systematic evaluation of the operational effectiveness of the major decision-making system. In addition, it further clarifies the decision-making matters, defines the responsibilities and authorities, improves the authorization management, and optimizes the decision-making processes, to ensure that the operation of the board of directors has rules and laws to follow and continuously improve the standardization and modernization levels of board construction.

畅通信息沟通机制

Streamlining the information communication mechanism



通过相关会议学习，精准把握当前国企改革重点难点问题，了解履职要求；督促集团公司及时向国务院国资委报送各类报告，征求出资人的审批或指导意见，确保董事会相关工作信息及时准确上报。

We organize relevant meetings and learning activities to accurately grasp the key and challenging issues arising from the on-going SOE reform and adequately understand the requirements for performance of duties; urge the Group Corporation to timely submit all required reports to the SASAC of the State Council for approval and ask for approval or guiding opinions of the investor, so as to ensure that the board of directors can report its work related information timely and accurately.



充分利用董事会、务虚会、年度工作会议、季度工作例会、决策人研修会议等平台，就战略定位、改革发展、经营投资等问题进行深入研讨。

We make full use of the opportunities and platforms, such as the meetings of board of directors, theory-discussing meetings, annual work meetings, quarterly work meetings and decision-makers training sessions, to fully discuss the matters in connection with the strategic positioning, reform and development, operation and investment.



外部董事充分利用自身专业能力和资源优势为集团公司提供专业指导和业务支持；将董事会决议事项纳入集团公司督办体系，突出对经理层执行董事会决议事项的监督，强化决策落地。

We encourage the outside directors to fully utilize their own expertise and advantage in resources to provide professional guidance and business support for the Group Corporation; bring the resolutions of the board of directors into the supervision system of the Group Corporation to strengthen the supervision on the management's execution of board resolutions, and ensure the exact execution of such decisions.

强化外部董事履职支撑

Strengthening all supports for the outside directors in fulfilling their duties

落实国务院国资委关于规范中央企业外部董事履职保障工作要求，制定《关于加强中央企业外部董事履职支撑服务的工作方案》，持续做好专项信息报送、外部董事调研服务、重大决策事项会前沟通支撑等服务，持续深化外部董事务虚会制度，强化外部董事履职保障。

According to the requirements of the SASAC of the State Council on regulating the guarantee of the duty fulfillment of outside directors in central SOEs, we have formulated the *Work Plan for Strengthening the Support and Services for the Duty Fulfillment of Outside Directors in Central SOEs*, so as to provide services such as special information submission, outside director investigation, and prior communication support before the meeting concerning major decisions, keep improving the system of theory-discussing meetings for outside directors and strengthen all mechanisms in favor of the outside directors to fulfill their duties.

落实国企改革

Promoting the SOE reform

2022年是国企改革三年行动收官之年，宝武全面贯彻落实党中央、国务院国资国企改革决策部署，扎实推进国企改革三年行动任务和集团公司重点改革任务，全面完成了109项改革任务、155项改革举措，以及集团公司年度重点改革任务，实现了高质量圆满收官，取得了一系列突破性成果。

2022 sees the closing of the three-year action plan for state-owned enterprise reform. Baowu fully implemented the decisions and deployments of the Party Central Committee and the SASAC of the State Council on SOE reform, and effectively pushed forward all work to accomplish the key reform tasks as specified in this action plan and set by the Group Corporation. We fully accomplished 109 reform tasks, 155 reform measures, and the annual key reform tasks set by the Group Corporation, thus making a series of great breakthroughs to achieve the high quality fulfillment.



形成具有宝武特色的“2321”  
改革模式

A distinguished “2321” reform  
model is formed and applied  
by Baowu

“2”个坚持：坚持国有资本投资公司功能定位，坚持“两个一以贯之”。  
党建与治理、党建与生产经营深度融合。

“2” adherences: adhere to the functional positioning as state-owned investment  
company and the guidelines of “Two Consistencies”, to combine Party building with  
corporate governance, and Party building with production and operation.

“3”类创新：科技创新、机制创新、商业模式创新。

“3” innovations: technological innovation, mechanism innovation and business model  
innovation.

“2”项改革：组织变革、混合所有制改革。

“2” reforms: organizational reform and mixed ownership reform.

“1”组退出：法人压减、瘦身健体，关停注销处置僵尸企业、长期亏损  
企业，稳步清理退出“两非”产业。

“1” group of cancellation and closure: streamline legal entities to keep the Group  
Corporation in good operation; close and cancel zombie enterprises and enterprises  
with long-term losses; and systematically clean up the business lines which are neither  
main business nor competitive business.

纵深推进国企改革

Deepening the SOE reform

全面深入贯彻“两个一以贯之”

Comprehensively and thoroughly implementing the guidelines of “Two Consistencies”

在完善公司治理中加强党的领导，完善“三重一大”决策制度实施办法、重大事项决策权责清单，进一步健全决策事项、细化职责权限、完善授权管理、优化决策流程；加强子公司董事会建设，落实应建尽建，规范董事会运行；激发改革活力，有效落实董事会职权。2022年，下属227家子公司董事会100%“应建尽建”；明确19家重要子公司开展落实董事会职权工作，梳理形成子公司董事会职权事项清单。

We strengthen the leadership of the Party in improving corporate governance, perfect the measures for implementing the “Three Majors and One Large” decision-making system, and elaborate the list of decision-making rights and responsibilities on major matters, so as to further define the decision-making matters, detail the relevant responsibilities and authorities, improve the authorization management and optimize the decision-making processes. And we promote the construction of the board of directors for all subsidiaries according to the “setting up the board of directors as required” principle, and standardize the operation of the board of directors. Furthermore, we stimulate the vitality of reform and grant effective powers to the board of directors. In 2022, the board of directors was set up within all of our 227 subsidiaries (100%) according to the “setting up the board of directors as required” principle. We also require 19 key subsidiaries to define and grant the powers to their board of directors and make a list of matters on the powers of the board of directors.

混合所有制改革稳步推进

Pushing forward the mixed ownership reform steadily

中钢洛耐在科创板成功挂牌上市。欧冶云商创业板IPO获上市委会议通过。华宝证券IPO上市取得实质性进展。宝武碳业在创业板上市迈出关键一步。宝钢金属实控云海金属取得突破，全面完成宝玛克科技混改，激发经营活力。“一基五元”混合所有制改革齐头并进，成功引入社会资本69.98亿元。宝武系“科改示范企业”“双百企业”、第四批混改企业达到25户，中钢国际获评双百“标杆”，宝钢股份、太钢集团、宝钢金属获评双百“优秀”，中钢天源获评科改“优秀”。

Sinosteel Luonai Materials Technology was successfully listed on the Science and Technology Innovation Board. The IPO of Ouyeel on the Second-board Market was approved by the Listing Committee upon meeting. The IPO of Hwabao Securities made substantial progress. Baowu Carbon took a crucial step towards being listed on the Second-board Market. RSM Group under the actual control by Baosteel Metal made breakthrough and fully completed the mixed ownership transformation of Baomarc Technology, whose business was thereafter boosted. The mixed ownership reforms were carried out in parallel according to the guidelines of “One Basis and Five Industries”, and RMB 6.998 billion was successfully attracted from the social capital. Within Baowu’s associated enterprises, 25 was designated as “Science and Technology Reform Demonstration Enterprises”, “Top 100 Strong Businesses & Top 100 Growth Businesses” and included in the fourth batch of mixed ownership reform enterprises. Sinosteel Engineering & Technology was identified as the benchmark within the list of “Top 100 Strong Businesses & Top 100 Growth Businesses”. Baosteel, TISCO and Baosteel Metal were identified as the excellent “Top 100 Strong Businesses & Top 100 Growth Businesses”, and Sinosteel Tianyuan was identified as the excellent “Science and Technology Reform Demonstration Enterprises”.



中钢洛耐首次公开发行 A 股并在科创板上市

Sinosteel Luonai Materials Technology’s IPO of A-shares was listed on the Science and Technology Innovation Board



欧冶云商上市申请通过深交所创业板上市委会议审议

The IPO of Ouyeel on the Second-board Market was approved by the Listing Committee of Shenzhen Stock Exchange

### 市场化经营机制加快建设

Accelerating the establishment of market-oriented management mechanism

深化三项制度改革，管理人员竞争上岗比例达59.9%，退出比例达9.6%。实施中长期激励企业累计达228户，其中实施科技型企业股权或分红激励企业10户、实施员工持股企业7户。出台《新时代科技创新激励保障指导意见》，聚焦基础研究“筑基”、科创增效“共享”、青年人才“安薪”等3个工程，遴选出首批“产业孵化人才特区”，按需支撑科技创新单列工资总额1.8亿元。进一步提升人事效率，2022年钢铁制造业人均产钢量1334吨，同比提升10.9%，其中，宝钢股份湛江钢铁人均产钢量2583吨。大集体企业改革工作大刀阔斧，共计完成538户集体法人处置，改革取得决定性成果。

We deepen the reform of the three systems (labor systems, personnel system and distribution system), with 59.9% of managers taking up their jobs through competitions and a separation rate up to 9.6%. A total of 228 enterprises have implemented medium to long-term incentives, including 10 technology-based enterprises that have adopted equity or dividend incentives and 7 enterprises that have carried out employee stock ownership plans. We have issued the *Guiding Opinions on the Incentives and Guarantee of Science and Technology Innovation in the New Era*, focusing on three programs: basic research for laying the foundation, science and technology innovation efficiency improvement for sharing achievements, and salary guarantees for young talents. The first batch of “special zones for industrial incubation talents” has been selected, and a total salary of RMB 180 million has been separately listed to support science and technology innovation as needed. We further improve the personnel management efficiency. As a result, the per capita steel output in the steel manufacturing sector was increased by 10.9% YOY to 1334 tons in 2022. Wherein, the per capita steel output of Baosteel Zhanjiang Iron & Steel was 2583 tons. The reform of large collectively owned enterprises has been carried out with great strides, with a total of 538 collective legal entities disposed of, achieving decisive results in the reform.

### 深化资产经营层“一总部多基地”管理体系

Deepening the “one headquarters and multiple bases” management system at the asset management layer

围绕“专业化整合、平台化运营、生态化协同、市场化发展”的“四化”管理要求，组织各一级子公司形成“一总部多基地”管理体系建设方案，推动职能配置和机构设置优化；牵头开展产业经营和区域经营单元申报和认定工作，着力推动子公司完善管理体系，促进产业发展和区域协同。

Based on the management requirements of “professional integration, platform-based operation, ecological collaboration, and market-based development”, we organize all first-tier subsidiaries to form a plan for building the management system of “one headquarters and multiple bases” and optimize the functional configuration and institutional setting. Moreover, we lead the application and accreditation of industrial and regional business units, focus on promoting the improvement of management systems for subsidiaries, and promote industrial development and regional collaboration.

### 落实绩效驱动型战略执行体系

Establishing a performance-driven strategic execution system

建立并实践“超越自我、跑赢大盘、追求卓越、全球引领”的绩效导向，形成一套绩效驱动型战略执行体系，实施年度、任期闭环运作，促进子公司收益水平和竞争力持续提升，保障集团公司战略规划和经营目标的落实落地。

We establish and apply a performance-oriented approach of “outdoing ourselves, outperforming in the overall market, striving for excellence, and maintaining a leadership position in the world”, form a performance-driven strategic execution system for the closed-loop operation based on financial year and term of office, so as to continuously improve the subsidiaries’ profitability and competitiveness, and ensure the exact implementation of the strategic plans and business objectives of the Group Corporation.

## 完善组织架构管理

### Improving the management of organizational structure

#### 聚焦战略迭代系统策划总部运行体系建设

Focusing on the operation system construction of the planning headquarters for strategic iteration system

围绕集团公司战略迭代升级管理需求，以“三层管控架构”为基础，从总部作为资本运作层功能定位出发，梳理策划总部运行体系优化方案；明确从“管企业”向“管资本”为主转型的变革方向，理顺总部围绕“资本运作、战略管控”两条管理主线的体系架构，进一步完善集团公司综合运行体系，强化集团公司总部作为战略投资中心和资本运作中心的核心能力，着力打造引领发展、决策高效、管控有力的“强总部”。

Focusing on the strategic iteration and upgrading management needs of the Group Corporation, and based on the “three-layer management and control structure”, we start from the functional positioning of the headquarters as the capital operation layer, and sort out the optimization plans for the planning headquarters operation system. Moreover, we make clear the direction of transformation from “managing business” to “managing capital”, sort out the system architectures of the headquarters around the two main management lines of “capital operation and strategic control”, and further improve the comprehensive operation system of the Group Corporation, so as to strengthen the core capabilities of Group Corporation headquarters as a strategic investment center and capital operation center, and aim at building a “powerful headquarters” that leads development, makes efficient decisions and imposes powerful control on all subsidiaries.

## 健全审计体系

### Perfecting the audit system

宝武围绕“思维赋能、数据赋能、体制赋能”思路构建集中统一、全面覆盖、权威高效的内部审计体系，强化巡审贯通协同。通过审计项目支撑国家政策落地、集团公司战略实施和内控体系优化；建设智慧审计系统，推进数字化巡审模式转型；统筹集团公司内部审计资源，采用推磨式交叉审计等方式强化体系集中统一管理；健全审计整改制度，通过内外部审计问题整改、审计成果共享运用、从严从紧优化违规追责机制等一体化措施，构建审计整改闭环管理长效机制。

Baowu builds a centralized, unified, comprehensive, authoritative and efficient internal audit system according to the concept of “thinking empowerment, data empowerment, and system empowerment”, and strengthens the connection and coordination between inspection and audit. We also provide support for carrying out national policies, strategy implementation and internal control system optimization of the Group Corporation through audit projects. Moreover, we build a smart audit system to accelerate the transformation toward digital



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| 136 | <div><div>中国宝武钢铁集团有限公司</div><div>China Baowu Steel Group Corporation Limited</div></div>   | <div><div>治理现代 推动新时代“宝武之治”落实落地</div><div>Promote Modern Governance to Drive the Implementation of “Governance of Baowu” in the New Era</div></div>  | 137 |
|     | <div><div>inspection and audit. We make overall arrangements on the internal audit resources of the Group Corporation, and strengthen the centralized and unified management of the system through rotatory and cross auditing. In addition, we make efforts to perfect the audit rectification system, and establish a long-term closed-loop management mechanism for audit rectification through various integrated measures, such as internal and external audit problem rectification, sharing and utilization of audit results, and optimization of accountability mechanisms against violations.</div></div> <div><div><div>大数据审计</div><div>Big data audit</div></div><div><p>强化数据赋能，基本完成“以内部审计管理系统和大数据审计系统为骨架”的数字化审计平台框架；构建“敏捷前台、智慧中台、决策后台”有机融合的审计项目实施机制；推进审计项目“数据先行、模型开道”成为常态，充分运用智慧审计系统开展非现场审计，提升监督具体化、精准化、常态化水平。</p><p>We strengthen the data empowerment and substantially complete the framework of digital audit platform based on the “backbone of internal audit management system and big data audit system”. We also establish a mechanism for carrying out audit projects by organically integrating “swift foreground, intelligent middle-ground and decision-making background”. Moreover, we promote the normalization of “data first and model guided” in audit projects, fully utilize smart audit systems to conduct off-site audits, and improve the level of supervision in terms of materialization, precision, and normalization.</p></div></div> <div><div><div>奖项荣誉</div><div>Awards and honors</div></div><div><p>《中国审计报》刊发《中国宝武推进智慧审计提升监督效能》，同时入选参编中国信息通信研究院审计数字化能力成熟度标准。</p></div><div><p>The <i>China Audit News</i> published <i>China Baowu Promotes Smart Audit to Improve Supervision Efficiency</i>, and Baowu was also selected to participate in the preparation of the China Academy of Information and Communication Technology's maturity standards for audit digitalization capability.</p></div></div> | <div><div><div>投资审计</div><div>Investment audit</div></div><div><p>围绕商业计划书重点投资项目目标实现、投资管理能力提升、投资项目竣工财务决算数据准确性、工程造价等领域开展审计，揭示典型问题，确保“国家法规、集团规章、战略规划”相关要求在投资项目管理上落实到位，促进投资管理体系不断完善。</p></div><div><p>Centering on the realization of goals for key investment projects in the business plan, the improvement of investment management capacity, the data accuracy of final accounts for the completion of investment projects, and the engineering cost, we conduct the audit to reveal typical problems and ensure the implementation of relevant requirements of “national regulations, Group rules and strategic planning” in the management of investment projects are in place, promoting the constant improvement of the investment management system.</p></div></div> <div><div><div>经营审计</div><div>Business audit</div></div><div><p>开展经济责任审计并重点加强任职期间审计，组织实施多单位推磨式交叉审计，客观反映财务状况和经营成果，及时发现重大经营风险和降本增效空间，有效促进经营管理活动按公司目标受控、合规运行。强化巡视、审计贯通协同，探索“同巡同审、先审后巡、先巡后审”等模式，建立资源、人员、信息、问题和成果等方面协同共享机制。开展产权变动净资产审计，为股权投资、资产转让等在线经营重点工作提供有力保障。</p></div><div><p>We carry out economic responsibility audits and focus on the audit during the tenure, organize multiple units to implement rotary and cross audits, in order to objectively reflect the financial conditions and operating results, timely identify major operational risks and room for cost reduction and efficiency increase, and effectively promote the controlled and compliant operation of operating and management activities in accordance with the corporate objectives. We also strengthen the coordination between routine inspections and audits, explore the better modes such as “inspection in parallel with audit, inspection after audit, and audit after inspection”, and establish a collaborative sharing mechanism for resources, personnel, information, issues, and achievements. Moreover, we conduct the net asset audit on changes of property rights to provide strong guarantee for key online business activities such as equity investment and asset transfer.</p></div></div> |     |
|     | <div><div><div>战略绩效审计</div><div>Strategic performance audit</div></div><div><p>围绕贯彻落实国家重大决策部署，开展乡村振兴定点帮扶资金、国企改革三年行动等审计项目，促进政令畅通；围绕战略关注重点开展年度经营绩效、“三降两增”、整合融合等审计项目，确保集团公司战略有效落地、重点工作有序推进。</p></div><div><p>We carry out audits on the projects such as the designated assistance funds for rural revitalization and the three-year action plan for state-owned enterprise reform around the implementation of major national decisions and deployments, to promote the smooth communication of government orders and policies. We also carry out audits on the projects such as the annual business performance, “three reductions and two increases” and integrated consolidation around the implementation of strategic focus, to ensure the effective implementation of the strategies and the orderly execution of key tasks of the Group Corporation.</p></div></div>  | <div><div><div>内部控制审计</div><div>Internal control audit</div></div><div><p>聚焦财务收支、购销管理、金融衍生品、境外资产等重点领域实施监督，发现内控缺陷，提出管理优化建议。针对各子公司发展阶段和业务特点，针对性加强内控评价督导与管理，推动内控评审机制进一步健全优化，不断提升内控体系能力。</p></div><div><p>We focus on the supervision in key areas such as financial revenue and expenditure, purchase and sales management, financial derivatives and overseas assets, in order to identify internal control deficiencies, and propose management optimization suggestions. We also strengthen the supervision and management of internal control evaluation based on the development stages and business characteristics of each subsidiary, in order to promote the further improvement and optimization of the internal control review mechanism and continuously enhance the capabilities of the internal control system.</p></div></div>  |     |

## 筑牢风险防线

### Building a strong risk defense line

宝武作为国有资本投资公司和创建世界一流示范企业，结合“管资本”的功能定位，坚持将投资合规性放在首要位置，规范投资项目合规审查，审慎决策，强化风险防控责任，完善海外风险管理体系和决策风险评估，组织开展经营风险压力测试，控制风险敞口，提升风险预警监测能力，深化穿透式监督体系，不断优化完善与国有资本投资公司相匹配的抗风险能力。2022年，集团公司各项重大风险总体可控，未发生重大风险事件。

As a state-owned capital investment company and a world-class demonstration enterprise, Baowu adheres to the functional positioning of “capital management” by prioritizing investment compliance, standardizing compliance review of investment projects, making prudent decisions, strengthening risk prevention and control responsibilities, improving overseas risk management system and decision-making risk assessment, organizing and conducting operational risk stress tests, controlling risk exposure, enhancing risk warning and monitoring capabilities, deepening the penetrating supervision system and continuously optimizing and improving the risk resistance capabilities necessary for a state-owned capital investment company. In 2022, the major risks of the Group Corporation were generally controllable and no major risk events occurred.

## 持续完善内控制度体系

### Continuously improving the internal control system

推进构建具有宝武特色的风控、内控、法务、合规管理协同运作机制，深化总部“1+N”制度整合优化，筑牢经营投资纪律底线红线，完善重大经营突发事件报告处理程序，强化经营风险防控预警体系。全面规范各级公司经济合同的业务行为，组织开展综合治理专项行动，夯实合法经营根基。

We promote the construction of a mechanism in collaboration among risk control, internal control, legal affairs and compliance management with Baowu characteristics, deepen the integration and optimization of the headquarters' “1+N” system, establish a bottom line/red line for business investment discipline, improve the reporting and handling procedures for major business emergencies, and reinforce the business risk prevention and warning system. We also standardize the management and execution of economic contracts of all affiliated companies at all levels, organize them to carry out a special campaign in order to promote the comprehensive governance and consolidate the foundation of legitimate business operations.



2022年11月7日-8日，宝武举办“合规管理体系建设”专题培训。集团公司总部各部门合规管理领域相关人员、各一级子公司合规管理分管领导或总法律顾问、合规管理部门负责人、合规管理骨干共计500多人参加培训。

On November 7-8, 2022, Baowu held a special training session on “Construction of Compliance Management System”. More than 500 persons including the personnel responsible for compliance management from the headquarters of the Group Corporation and the leaders, general legal counsels and director responsible for compliance management or legal affairs from the first-tier subsidiaries participated in the training session.

## 有效管控重点领域风险

### Effectively controlling risks in key areas

高效统筹疫情防控和生产经营，封控期间集团公司总部保持正常运行，宝钢股份、宝武特冶、宝钢包装等多家单位，生产保持安全稳定满负荷；完成全球司库系统建设，全面提高集团公司资金管理水平；面对跌宕起伏的大宗商品市场波动，主动防风险、系统防风险、科技防风险，研判经济走势，有效规避巨大损失；加强“总对总”银企对接，融资成本率同比下降34个基点。

We have efficiently made overall arrangements for the epidemic prevention and control, as well as the production and operation. During the lockdown period, the headquarters of the Group Corporation maintained normal operation, and multiple subordinate companies such as Baosteel, Baowu Special Metallurgy and Baosteel Packaging maintained safe and stable production at full capacity. We completed the construction of the global treasury system and comprehensively improved the fund management capabilities of the Group Corporation. In the face of ups and downs in the commodity market, we actively and systematically prevented all kinds of risks based on scientific methods, researched and judged the economic trends, and effectively avoided huge losses. We also strengthened the “headquarters to headquarters” connection between banks and enterprises, with the financing cost rate decreasing by 34 base points on a year-on-year basis.



全面风险管理总体框架

General framework for comprehensive risk management

## 信息公开透明

### Information disclosure and transparency

认真贯彻落实信息公开制度，畅通信息公开渠道，在集团公司官网设置信息公开专栏，对集团公司经营治理等相关信息进行披露，保障股东等相关方的知情权。上市公司均严格按照监管要求，持续细致规范做好信息披露工作，不断提升信息披露管理水平，确保信息披露的真实、准确、完整、及时。

We strictly implement the information disclosure rules, guarantee the unobstructed information disclosure, set up an information disclosure column on the official website of the Group Corporation to disclose relevant information on the management and governance of the Group Corporation and protect the right to know of shareholders and other stakeholders. All listed companies strictly abide by the regulatory requirements to consistently and meticulously execute information disclosure related work, continuously improve information disclosure management level, and ensure the authenticity, accuracy, completeness, and timeliness of information disclosure.



# 社会责任管理

## Social Responsibility Management

### 责任组织

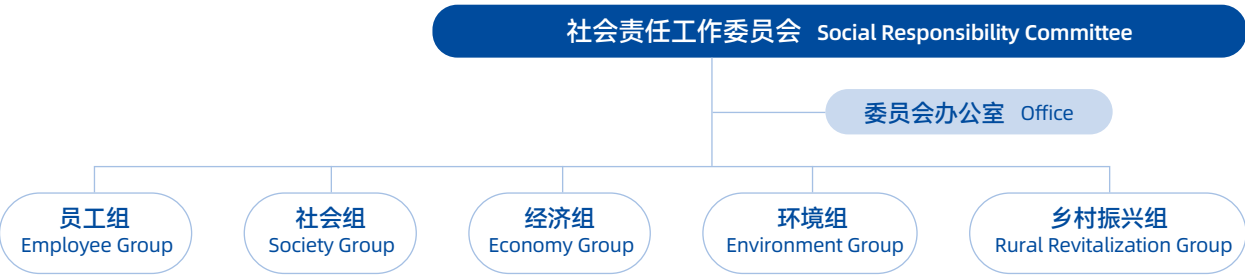
### Responsibility organization

宝武持续建立健全责任组织体系，强化责任治理，明确责任规划，完善责任制度，为统筹推进集团公司社会责任工作打下坚实基础。

Baowu persists in establishing a sound corporate social responsibility (CSR) organization system, strengthening CSR governance, clarifying CSR planning, and improving CSR system, in order to lay a solid foundation for pushing forward the CSR-related work of the Group Corporation as a whole.

宝武设立社会责任工作委员会，统筹领导社会责任工作，开展重大事项的审议决策，形成自上而下、分工明确的社会责任管理组织机制。社会责任工作委员会主任由集团公司主要领导担任，委员会成员包括各相关部门负责人。委员会下设员工组、社会组、经济组、环境组、乡村振兴组，分别对应企业重点关注的责任领域。同时，集团公司指导下属各单位参照设立社会责任工作领导小组，明确社会责任工作归口管理部门，并确定若干社会责任工作人员，有效推进本单位社会责任工作的开展。

Baowu has established a Corporate Social Responsibility Committee to coordinate and lead social responsibility work, and conduct the review and decision-making on major issues, forming a top-down organizational mechanism for social responsibility management with clear division of work. The director of the Corporate Social Responsibility Committee is the chief leader of the Group Corporation, and the members of the Committee include the heads of all relevant departments. The Committee is composed of the Employee Group, Society Group, Economy Group, Environment Group and Rural Revitalization Group, which correspond to the key responsibility fields that Baowu focuses on respectively. Meanwhile, the Group Corporation guides its subordinate units to set up leading groups for social responsibility work by reference, define the centralized management department of social responsibility work, and determine the personnel for social responsibility work to effectively promote the development of their social responsibility work.



### 责任理念

### Responsibility concept

宝武秉持“共建产业生态圈推动人类文明进步”的社会责任核心理念，具体诠释为“诚信经营、创新驱动、绿色发展”三个基础选项和“关爱员工、回馈社会、生态圈共建、海外履责”四个优先选项。

Baowu adheres to the core concept of social responsibility of “jointly build an industrial ecosystem and promote the progress of human civilization”, which is specifically interpreted as three basic options of “integrity management, innovation-driven development and green development” and four priority options of “caring for employees, contribution to society, ecosystem co-building and overseas CSR fulfillment”.



### 责任规划

### Responsibility planning

宝武在战略规划中制订并滚动更新社会责任工作目标和举措，每年明确集团公司社会责任和ESG工作的重点任务和具体要求，持续推进社会责任理念全面融入企业战略和重大决策、日常经营和供应链管理，已有15.4%的上市公司制定明确的ESG战略规划，53.8%的上市公司将ESG相关内容融入公司战略。

Baowu formulates and regularly updates its CSR objectives and measures in its strategic plans, defines the key tasks and specific requirements for CSR and ESG work of the Group Corporation every year, and continues to promote the full incorporation of CSR concept into the strategies and major decisions of the Group Corporation, daily operations and supply chain management. 15.4% of listed companies have formulated clear ESG strategic plans, and 53.8% of listed companies have incorporated ESG related contents into their corporate strategies.

### 责任制度

### Responsibility system

宝武不断建立完善具有宝武特色的社会责任工作体系，《中国宝武社会责任工作制度》经集团公司董事会审议通过，并升级为集团公司基本管理制度。该制度包括组织体系、责任规划、议题管理、能力建设、沟通管理、报告管理、评比表彰、经费保障等十个模块，内容详实、可操作性强，极大地推动各部门、各单位将社会责任和ESG理念更好融入企业运营全过程；推进制定《企业社会责任报告/ESG报告编写规范》等，不断规范社会责任报告管理。

Baowu has established and continuously improved a social responsibility work system with its own characteristics. The board of directors of the Group Corporation has reviewed and approved the *Corporate Social Responsibility Work System of China Baowu* as one of the basic regulatory systems of the Group Corporation. This system consists of ten components, including organizational system, CSR planning, issue management, capacity building, communication management, report management, evaluation & commendation and funding support, practically enabling all departments and units to better integrate CSR and ESG concept into the whole process of corporate business operation. We also kept promoting the standardization of CSR/ESG report management by formulating *the Standards for Preparing CSR/ESG Reports* and other normative documents.

## 责任融合

### Responsibility integration

社会责任从理论到实践需要将责任理念、责任规划融入企业日常运营全过程，宝武高度重视融合工作，做实责任议题、责任流程、责任绩效和责任能力四项工作，形成完整的PDCA（计划——执行——检查——行动）循环，推动社会责任融入企业发展战略与经营活动，塑造有影响、可持续的责任品牌。

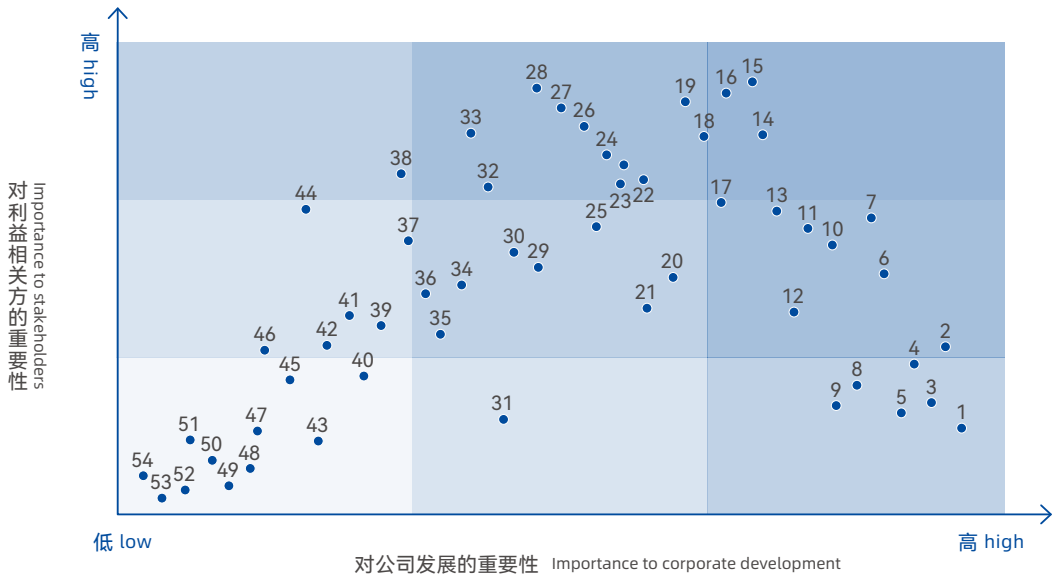
To fulfill the corporate social responsibilities, the CSR concept and planning shall be integrated into the whole process of the daily business operation from theory to practice. Baowu attaches great importance to the integration work. It effectively implements CSR issue, procedures, performance and capacities and develops a complete PDCA (Plan - Do - Check - Act) cycle to promote the integration of CSR into corporate development strategies and business activities and build an influential and sustainable responsibility brand.

### 责任议题

#### Responsibility issues

宝武的社会责任议题涵盖诚信经营、创新驱动、绿色发展、关爱员工、回馈社会、生态圈共建、海外履责等领域，形成完整的社会责任指标体系。在此基础上，集团公司持续多年开展实质性议题调查活动，通过行业政策趋势研究、国内外报告标准分析、同行业优秀报告对标、内外部利益相关方调查等方式，对需要重点关注的实质性议题进行优化更新，以更好地回应利益相关方的关注。

Our core social responsibility issues cover integrity management, innovation-driven development, green development, caring for employees, contribution to society, ecosystem co-building and overseas CSR fulfillment, constituting a complete CSR indicators system. On this basis, the Group Corporation has constantly conducted investigations on the substantive issues for many years to optimize and update such issues in response to the concerns of all stakeholders, by studying industrial policy trends, analyzing domestic and international report norms, benchmarking outstanding reports in the same industry, and investigating internal and external stakeholders.



#### 诚信经营 Integrity management

##### 6. 党风廉政建设与反腐败

Improving Party conduct, upholding government integrity, and combating corruption

##### 15. 信息披露

Information disclosure

##### 25. 社会责任管理体系

CSR management system

##### 16. 诚信与合规经营

Integrity and compliance management

##### 44. 负责任采购管理

Responsible procurement management

##### 11. 优化公司治理

Optimizing corporate governance

##### 24. 风险管理体系

Risk management system

#### 创新驱动 Innovation-driven development

##### 7. 数智化转型

Digital and intelligent transformation

##### 29. 原创技术攻关

Making breakthroughs in original technology

##### 36. 低碳冶金技术研发

Research and development of low-carbon metallurgical technology

##### 14. 攻克“卡脖子”难题

Overcoming bottleneck problems

##### 30. 科技创新体系变革

Transformation of technological innovation system

##### 37. 科技降本，去除“活套”

Technology-based cost reduction and removal of redundant process steps

#### 绿色发展 Green development

##### 17. 守护绿色生态

Protecting green ecology

##### 26. “双碳”工作进展及成效

Progress and achievements of “dual-carbon” work

##### 33. 能源环境管理体系建设

Construction of energy and environmental management system

##### 22. 能源环境绩效

Energy and environmental performance

##### 27. 绿色工艺及环境友好产品

Green technology and environment-friendly products

##### 34. 应对气候变化

Addressing climate change

##### 23. 资源再生与利用

Resources recycling

##### 28. 节能减排技术及应用

Energy saving and emission reduction technology and application

##### 38. 产品生命周期研究及应用

Research and application of product life cycle

#### 关爱员工 Caring for employees

##### 1. 薪酬福利

Remuneration and benefit

##### 4. 员工构成

Workforce composition

##### 9. 困难员工帮扶

Assistance for employees in difficulties

##### 2. 安全及权益保护

Safety and rights protection

##### 5. 员工文化活动

Employee cultural activities

##### 31. 外派员工关爱

Caring for expatriate employees

##### 3. 员工录用与职业发展

Employment and career development

##### 8. 员工心理健康管理

Employee mental health management

##### 43. 退休员工关爱

Caring for retired employees

#### 回馈社会 Contribution to society

##### 12. 全力抗击疫情

All-out fight against the epidemic

##### 40. 志愿服务活动

Volunteer activities

##### 45. 公益慈善捐赠

Public benefit activities and charitable donations

##### 35. 助力乡村振兴

Facilitating rural revitalization

##### 41. 应对自然灾害

Response to natural disasters

##### 39. 促进民族团结

Promoting ethnic unity

##### 42. 社区关系维护

Maintaining relationships with communities

#### 生态圈共建 Ecosystem co-building

##### 10. 服务“制造强国”

Serving the “manufacturing power”

##### 21. 与城市共融共生

Integration and co-existence with the city

##### 13. 与生态圈伙伴共创共享价值

Jointly creating and sharing value with ecosystem partners

##### 18. 推进产业协同发展

Promoting coordinated industrial development

##### 19. 引领行业高质量发展

Leading high-quality development of the industry

#### 海外履责 Overseas CSR fulfillment

##### 46. 高质量共建“一带一路”

Joint and quality building of “the Belt and Road”

##### 48. 海外项目运营地推进生态环保和绿色发展

Contribution to ecological conservation, environmental protection and green development in the neighborhood of overseas operations

##### 50. 响应联合国可持续发展目标

Response to UN SDGs

##### 53. 海外项目本地化雇佣

Local employment of overseas projects

##### 47. 践行全球发展倡议

Implementing global development initiative

##### 49. 海外项目经营及为当地创造的经济价值

Overseas project operations and creating economic values for local places

##### 51. 海外社会责任管理体系

Overseas CSR management system

##### 54. 海外本地化采购

Local procurement of overseas projects

##### 52. 海外员工培训

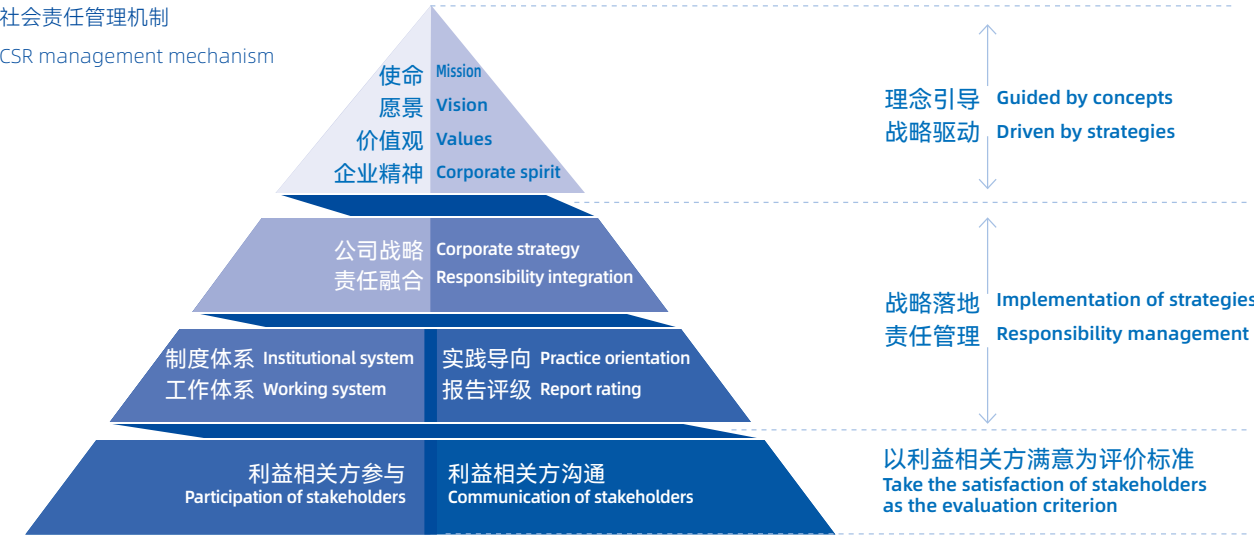
Overseas employee training



责任流程  
Responsibility process

宝武坚持“以报告促管理、促改进、促提升”，以社会责任报告为抓手，将责任议题的具体要求嵌入工作流程中，优化关键岗位的工作方式，提升社会责任绩效，实现公司战略与社会责任的深度融合，最终赢得利益相关方的信任和支持。

Baowu insists on “Promoting management, improvement and enhancement via report”. With the CSR report as the starting point, Baowu embeds the specific requirements corresponding to each CSR issue into the work procedures. Moreover, we optimize the working mode of key posts to promote CSR performance and realize the deep integration between corporate strategies and fulfillment of CSRs, and eventually win the trust and support of all stakeholders.



责任绩效  
Responsibility performance



宝武《企业社会责任优秀案例集（2021-2022）》

Collection of Excellent CSR Cases (2021-2022) of Baowu

2022年，首本中英文混编的《中国宝武2021年社会责任报告》蝉联“五星佳”级最高评价；首份《绿色低碳发展报告》入选《中国企业社会责任报告评级2022》白皮书专项报告优秀案例；实现了控股上市公司ESG报告编制的全覆盖；集团公司在“央企责任管理·先锋30指数”中位列第二位，宝钢股份、太钢不锈、马钢股份等上市公司在相关指数排名中均有优异表现。

In 2022, the first Chinese-English bilingual *China Baowu Corporate Social Responsibility Report 2021* won the highest rating of “Five-Star Excellent” in a row. The first issue of *Baowu Green and Low-Carbon Development Report* was selected as an excellent case of special report in the White Paper 2022 *Corporate Social Responsibility Reporting Rating in China*. We realized ESG report preparation for all listed companies controlled by the Group Corporation. The Group Corporation ranked second in the “Central SOE CSR Management · Pioneer 30 Index”, and the subordinate listed companies, such as Baosteel, Shanxi Taigang Stainless Steel and Masteel had all done well in the relevant index rankings.

同时，集团公司积极培育“重绩效、树标杆、立榜样、争一流”的良好氛围，设置社会责任相关考核内容和指标，真正将社会责任融入企业管理，推动社会责任整体工作水平的提升。2022年，宝武首次设立“社会责任先锋奖”（集体和个人）、“社会责任工作最佳进步奖”；继续做好社会责任标杆案例和优秀案例评选活动，通过专业评审及网络投票，评选出年度10个标杆案例及10个优秀案例，并汇编两年的优秀案例，编制完成宝武《企业社会责任优秀案例集（2021-2022）》。

The Group Corporation also actively created a favorable atmosphere of “valuing performance, setting benchmarks, setting examples and striving for excellence” and set up CSR related assessment contents and indicators to truly integrate the CSR into the business management and drive the overall improvement of CSR related work. In 2022, Baowu established the “CSR Pioneer Award” (collective and individual) and the “Best Progress Award for CSR Work” for the first time. Moreover, Baowu continued to well organize the selection activity for CSR benchmarking cases and excellent cases, with 10 benchmarking cases and 10 excellent cases selected for the year through professional review and online voting. The excellent cases in the past two years were collected into *Baowu’s Excellent Case Collection of CSR (2021-2022)*.

责任能力  
Responsibility capacity

匹配“世界一流企业”，宝武不断推进建设卓越社会责任及ESG管理队伍，每年邀请外部专家做工作指导，组织开展社会责任专题培训，了解最新国内外趋势，探讨发展战略，聚焦工作薄弱环节，研究改进方向。2022年，集团公司以企业社会责任（ESG）管理“三步十法”理论模型为依据，对上市子公司开展ESG管理诊断工作，推进ESG体系研究；积极参加外部社会责任论坛和活动，成为首批加入“中央企业ESG联盟”的11家成员企业之一；成为世界钢铁协会新版《可持续发展宪章》成员企业；正式加入中国社会责任百人论坛，成为理事长单位，在更高的平台上，助力社会责任工作的开展。

To be qualified as a “world-class enterprise”, Baowu keeps on building an excellent CSR and ESG management team, invites external experts to provide work guidance, organizes and carries out special CSR training to keep up with the latest domestic and international trends, explore development strategies and seek to make improvement against vulnerabilities in work flows. In 2022, based on the theoretical model of “Three Steps and Ten Methods” for CSR (ESG) management, the Group Corporation conducted ESG management diagnosis on listed subsidiaries to promote the research on the ESG system. It also actively participated in external CSR forums and activities and became one of the earliest 11 member companies of the “Central SOE ESG Alliance”, became a member enterprise of the World Steel Association in new *Sustainable Development Charter*. Moreover, it formally joined the “China Social Responsibility 100 Forum” as a director unit, so as to assist in driving the CSR work on a higher platform.

**案例 CASE** | 举行社会责任和 ESG 工作年度总结及专项研修  
Annual work review and special training on CSR and ESG

为系统回顾2022年宝武社会责任工作重点和进展状况，明确2023年宝武社会责任和ESG工作的重点任务和具体要求，2023年2月9日—10日，宝武开展社会责任和ESG工作年度总结及专项研修，邀请国务院国资委、中国社会科学院、中国质量协会标准工作办公室、中交集团等相关领导和专家进行授课和分享。

In order to systematically review the priorities and progress of Baowu’s CSR work in 2022 and determine the key tasks and specific requirements of its CSR and ESG work in 2023, we carries out annual work review and special training on CSR and ESG from February 9 to 10, 2023, and invited relevant leaders and experts from the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, the Chinese Academy of Social Sciences (CASS), the Standards Work Office of the China Association for Quality and the China Communications Construction Company Limited to give lectures and share insights.



宝武加入“中央企业 ESG 联盟”  
Baowu became a member of the “Central SOE ESG Alliance”



宝武加入中国社会责任百人论坛，成为理事长单位  
Baowu joined the “China Social Responsibility 100 Forum” as a director unit

## 责任沟通

### Responsibility communication

宝武搭建多元化内外部沟通平台，与利益相关方就企业自身社会责任工作展开交流，实现社会责任信息双向传递、接收、分析和反馈。

Baowu has set up a diversified platform for internal and external communication to communicate with stakeholders on its CSR work, realizing two-way transmission, reception, analysis and feedback of CSR information.

### 责任报告

#### Responsibility report

社会责任报告是最重要的责任沟通媒介，宝武建立健全“1+N+M”报告体系及常态化发布机制，“1”是指年度社会责任报告，“N”是议题型报告，如绿色低碳发展报告、乡村振兴白皮书等，“M”是下属各单位编制的社会责任报告。集团公司要求下属控股上市公司都要通过编写、发布社会责任报告或ESG报告，来呈现亮点、发现短板。

CSR report is the most important CSR communication medium. Baowu has established and improved the “1+N+M” reporting system and normalized release mechanism, in which, “1” refers to the annual social responsibility report of Baowu, “N” refers to issue-based reports, such as green and low-carbon development report, white paper on rural revitalization, etc., and “M” refers to the social responsibility reports prepared by its subordinate units. The Group Corporation requires all subordinate listed companies to share achievements and find shortcomings by compiling and releasing CSR or ESG reports.

## 利益相关方参与

### Participation of stakeholders

宝武构建有效的利益相关方沟通机制，识别和回应利益相关方诉求，在官网、官方微信公众号和主流媒体披露企业社会责任相关工作信息和活动资讯，通过新版形象宣传片、绿色宣传片、社会责任专题片以及系列海报等方式，拉近宝武与社会大众的距离，有效传播集团公司责任理念及履责动态，增进利益相关方对集团公司的理解和支持；重视与海外利益相关者的互动，利用互联网、海外社交平台，加强社会责任工作在海外的传播；与研究机构、行业协会等加强沟通交流，参加中国钢铁工业协会、责任云研究院主办的《钢铁行业社会责任蓝皮书（2022）》发布会等。

Baowu built an effective stakeholder communication mechanism to identify and respond to the demands of stakeholders. It disclosed and updated CSR related work and activity information on the official website, WeChat official account and mainstream media, to close the distance between Baowu and the public through new image promotional video, green promotional video, CSR feature films and series of posters, effectively communicate with the public about the CSR concepts and CSR fulfillment progress of the Group Corporation, and gain the deep understanding and wide support of stakeholders. We also attached importance to the interaction with overseas stakeholders through the Internet and overseas social media platforms to strengthen the dissemination of our CSR work overseas. Moreover, we strengthened communication and exchange with research institutions and industry associations, and participated in the launch of the *Blue Paper on Corporate Social Responsibility of Iron and Steel Industry (2022)* sponsored and published by the China Iron and Steel Association and the CSR Cloud Research Institute.



2022年7月18日，宝武2021“1+N+M”社会责任报告集中发布。

On July 18, 2022, Baowu's "1+N+M" CSR reports were centrally released.



扫描二维码，观看社会责任专题片

Scan QR code to watch CSR feature films



## 责任荣誉

### Honors on responsibility



《中国宝武2021年社会责任报告》蝉联“五星佳”级最高评价。

*2021 Corporate Social Responsibility Report of China Baowu won the highest rating of "Five Star Excellent" in a row.*



首份《绿色低碳发展报告》入选《中国企业社会责任报告评级2022》白皮书专项报告优秀案例。

*The first issue of Green and Low-Carbon Development Report was selected as an excellent case of special report in the White Paper 2022 Corporate Social Responsibility Reporting Rating in China.*



三个优秀案例入选国务院国资委课题《中央企业上市公司ESG蓝皮书》。

*The three outstanding cases were included in the ESG Blue Book of Central-Controlled Listed Companies prepared and published by the SASAC of the State Council.*



宝钢股份、太钢不锈、马钢股份再次入围“央企ESG·先锋50指数”，排名均创新高。

*Baosteel, Shanxi Taigang Stainless Steel and Masteel were shortlisted in the "Central SOE ESG · Pioneer 50 Index" again, all ranking at new highs.*



中南股份、重庆钢铁、宝钢包装等上市公司在“治理先锋50指数”“社会价值先锋50指数”“风险管理先锋50指数”上都有所斩获。

*The listed companies including Guangdong Zhongnan Iron & Steel, Chongqing Iron & Steel and Baosteel Packaging ranked top in the "Governance Pioneer 50 Index" "Social Value Pioneer 50 Index" and "Risk Management Pioneer 50 Index" respectively.*



宝武成为“中央企业ESG联盟”首批11家成员企业之一。

*Baowu became one of the earliest 11 member companies of the "Central SOE ESG Alliance".*



责任管理案例入选国务院国资委《中央企业社会责任蓝皮书》。

*The responsibility management case was included in the Research Report on Corporate Social Responsibility of Central Enterprises by the SASAC of the State Council.*



海外履责案例入选国务院国资委《中央企业海外社会责任蓝皮书》。

*The overseas responsibility performance case was included in the Research Report on Overseas Social Responsibility of Central Enterprises by the SASAC of the State Council.*



在中国社会责任百人论坛“2022责任金牛奖”榜单中，宝武荣膺“责任企业奖”，宝武资源荣获“责任新秀奖”。

*Baowu won the "Responsible Enterprise Award" and Baowu Resources won the "Responsible Newcomer Award" at the China Social Responsibility 100 Forum in the "2022 Responsibility Golden Bull Award" list.*



在中国社会责任百人论坛“2022 ESG金牛奖”榜单中，宝钢股份、太钢不锈荣膺“双碳先锋奖”，马钢股份获得“治理先锋奖”，重庆钢铁获得“新秀企业奖”。

*Baosteel and Shanxi Taigang Stainless Steel won the "Dual-Carbon Pioneer Award", Masteel won the "Governance Pioneer Award" and Chongqing Iron & Steel won the "Excellent Newcomer Award" at the China Social Responsibility 100 Forum in the "2022 Responsibility Golden Bull Award" list.*



“宝武授渔匠”团队以总成绩第一名荣获“SDG创新解决方案大奖”，同时荣获“最具创新性方案奖”单项大奖。

*Baowu's "Teach the Fishing" Team won the "SDG Innovative Solutions Award" with the highest total score, and won the individual award of "Most Innovative Solution Award".*

# 未来展望

## Prospect

汇聚磅礴力量，书写新的华章。

2023年，我们将以习近平新时代中国特色社会主义思想为指导，全面贯彻落实党的二十大及习近平总书记有关宝武的重要指示精神，深刻领悟“两个确立”的决定性意义，增强“四个意识”、坚定“四个自信”、做到“两个维护”，坚持党的全面领导，加强党的建设，完整、准确、全面贯彻新发展理念，大力弘扬国有企业家精神，充分激发全员创业创新活力，以勇当新型低碳冶金现代产业链链长的战略，主动构建发展新格局；以打造原创技术策源地的敢闯有为，注入发展新动能；以加快推进国际化的坚决果敢，开辟发展新天地；以深化国有资本投资公司建设的创新实践，开创发展新局面，在推进中国式现代化的进程中，谱写创建世界一流企业新篇章。

**Incorporate all strength and wisdom into new inspiring stories.**

In 2023, under the guidance of Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, we will fully implement the guiding principles of the 20<sup>th</sup> CPC National Congress and the important instructions given by General Secretary Xi Jinping concerning and applicable to Baowu to develop a deep understanding of the decisive significance of the "Two Affirmations", strengthen the "Four Consciousnesses", bolster the "Four Confidences" and ensure the "Two Upholds". We will uphold the Party's overall leadership, strengthen the Party building, and fully, accurately and comprehensively implement the new development concept. We will also vigorously promote the spirit of state-owned entrepreneurs, fully stimulate the entrepreneurial and innovative vitality of all employees, and actively construct a new pattern of development based on the strategy of proactively becoming the leader of the new low-carbon metallurgical modern industrial chain. In addition, we will inject new growth drivers by innovatively building the bases of original technologies; explore new ground for development by the determination and courage in accelerating the internationalization; and make fresh progresses in development with the innovative practice in deepening the construction of state-owned capital investment company. By doing so, we can write a new chapter for building a world-class enterprise in the process of advancing the Chinese path to modernization.



# 附录

## Appendix

### 关键绩效

#### Key performance indicators

| 指标 Indicators   | 单位 Units              | 2020      | 2021      | 2022      |
|---|-----------------------|-----------|-----------|-----------|
| 营业总收入<br>Total operating revenue <sup>1</sup>                                       | 亿元<br>RMB 100 million | 6,737.39  | 9,722.58  | 10,877.07 |
| 营业总成本<br>Total operating cost   | 亿元<br>RMB 100 million | 6,532.03  | 9,091.05  | 10,725.62 |
| 利润总额<br>Total profits   | 亿元<br>RMB 100 million | 455.43    | 602.24    | 301.56    |
| 资产总额<br>Total assets  | 亿元<br>RMB 100 million | 10,140.71 | 11,170.84 | 12,398.41 |
| 所有者权益<br>Owner's equity   | 亿元<br>RMB 100 million | 4,812.90  | 5,423.30  | 5,849.7   |
| 资产负债率<br>Debt-to-asset ratio  | %                     | 52.5      | 51.45     | 52.82     |
| 纳税总额<br>Total tax   | 亿元<br>RMB 100 million | 265.35    | 443.52    | 415.45    |
| 钢产量<br>Steel output   | 万吨<br>10,000 tons     | 11,529    | 11,994    | 13,184    |
| 董事会召开会议次数<br>Number of board meetings   | 次<br>Time             | 16        | 17        | 14        |
| 董事会讨论审议事项数<br>Number of matters discussed and deliberated by the Board of Directors | 项<br>Item             | 59        | 70        | 70        |
| 财务收支审计<br>Audit of financial revenue and expenditure                                | 项<br>Item             | 9         | 12        | 17        |
| 经济责任审计<br>Audit of economic responsibility  | 项<br>Item             | 120       | 151       | 162       |
| 产权变动净资产审计<br>Net asset audit of property right alteration                           | 项<br>Item             | 125       | 187       | 202       |
| 投资项目竣工决算审计<br>Final account audit of the completed investment project               | 项<br>Item             | 8         | 28        | 22        |
| 投资项目审计评价<br>Audit and evaluation of investment project                              | 项<br>Item             | 25        | 47        | 67        |
| 投资项目造价审计<br>Cost audit of the investment project                                    | 项<br>Item             | 15        | 16        | 18        |
| 管理审计<br>Management audit  | 项<br>Item             | 186       | 189       | 221       |

<sup>1</sup>2022 年数据对外不含中钢集团。

The publicly disclosed data in 2022 excludes that of Sinosteel.

| 指标 Indicators   | 单位 Units                          | 2020   | 2021   | 2022    |
|---|-----------------------------------|--------|--------|---------|
| 其他审计<br>Number of other audits  | 项<br>Item                         | 32     | 52     | 38      |
| 投资项目造价送审项数<br>Number of engineering cost audits   | 项<br>Item                         | 637    | 1,231  | 1,076   |
| 净核减工程款<br>Net reduction of project funds  | 亿元<br>RMB 100 million             | 10.93  | 7.94   | 13.49   |
| ESG 培训时长<br>ESG training time   | 小时<br>Hour                        | —      | —      | 1,111.5 |
| ESG 培训人次<br>Number of ESG training participants   | 人次<br>Person-times                | —      | —      | 276     |
| ESG 在线培训时长<br>ESG online training time  | 学时 (45 分钟)<br>Period (45 minutes) | —      | —      | 37,896  |
| ESG 在线培训人次<br>Number of ESG online training participants  | 人次<br>Person-times                | —      | —      | 12,048  |
| 研发投入金额<br>Amount of R&D investment  | 亿元<br>RMB 100 million             | 186.9  | 316    | 379     |
| 研发投入比例<br>Proportion of R&D investment  | %                                 | 2.8    | 3.2    | 3.24    |
| 申请受理专利数<br>Number of patents applied  | 件<br>PCS                          | 3,779  | 4,395  | 5,717   |
| 专利授权数<br>Number of patents granted  | 件<br>PCS                          | 1,789  | 2,445  | 4,062   |
| 新产品销售率<br>Sales of new products   | %                                 | 12     | 11     | 13      |
| 科研项目经济效益<br>Economic benefits of research projects  | 亿元<br>RMB 100 million             | 36.7   | 46     | 55.7    |
| 技术贸易合同额<br>Amount of technology trade contract  | 万元<br>RMB 10,000                  | 6,425  | 3,762  | 8,420   |
| 技术贸易数<br>Number of technology trade   | 个<br>PCS                          | 61     | 57     | 19      |
| 产品合格率<br>Product qualification ratio  | %                                 | —      | 99.16  | 99.28   |
| 客户投诉解决率<br>Customer complaint resolution rate   | %                                 | 96     | 97.52  | 95.7    |
| 国内用户满意度<br>Domestic user satisfaction   | 分<br>Scores                       | 92.63  | 92.19  | 92.83   |
| 经济合同履约率<br>Economic contract performance rate   | %                                 | 100    | 100    | 100     |
| 环保总投入<br>Total investment in environmental protection   | 亿元<br>RMB 100 million             | 127.35 | 106.58 | 151.36  |
| 节能技改总投入<br>Total investment in energy conservation and technology transformation                    | 亿元<br>RMB 100 million             | 16.2   | 4.91   | 9.34    |
| 万元产值综合耗能（可比价）<br>Comprehensive energy consumption per RMB 10,000 of output value (comparable price) | 吨标准煤<br>Ton of standard coal      | 1.49   | 1.18   | 0.992   |

| 指标 Indicators   | 单位 Units                  | 2020      | 2021      | 2022      |
|---|---------------------------|-----------|-----------|-----------|
| 万元产值综合能耗下降率<br>The reduction rate of comprehensive energy consumption per RMB 10,000 of output value <sup>2</sup> | %                         | 3.43      | 22.2      | 3.00      |
| 吨钢综合能耗<br>Comprehensive energy consumption per ton of steel   | 千克标准煤<br>Kg standard coal | 574       | 564       | 560       |
| 吨钢综合能耗下降率<br>The reduction rate of comprehensive energy consumption per ton of steel                              | %                         | 1.54      | 1.65      | 0.71      |
| 二氧化硫排放量<br>Sulfur dioxide emissions   | 吨<br>Ton                  | 20,697    | 23,079    | 23,854    |
| 二氧化硫排放下降率<br>The reduction rate of sulfur dioxide emissions   | %                         | 12.5      | 20.8      | 13        |
| 氮氧化物排放量<br>NOx emissions  | 吨<br>Ton                  | 49,802    | 53,840    | 56,391    |
| 氮氧化物排放下降率<br>The reduction rate of NOx emissions  | %                         | 10.9      | 24        | 8         |
| 化学需氧量排放量<br>COD emissions   | 吨<br>Ton                  | 1,396     | 1,994     | 1,570     |
| 化学需氧量排放下降率<br>The reduction rate of COD emissions   | %                         | 7.2       | 7.8       | 27        |
| 年度新鲜水用水量<br>Fresh water consumption per year  | 吨<br>Ton                  | 24,067.23 | 31,174.21 | 27,308.44 |
| 吨钢耗新水量<br>Fresh water consumption per ton of steel  | 万吨<br>10,000 tons         | 3.24      | 2.55      | 2.35      |
| 吨钢耗新水量下降率<br>The reduction rate of freshwater consumption per ton of steel  | %                         | 2.76      | 21.3      | 7.84      |
| 副产资源利用率（工业固废综合利用率）<br>Utilization of byproducts (comprehensive utilization of industrial solid waste)             | %                         | 99.73     | 99.15     | 99.75     |
| 返生产利用率<br>Return-to-production utilization  | %                         | 28.24     | 26.17     | 27.42     |
| 社会大宗废弃物利用量（协同处置城市危险废物）<br>Utilization of social bulk waste (with disposal of urban hazardous waste)               | 吨<br>Ton                  | 14,093    | 18,740    | 27,965.4  |
| 吨钢二氧化碳排放量下降率<br>The reduction rate of carbon dioxide emissions per ton of steel                                   | %                         | 1.25      | 0.63      | 0.15      |
| 绿色产业销售收入<br>Revenue from the green industry   | 亿元<br>RMB 100 million     | 524.47    | 1,138.3   | 1,432.9   |
| 获得 ISO14001 体系认证证书的供应商数量<br>Number of suppliers with ISO14001 system certification                                | 家<br>NOS                  | 5,091     | 10,225    | 7,145     |
| 资材备件绿色采购金额<br>Amount of green procurement for materials and spare parts   | 亿元<br>RMB 100 million     | 24.6      | 26.3      | 27.7      |

<sup>2</sup>2022 年起根据国资委任期目标设置要求，万元产值能耗范围变化，包含非工行业营收能耗；不含中钢集团、新钢集团。

From 2022, the change in the scope of energy consumption per RMB 10,000 of output value shall include the energy consumption of non-public industries in operating revenue, according to the requirements of the SASAC for the setting of goals within the terms of office, excluding that from Sinosteel and Xinsteel.

| 指标 Indicators  | 单位 Units              | 2020     | 2021     | 2022     |
|--|-----------------------|----------|----------|----------|
| 资材备件绿色采购比例<br>The proportion of green procurement for materials and spare parts                    | %                     | 50.4     | 65.8     | 67.88    |
| 向中小企业采购设备资材金额<br>Amount of equipment and materials purchased from SMEs                             | 亿元<br>RMB 100 million | 17       | 15       | 21       |
| 向中小企业采购设备资材占比<br>The proportion of equipment and materials purchased from SMEs                     | %                     | 53       | 60       | 95       |
| 总的本地设备资材采购占比<br>The proportion of equipment and materials purchased from the local                 | %                     | 36       | 63       | 67       |
| 总的本地设备资材采购金额<br>Amount of equipment and materials purchased from the local                         | 亿元<br>RMB 100 million | 114      | 228      | 293      |
| 报告期内审查供应商数量<br>Number of suppliers reviewed during the reporting period                            | 个<br>NOS              | 4        | 51       | 104      |
| 员工总数<br>Total number of employees  | 人<br>Person           | 227,007  | 222,595  | 219,610  |
| 女性员工数量<br>Number of female employees   | 人<br>Person           | 39,150   | 36,518   | 43,986   |
| 新增员工人数<br>Number of new employees  | 人<br>Person           | 2,270    | 3,509    | 4,789    |
| 新增员工人数占员工总数比例<br>The proportion of new employees   | %                     | 1.0      | 1.58     | 1.82     |
| 员工辞职人数<br>Number of employees resigned   | 人<br>Person           | 1,487    | 2,290    | 1,698    |
| 员工辞职人数占员工总数比例<br>Proportion of employees resigned  | %                     | 0.66     | 1.03     | 0.65     |
| 管理岗位占比<br>The proportion of management posts   | %                     | 7.6      | 7.3      | 6        |
| 海外公司当地员工比例<br>The proportion of local employees in overseas companies                              | %                     | 91.8     | 91.5     | 97.9     |
| 外协人员数量<br>Number of outsourced labors  | 人<br>Person           | 14,237   | 11,484   | 10,634   |
| 劳动合同签订率<br>Signing rate of labor contract  | %                     | 100      | 100      | 100      |
| 社会保险覆盖率<br>Social insurance coverage   | %                     | 100      | 100      | 100      |
| 员工培训投入<br>Investment for employee training   | 万元<br>RMB 10,000      | 16,345.5 | 24,193.2 | 19,533.9 |
| 员工人均培训课时<br>Per capita training hours for employees  | 小时<br>Hour            | 101.6    | 120.2    | 138.02   |
| 员工人均培训投入<br>Per capita investment for employee training  | 元<br>RMB              | 857.5    | 1,304.5  | 956.47   |
| 独立用工单位集体劳动合同覆盖率<br>The coverage rate of collective labor contracts of independent employment units | %                     | 100      | 100      | 100      |



| 指标 Indicators  | 单位 Units                                 | 2020     | 2021     | 2022     |
|--|--|----------|----------|----------|
| 员工救助受益总人次<br>Number of employee assistance beneficiaries                               | 人次<br>Person-times                       | 102,077  | 111,451  | 119,565  |
| 员工救助总投入金额<br>Amount invested in employee assistance                                    | 万元<br>RMB 10,000                         | 6,653.32 | 6,132.22 | 6,779.37 |
| 帮困慰问金受助人次<br>Number of solatium recipients   | 人次<br>Person-times                       | 92,953   | 105,244  | 111,306  |
| 帮困慰问金投入总额<br>Total amount invested in solatium   | 万元<br>RMB 10,000                         | 4,312.14 | 4,505.11 | 5,015.09 |
| 员工助学金受助人次<br>Number of employee grant recipients                                       | 人次<br>Person-times                       | 1,562    | 1,826    | 1,462    |
| 员工助学金投入总额<br>Total amount invested in employee grants                                  | 万元<br>RMB 10,000                         | 321.2    | 327.45   | 304.3    |
| 员工医疗救助受助人次<br>Number of employees' medical assistance recipients                       | 人次<br>Person-times                       | 7,562    | 4,381    | 6,797    |
| 员工医疗救助投入总额<br>Total amount invested in employees' medical assistance                   | 万元<br>RMB 10,000                         | 2,019.97 | 1,299.66 | 1,459.98 |
| 定点帮扶资金<br>Funds for designated assistance  | 万元<br>RMB 10,000                         | 8,554.50 | 9,030    | 9,706.20 |
| 购买脱贫地区农产品<br>Procurement of agricultural products from poverty-stricken areas          | 万元<br>RMB 10,000                         | 6,223.05 | 8,363.20 | 7,589.02 |
| 帮助销售脱贫地区农产品<br>Assistance in selling agricultural products from poverty-stricken areas | 万元<br>RMB 10,000                         | 8,278.26 | 5,739    | 7,946.86 |
| 安全生产总投入<br>Total investment in safety production                                       | 亿元<br>RMB 100 million                    | 21.39    | 28.37    | 26.33    |
| 安全培训人次<br>Number of safety training  | 人次<br>Person-times                       | 15,870   | 103,160  | 467,771  |
| 安全培训覆盖率<br>Safety training coverage  | %  | 100      | 100      | 100      |
| 安全生产事故数<br>Number of safety production accidents                                       | 起<br>NOS                                 | 51       | 59       | 74       |
| 员工工伤事故伤害人数<br>Number of employees injured in work-related accidents                    | 人<br>Person                              | 53       | 61       | 78       |
| 员工工伤事故伤害频率<br>Injury frequency of work-related accidents                               | 百万工时伤害数<br>Injuries in Million Man-hours | 0.11     | 0.13     | 0.13     |
| 员工工伤事故伤害严重率<br>Injury severity rate of work-related accidents                          | 百万工时损工数<br>Injuries in Million Man-hours | 42.87    | 94.92    | 95.43    |
| 志愿者人数<br>Number of volunteers  | 人<br>Person                              | 2,590    | 8,319    | 12,054   |
| 志愿者活动项目数量<br>Number of volunteer activities and programs                               | 个<br>NOS                                 | —        | 1,489    | 2,368    |
| 志愿服务活动参与人次<br>Participants in volunteer activities                                     | 人次<br>Person-times                       | 5,272    | 9,353    | 26,785   |
| 志愿服务活动总时长<br>Total time of volunteer activities  | 小时<br>Hour                               | 21,088   | 37,412   | 45,200   |

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## 评级报告



### 《中国宝武钢铁集团有限公司2022年社会责任报告》评级报告

受中国宝武钢铁集团有限公司委托，“中国企业社会责任报告评级专家委员会”挑选专家组成评级小组，对《中国宝武钢铁集团有限公司2022年社会责任报告》（以下简称《报告》）进行评级。

#### 一、评级依据

中国社会科学院《中国企业社会责任报告指南（CASS-CSR4.0）》暨“中国企业社会责任报告评级专家委员会”《中国企业社会责任报告评级标准（2020）》。

#### 二、评级过程

1. 评级小组审核确认《报告》编写组提交的《企业社会责任报告过程性资料确认书》及相关证明材料；

2. 评级小组对《报告》编写过程及内容进行评价，拟定评级报告；

3. 评级专家委员会主席、评级小组组长、评级小组专家共同签审评级报告。

#### 三、评级结论

##### 过程性（★★★★★）

集团党委宣传部、企业文化部牵头成立报告编制小组，统筹具体编制工作，各部门和子公司提供基础资料并进行审核，党委宣传部、企业文化部副部长把控报告整体方向，企业文化处处长负责把控关键节点，董事长、总经理负责报告最终审定；将报告定位为提高社会责任管理水平、强化利益相关方沟通、塑造企业责任品牌形象的重要工具，功能价值定位准确；根据国内外社会责任标准、国家政策趋势、行业对标分析、公司发展战略、利益相关方调查等识别实质性议题；计划召开专项发布会、社会责任报告集中发布活动发布报告，并将在国务院国资委组织的中央企业报告集中发布活动中进行二次发布；将以电子版、印刷品、中英文版本呈现报告，具有卓越的过程性表现。

##### 实质性（★★★★★）

《报告》系统披露了贯彻宏观政策、产品质量管理、产品创新、责任采购、职业健康管理、安全生产、环保技术和设备的研发与应用、节约能源资源、发展循环经济、厂区周边环境治理等所在行业关键性议题，叙述详细充分，具有卓越的实质性表现。

##### 完整性（★★★★★）

《报告》主体内容从“产品卓越 点亮‘超亿吨宝武’生命底色”“品牌卓著 彰显‘强国重企’品牌影响力”“创新领先 铸就科技自立自强‘钢铁长城’”“治理现代 推动新时代‘宝武之治’落实落地”等角度系统披露了所在行业核心指标的93.46%，具有卓越的完整性表现。

##### 平衡性（★★★★★）

《报告》披露了“安全生产事故数”“员工工伤事故伤害人数”“员工辞职人数占员工总数比例”等负面数据信息，并简要描述“未发生重大风险事件”、查办违反中央八项精神问题事件及处置整改情况，平衡性表现卓越。

##### 可比性（★★★★★）

《报告》披露了“营业总收入”“钢产量”“节能技改总投入”“吨钢综合能耗”“新增员工人数”“定点帮扶资金”等105个关键指标连续3年的对比数据；通过“钢产量及市场占有率均保持全球第一”“‘世界品牌500强’钢铁品牌第二位”“‘世界级钢铁企业竞争力排名’第五名”等进行横向比较，具有卓越的可比性表现。

##### 可读性（★★★★★）

《报告》以“凝心聚力建设世界一流企业”为主题，框架结构清晰，重点议题突出，详细阐述了企业在科技创新、环境保护、安全生产、产品品质、员工成长、公益慈善等重点议题下的履责行动与绩效；封面设计采用概念图风格，提炼出“同心圆”图形元素，深度呼应“同一个宝武”，色调呼应企业品牌标识；章节跨页选用契合章节主题的实景大图，嵌入叙述性引言和关键数据绩效，提纲挈领，提高了报告的易读性；设置“名词解释”专栏解读专业术语，嵌入二维码进行影像化延伸，增强了报告的沟通力，具有卓越的可读性表现。

##### 创新性（★★★★★）

《报告》设置“聚焦产品卓越 提升产品竞争力”“深耕品牌建设 奏响钢铁强音”“勇闯低碳‘无人区’ 实现科技创新突破”“凝心聚力铸初心 笃行不怠开新局”四个责任专题，精准聚焦企业在致力科技创新、打造卓越产品、践行绿色低碳、加强党的建设等方面的责任行动与成效，彰显了中央企业的责任担当；建立健全“1+N+M”报告体系及常态化发布机制，将《中国宝武社会责任工作制度》升级为企业基本管理制度，推进制定《企业社会责任报告/ESG报告编写规范》，规范社会责任管理，创新性表现卓越。

##### 综合评级（★★★★★+）

经评级小组评价，《中国宝武钢铁集团有限公司2022年社会责任报告》的过程性、实质性、完整性、平衡性、可比性、可读性及创新性均达到五星级，综合为“五星佳”级，是企业社会责任报告中的典范。



中国宝武社会责任报告获得一次五星级评价、  
连续第三年获得五星佳级评价

#### 四、改进建议

增加行业核心指标的披露，提升报告完整性。



## Rating report



### Rating Report of China Baowu Steel Group Social Responsibility Report (2022)

Upon the request of China Baowu Steel Group, the Chinese Expert Committee on CSR Report Rating invited experts to form a Rating Team and rated the China Baowu Steel Group Social Responsibility Report (2022) (hereinafter referred to as “the Report”).

#### I. Rating Criteria

The Report is based on the *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0)* issued by the Chinese Academy of Social Sciences and the *China Corporate Social Responsibility Report Rating Standards (2020)* issued by the Chinese Expert Committee on CSR Report Rating.

#### II. Rating Processes

1. The Rating Team reviewed and confirmed the *Process Data Confirmation of Corporate Social Responsibility Report* and related supporting materials submitted by the Preparation Team of the Report;

2. The Rating Team evaluated the compilation process and the disclosed information of the Report and drafted the Rating Report;

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

#### III. Rating Results

##### Process（★★★★★）

The Propaganda Department of the Party Committee and the Corporate Culture Department of the Group took the lead to set up a report preparation work group to coordinate the specific preparation work. The departments and subsidiaries provided and reviewed the basic materials. The Deputy Minister of the Party Committee Propaganda Department and the Corporate Culture Department controlled the overall direction of the Report. The Director of the Corporate Culture Department controlled the key nodes. The Chairman and General Manager were responsible for the final review. The Report was positioned as an important tool to improve the CSR management level, strengthen communication with stakeholders, and build a responsible brand image for the enterprise, showing an accurate positioning of functional value. Material issues were identified according to domestic and foreign social responsibility standards, national policies and trends, benchmarking analysis in the industry, the company's development strategy, and the survey on stakeholders. A special launch conference and corporate social responsibility report centralized release activities are planned to be held to release the Report. The Report will also be released for the second time during the centralized release of the social responsibility report of central enterprises organized by the State-owned Assets Supervision and Administration Commission of the State Council. The Report will be presented in electronic and printed forms in both Chinese and English. Therefore, the Report has an excellent process performance.

##### Materiality（★★★★★）

The Report systematically disclosed industrial key issues in full and in detail, including the implementation of macro policies, product quality management, product innovation, responsible procurement, occupational health management, workplace safety, R&D and applications of environmental protection technologies and equipment, the conservation of energy and resources, the development of recycling economy, and environmental governance surrounding the plant. Therefore, the Report has an excellent materiality performance.

##### Completeness（★★★★★）

The Report systematically disclosed 93.46% of industrial core indicators from various aspects, including “Make Outstanding Products to Shine a More Brilliant Light on ‘a Baowu with Over-100-million Tons of Steel Production’”, “Create Outstanding Brands to Highlight the Brand Influence of ‘Strengthening the Country with Powerful Enterprises’”, “Pursue Leading Innovation to Build a ‘Great Wall of Steel’ Through Self-reliance and Self-improvement in Science and Technology”, and “Promote Modern Governance to Drive the Implementation of ‘Governance of Baowu’ in the New Era”. Therefore, the Report has an excellent completeness performance.

##### Balance（★★★★★）

The Report disclosed negative data such as “Number of safety production accidents”, “Number of employees injured in work-related accidents”, and “Proportion of employees resigned”, and briefly described the situation of “no major risk events occurred” and the cases involving the violation of the CPC Central Committee's eight-point decision on improving conduct as well as the relevant disposal and rectification. Therefore, the Report has an excellent balance performance.

##### Comparability（★★★★★）

The Report disclosed and compared data on 105 key indicators over the past three years, including “total operating revenue”, “steel output”, “total investment in energy conservation and technology transformation”, “comprehensive energy consumption per ton of steel”, “number of new employees”, and “funds for designated assistance”. Moreover, a horizontal comparison was made according to “1<sup>st</sup> in the world in terms of output and global market share of steel”, “2<sup>nd</sup> in the category of steel brands on the list of ‘The World's 500 Most Influential Brands’”, and “5” in the ‘Competitiveness Ranking of World-class Steel Enterprises’”. Therefore, the Report has an excellent comparability performance.

##### Readability（★★★★★）

The Report is themed “Pull Together to Build a World-Class Enterprise”, showing a clear frame structure and prominent key issues. It elaborated on the enterprise's accountability actions and performance under key issues such as scientific and technological innovation, environmental protection, workplace safety, product quality, employee growth, and public welfare and charity. The cover design adopted a conceptual graph. The “concentric circle” graphic elements were extracted to deeply echo “One Shared Baowu” and the hue echoed the enterprise's brand logo. The cross-page chapters used large real-world pictures in line with the chapter's theme, with narrative introduction and key performance, to concentrate on the main points and enhance the readability of the Report. The special column “Terms interpretation” was used to interpret the professional terms. QR codes were also added for a visual expansion, thus enhancing the communication ability of the Report. Therefore, the Report has an excellent readability performance.

##### Innovation（★★★★★）

The Report set up four columns on responsibility, i.e. “Improve Product Competitiveness by Focusing on Outstanding Products”, “Make More Efforts in Brand Building to Make Steel Brands Influential”, “Dare to Blaze New Trails in Low-carbon Development and Make Breakthroughs in Science and Technology Innovation”, and “Bear in Mind the Original Intention Jointly and Use Every Effort to Make a Fresh Start”, precisely focusing on the enterprise's responsible actions and effects on being committed to scientific and technological innovation, creating excellent products, practicing the green and low-carbon concept, and strengthening Party building, and showcasing the responsibility of a central enterprise. Moreover, the Report established and improved the “1+N+M” reporting system and normalized the release mechanism, upgraded the *Corporate Social Responsibility Work System of China Baowu* as one of the basic regulatory systems of the enterprise, and promoted the formulation of the *Standards for Preparing CSR/ESG Reports* to standardize the social responsibility management. Therefore, the Report has an excellent innovation performance.

##### Overall Rating（★★★★★+）

Upon evaluation by the Rating Team, the China Baowu Steel Group Social Responsibility Report (2022) reached a five-star level in the process, materiality, completeness, balance, comparability, readability and innovation. The Report is rated a “five-star plus” report on the whole and is a model of corporate social responsibility (CSR) reports.



The China Baowu Social Responsibility Report has received a five-star rating for one time and a “five-star plus” rating for the third consecutive year

#### IV. Suggestions for Improvement

More industrial core indicators should be disclosed for better completeness of the Report.



意见反馈

Feedback

亲爱的读者：

Dear Readers,

您好！非常感谢您在百忙之中阅读《中国宝武钢铁集团有限公司2022年社会责任报告》！为了持续改进社会责任报告管理工作，我们特别希望倾听您的意见和建议，恳请您协助完成意见反馈表中的相关问题，并选择以下方式反馈给我们：

Thank you for taking the time to read *China Baowu Steel Group Corporation Limited Social Responsibility Report (2022)*! To constantly improve the management of the social responsibility report, we would appreciate it if you provide valuable comments and suggestions by completing relevant questions in the feedback form, and please send it back to us in the following way:

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China Baowu Steel Group Corporation Limited

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邮 件: csr@baowugroup.com  
E-mail: csr@baowugroup.com

您的信息  
Your personal information

姓名: \_\_\_\_\_

联系电话: \_\_\_\_\_

Name: \_\_\_\_\_

Tel: \_\_\_\_\_

工作单位: \_\_\_\_\_

邮箱地址: \_\_\_\_\_

Work Unit: \_\_\_\_\_

E-mail: \_\_\_\_\_

选择性问題：（请在相应的位置打“✓”）  
Choice Questions: (Please put a tick “✓” in the appropriate box)

|  |  |
|--|--|
| 请您评价本报告反映宝武对经济、社会、环境的重大影响程度：<br>Please comment on the significant impact of Baowu on the economy, society, and environment reflected in the report:        | <div><input type="checkbox"/> 很好    <input type="checkbox"/> 较好    <input type="checkbox"/> 一般    <input type="checkbox"/> 较差    <input type="checkbox"/> 很差</div> <div><input type="checkbox"/> Great   <input type="checkbox"/> Good   <input type="checkbox"/> General   <input type="checkbox"/> Poor   <input type="checkbox"/> Very poor</div> |
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开放性问题：  
Open Questions:

您对宝武社会责任工作有哪些建议？  
What suggestions do you have for Baowu’s work related to CSR work?

您认为本报告还需要增加披露哪些社会责任信息？  
What else social responsibility information do you think needs to be disclosed in this report?

您认为本报告为您提供了哪些有价值的社会责任信息？  
What useful social responsibility information do you think you get from this report?

您认为本报告存在哪些不足之处？  
What deficiencies do you think exist in this report?





## 中国宝武钢铁集团有限公司

报告出版的环境考虑

纸张:采用环保纸张印刷

油墨:采用环保油墨以减少空气污染

设计制作: 国信云三

## China Baowu Steel Group Corporation Limited

Environmental considerations for publication of the report

**The paper:** Printed on environmentally friendly paper

**Ink:** Use environmental ink to reduce air pollution

**Design and production:** 国信云三