

星辰大海
伟大征程

2021

中国宝武钢铁集团有限公司
社会责任报告

China Baowu Steel Group Corporation Limited
Corporate Social Responsibility Report



星長大海 偉大征程

Grand Goal
Great Journey

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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“中国宝武”或“公司”）自 2016 年以来对外公开发布的第六份社会责任报告。

This report is the sixth Corporate Social Responsibility Report released to the public by China Baowu Steel Group Corporation Limited (hereafter referred to as “China Baowu” or “the Company”) since 2016.

质量保证

Quality Assurance

本报告披露的信息和数据来源于公司统计报告和正式文件，并经过相关部门审核。公司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 Company and have been reviewed by relevant departments. The Company undertakes that there is no false record or misleading statement in this report, and is 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国资发改革 [2012]23 号《关于中央企业开展管理提升活动的指导意见》、国务院国资委 2008 年 1 号《关于中央企业履行社会责任的指导意见》、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-CSR4.0）》以及《中国宝武钢铁集团有限公司社会责任工作管理办法（2021 年版）》，充分考虑利益相关方的愿望和关切并结合中国宝武对社会责任的理解和具体实践编写而成。

This report is compiled with reference to *Guidelines on Management Improvement Activities of Central Enterprises* (GZFG No. [2012] 23) issued by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), *Guidelines on Fulfillment of Corporate Social Responsibility by Central Enterprises* (No. [2008] 1) issued by the SASAC, UN Sustainable Development Goals (SDGs), *Guidelines for Preparation of China Corporate Social Responsibility Report (CASS-CSR4.0)* issued by the Chinese Academy of Social Sciences, and *Social Responsibility Management Measures of China Baowu Steel Group Corporation Limited (2021 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 China Baowu.

报告范围

Scope

除有特殊说明，本报告主要描述 2021 年 1 月 1 日至 2021 年 12 月 31 日期间，中国宝武在诚信经营、创新驱动、绿色发展、关爱员工、回馈社会、生态圈共建、乡村振兴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、智慧服务业、资源环境业、产业园区业、产业金融业等。

Unless otherwise specified, this report mainly describes the work and performance of China Baowu in fulfilling its social responsibility in integrity management, innovation-driven development, green development, caring for employees, contribution to society, ecosystem co-building and rural revitalization, etc. from January 1 to December 31, 2021, and the report covers such industries as steel manufacturing, advanced material, intelligent service, resource and environment, industrial park, and industrial finance.

文本语言

Text language

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

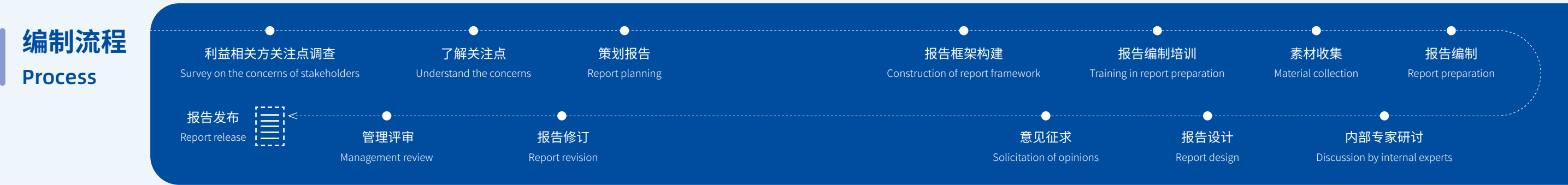
This report is published in both Chinese and English. In the event of any discrepancy between the two languages, the Chinese version shall prevail.

发布形式

Release form

本报告以印刷品、电子文档形式发布，其中电子文档可在中国宝武网站（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 website of China Baowu (www.baowugroup.com). To reduce the environmental impact of printing, we encourage readers to download and read electronic documents whenever possible.



高层致辞

Message from Chairman



中国宝武钢铁集团有限公司
党委书记、董事长 陈德荣
China Baowu Steel Group Corporation Limited
Secretary of the Party Committee
and Chairman Chen Derong

“雄关漫道真如铁，而今迈步从头越。”2021年是伟大的中国共产党成立100周年，也是我国“十四五”规划开局之年。面对严峻复杂的宏观环境、急剧变化的行业形势以及繁重艰巨的疫情防控和改革创新转型任务，中国宝武坚持以习近平新时代中国特色社会主义思想为指导，全面贯彻党的十九大和十九届历次全会精神，深入学习贯彻习近平总书记有关中国宝武的重要讲话和指示批示精神，树牢“四个意识”，坚定“四个自信”，做到“两个维护”，各级党组织、全体干部员工勇担时代责任，奋发创业激情。公司“十四五”开局势头良好，发展后劲显著增强。

我们积极探索“超亿吨宝武”下的管控模式，持续开疆拓土、整合融合，充分发挥规模效应，加快做强做优做大，首次挺进《财富》世界500强前百强。我们持续深化全面对标找差，着力追求极致效率，不断提升价值创造能力，经营业绩创历史最优。中国宝武第一次党代会提出的“亿万千百十”总体目标提前实现。

我们坚持把绿色作为企业生命的“底色”，“双碳”行动率先作为，引领行业绿色低碳转型，得到习近平总书记的充分肯定。我们发起成立全球低碳冶金创新联盟，碳中和行动方案正式出台，绿碳股权投资基金运作启动，低碳冶金项目有力推进，低碳绿色综合材料解决方案应用不断扩展。“三跨融合”落地路径逐步清晰，钢铁工业大脑战略计划付诸实施。我们努力“把关键核心技术掌握在自己手中”，着力解决“卡脖子”问题，产品助推“国之重器”上九天揽月、下五洋捉鳖，积极满足国家战略和支柱产业的材料需求，在实现国家科技自立自强中彰显宝武使命担当。

我们大力开展“百年奋斗心向党 产业报国谱新章”庆祝建党百年系列活动，深入开展党史学习教育，全员理想信念更为坚定，初心使命得到强化。实事项目暖心聚力，集团公司党委推进实施了两批19个重点项目，各级党组织累计为群众解决“急难愁盼”问题办实事25837件，将党的温暖送到了千万员工的心坎上。我们在脱贫攻坚战中不辱使命，接续奋斗，“授渔”计划开启乡村振兴新篇章。

企业文化是公司最核心的竞争力。2021年12月23日，我们共同度过了意义非凡的首个“公司日”，这是熔铸中国宝武价值观的全员文化盛典，“同一个宝武”氛围浓烈，员工的认同感、归属感和自豪感显著增强，“三有”生活水平不断提升。我们用全新语言、丰富形式讲好宝武故事、重塑行业形象，不断增强行业信心、企业信心和职业信心。

星辰大海，伟大征程。这是我们共同的理想，也是我们共同的事业。唯有戮力同心，将自身成长与企业发展紧密结合在一起，与国家、民族的命运紧紧联系在一起；唯有将企业战略融入国家战略，将企业发展跨越融入国家发展跨越的大趋势，才能建成强国重企和世界一流伟大企业，推动国家强大和民族复兴。

“浩渺行无极，扬帆但信风。”世界上最幸福的事，莫过于为理想而奋斗。尽管沿着理想之路前进，需要非凡的勇气、坚强的意志，需要睿智和远见，需要一代甚至几代人的接续努力、奋斗拼搏，但只要朝着伟大的目标锲而不舍，就一定能够走向无比辉煌灿烂的星辰大海！

“However difficult it might seem, the challenge will be overcome.” The year 2021 marks the centenary of the founding of the great Communist Party of China, and also the first year of China’s 14th Five-Year Plan. Facing the severe and complex macro environment, the rapidly changing industry situation, as well as the arduous double task of anti-epidemic endeavor, and reform, innovation and transformation, China Baowu follows the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implements the guiding principles of the Party’s 19th National Congress and all plenary sessions of the 19th Party Central Committee, and thoroughly studies and implements the important speeches and instructions of General Secretary Xi Jinping on China Baowu. With efforts put forth to consolidate “Four Consciousness” (maintaining political integrity, thinking in terms of the big picture, following the leadership core, and keeping in alignment with the central Party leadership), “Four Confidence” (confidence in the path, theory, system, and culture of socialism with Chinese characteristics) and “Two Upholds” (upholding General Secretary Xi Jinping’s core position on the CPC Central Committee and in the Party as a whole, and upholding the Central Committee’s authority and its centralized, unified leadership), all of the officials and employees shoulder the responsibility of the times and forge ahead with high entrepreneurial passion. The Company has embraced a good start in the 14th Five-Year period, showing strong momentum for future development.

We have actively explored the model of managing a Baowu with “over-100-million tons of steel production”. We keep expanding and consolidating our businesses to give full play to the scale effect and move faster to make Baowu stronger, better and bigger. We have entered the top 100 rankings in the *Fortune* Global 500 for the first time. We constantly identify gaps in operation and production through benchmarking, pursue ultimate efficiency, and keep improving our capabilities for value creation, thus achieving the best business performance in history. Our overall goal of “A Hundred Million, A Trillion, A Hundred Billion, Ten Billion, A Billion” put forward by the first Party Congress of China Baowu has been realized ahead of schedule.

We have been committed to promoting green development running throughout our entire company operation, we have taken the lead in advancing the “Dual-Carbon” (achieving carbon dioxide peaking and carbon neutrality) goals to guide the entire industry towards green and low-carbon transformation, which has been fully affirmed by General Secretary Xi Jinping. We initiated the Global Low-carbon Metallurgy Innovation Alliance, launched the “Carbon Neutrality Action Plan”, started the Green Carbon Equity Investment Fund, promoted the Low-carbon Metallurgy Program, and expanded the application of the “Comprehensive Low-carbon and Green Material Solution”. We clarified the implementation path of the “Three-cross Integration” (cross-industry and base, cross-space, cross-human-machine interface integration) strategy, and put into practice the “steel industrial brain strategic plan”. We strived to “keep the key core technologies in our own hands” and focused on solving the bottleneck problems. Our products have contributed to achieving China’s

exploration plans in space and the ocean. We have worked actively to meet the material demands required for boosting national strategies and pillar industries, which demonstrates Baowu’s mission and responsibility in contributing to China’s self-reliance on science and technology.

Through a series of activities in celebration of the centenary of the founding of the CPC, as well as in-depth study and education in Party history, all of us have strengthened our beliefs and original aspiration. We have also carried out many heart-warming practical projects. The Party Committee of the Group has implemented two batches of 19 key projects. Party organizations at all levels have completed a total of 25,837 practical tasks to solve employees’ urgent and difficult problems. We have also lived up to our mission in the fight against poverty. Our “Teach the Fishing” plan has opened a new chapter in rural revitalization.

Corporate culture embodies the core competitiveness of a company. On December 23, 2021, we celebrated the first “Company Day”, which was a cultural ceremony for all employees to forge the values of China Baowu. Immersed in the “One Shared Baowu” atmosphere, all of our employees have enhanced their sense of identity, belonging and pride, as their living standards featuring “Three Haves” are on the constant rise. We are telling the stories of Baowu and reshaping our image in the industry in a new language, through a diversity of forms, thus continuously enhancing our confidence in the industry, the Company and the profession.

Grand Goal, Great Journey. We have common ideals and undertakings to complete. We must pull together and base personal growth on the corporate development, on the shared future of our country and our nation, and we must integrate the corporate strategy into the national overall planning to ensure our corporate development follows the general trend of national development so that we can build a pillar world-class enterprise powering the national development and rejuvenation.

“There is no limit to the vastness, but we are determined to sail along with the wind.” The happiest thing in the world is to strive for one’s ambition and ideal. Although advancing towards our ideal requires extraordinary courage, strong will, wisdom and foresight, as well as continuous efforts of one generation or even several generations, we will surely be able to achieve our great ambition as long as we persevere!

陈德荣

走进中国宝武

About China Baowu



公司概况

COMPANY PROFILE

中国宝武注册资本527.9亿元，资产规模11170.84亿元，是国有资本投资公司试点企业，被国务院国有资产监督管理委员会纳入中央企业创建世界一流示范企业名单。在2021年《财富》发布的世界500强榜单中，中国宝武首次跻身前百强，排名第72位，继续位居全球钢铁企业首位。

China Baowu is one of the pilot enterprises of state-owned capital investment companies, with a registered capital of RMB 52.79 billion, an asset scale of RMB 1.117084 trillion, and has been included in the list of central SOEs to establish a world-class demonstration enterprise by State-owned Assets Supervision and Administration Commission of the State Council. On the *Fortune* Global 500 List released in 2021, China Baowu has entered the top 100 for the first time, ranking 72nd, and continued to rank first among global steel enterprises.



527.9 亿元

注册资本

A registered capital of RMB 52.79 billion

11170.84 亿元

资产规模

An asset scale of RMB 1.117084 trillion



11994 万吨

钢产量

Steel output of 119.94 million tons



9722.58 亿元

营业总收入

Total operating revenue of
RMB 972.258 billion



602.24 亿元

利润总额

Total profits of RMB 60.224 billion

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 steel and advanced materials integrated solutions and industrial ecosystem services

战略目标

Strategic goals

“亿万千百十”

集团形成亿吨级粗钢、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

“A Hundred Million, A Trillion, A Hundred Billion, Ten Billion, A Billion”

We will form a hundred million tons of crude steel, mineral products and renewable resources, a trillion yuan of 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 revenue and ten billion yuan of profits, and other subsidiaries that are excellent enterprises with ten billion yuan of revenue and a billion yuan of profits

“五四三二一”

研发强度5%，人均产钢4000吨，吨钢减碳30%，跨国指数20%，成为世界一流伟大企业

“5%, 4,000, 30%, 20%, First”

5% of R&D ratio, 4,000 tons of steel output per capita, 30% carbon reduction per ton of steel, 20% of transnational index, and becoming a world-class great enterprise

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

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



董事会 BOARD OF DIRECTORS



陈德荣 Chen Derong

党委书记、董事长
Secretary of the Party Committee and Chairman



胡望明 Hu Wangming

董事、总经理、党委副书记
Director, General Manager and Vice Secretary of the Party Committee



唐复平 Tang Fuping

外部董事
Outside Director



罗建川 Luo Jianchuan

外部董事
Outside Director



文传甫 Boon Swan Foo

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



张贺雷 Zhang Helei

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

来源：中国宝武钢铁集团有限公司官网 (<http://www.baowugroup.com>)，截至 2022 年 6 月

Source: Official website of China Baowu Steel Group Corporation Limited (<http://www.baowugroup.com>), as of June 2022

管理团队 MANAGEMENT TEAM



陈德荣 Chen Derong

党委书记、董事长
Secretary of the Party Committee and Chairman



胡望明 Hu Wangming

董事、总经理、党委副书记
Director, General Manager and Vice Secretary of the Party Committee



邹继新 Zou Jixin

党委常委
Standing Committee Member of the Party Committee



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 the Party Committee and Secretary of the Board (concurrent post)



郭斌 Guo Bin

副总经理、党委常委
Vice President and Standing Committee Member of the Party Committee



孟庆阳 Meng Qingyang

党委常委、纪委书记、国家监委驻中国宝武钢铁集团有限公司监察专员
Standing Committee Member of the Party Committee, Secretary of Discipline Inspection Commission and Supervisor of the National Commission of Supervision in China Baowu Steel Group Corporation Limited



侯安贵 Hou Angui

副总经理、党委常委
Vice President and Standing Committee Member of the Party Committee



魏尧 Wei Yao

党委常委
Standing Committee Member of the Party Committee



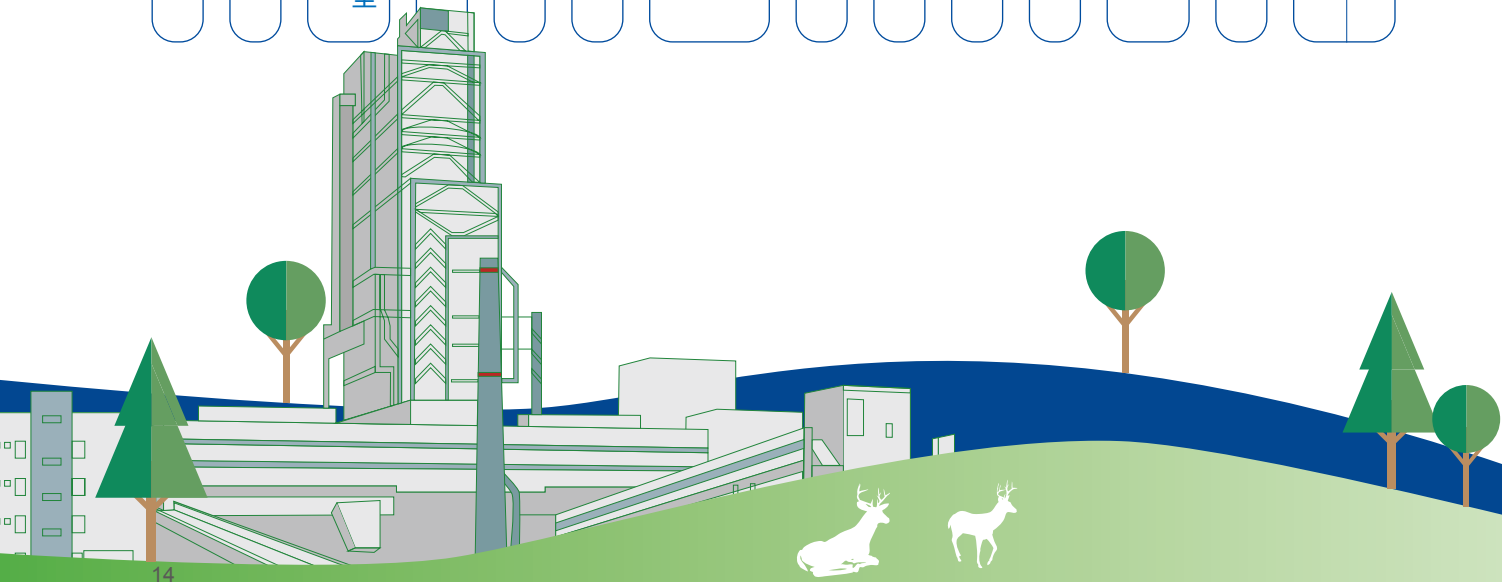
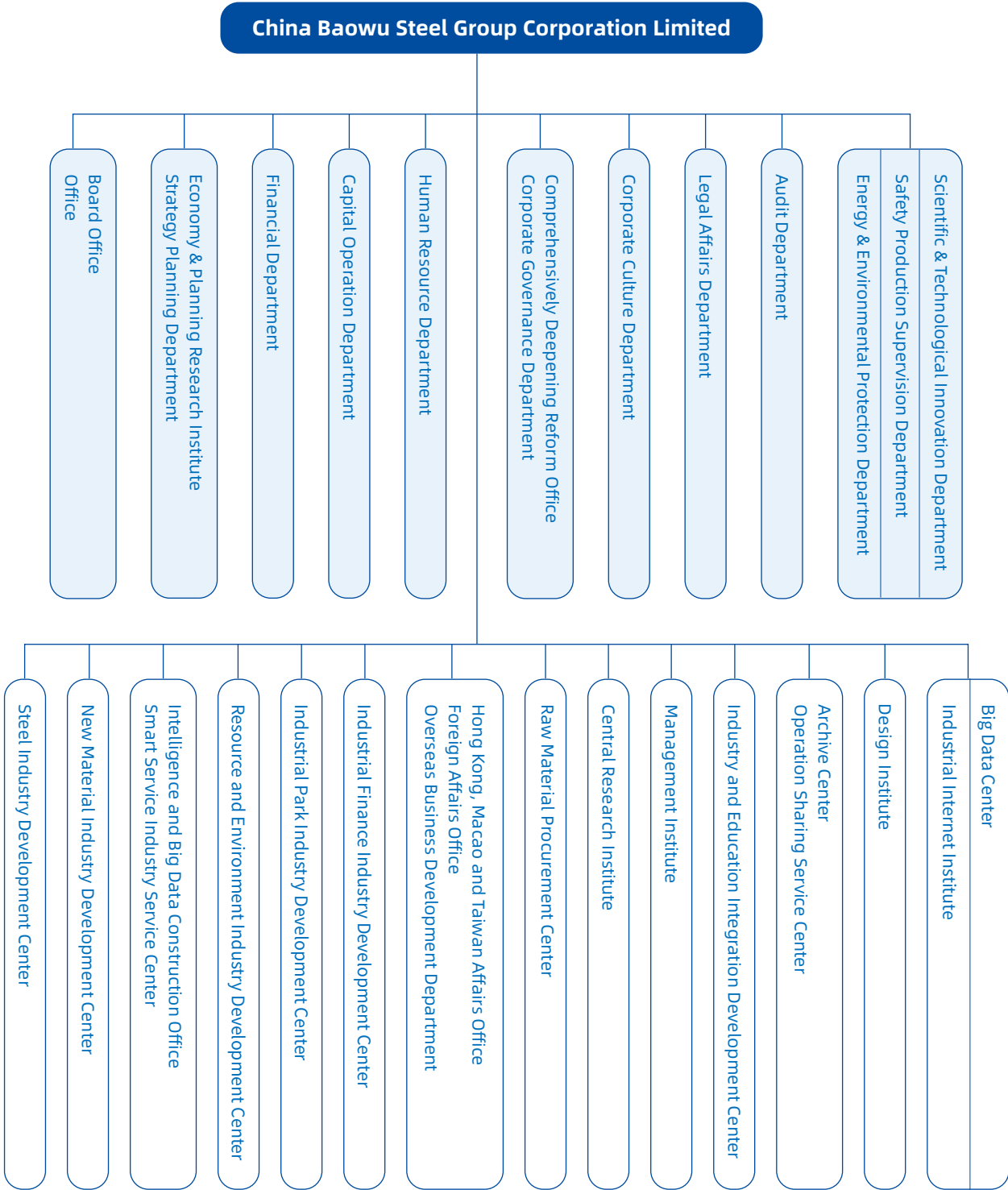
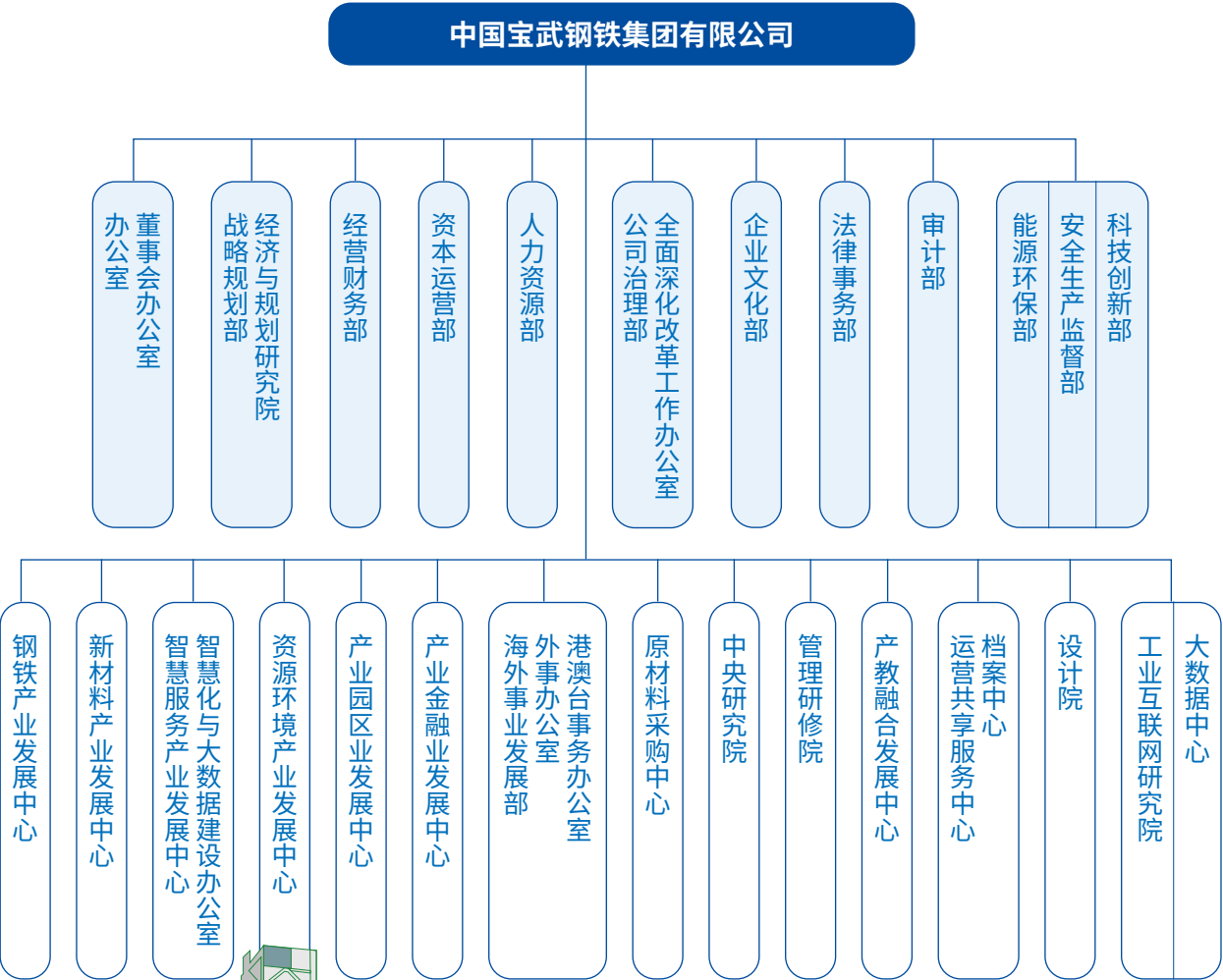
高建兵 Gao Jianbing

副总经理、党委常委
Vice President and Standing Committee Member of the Party Committee



组织机构

MANAGEMENT STRUCTURE





责任专题 | Column on Responsibility

百年奋斗心向党 产业报国谱新章

Struggle to Reward the Party and the Country with Industry Achievements

2021 年是中国共产党成立 100 周年，百年征程波澜壮阔，百年初心历久弥坚。在中国共产党的领导下，中国宝武在奋进征程中留下了弥足珍贵的红色足迹，谱写了新时代钢铁报国新篇章。2021 年，中国宝武党委高举中国特色社会主义伟大旗帜，坚持以习近平新时代中国特色社会主义思想为指导，全面贯彻落实党的十九大和十九届历次全会精神，深入学习贯彻习近平总书记有关宝武的重要讲话和指示批示精神，深入开展党史学习教育和“我为群众办实事”实践活动，积极推进新时代党的建设新的伟大工程，以高质量党建引领保障高质量发展。

The year 2021 sees the centenary of the founding of the Communist Party of China. Going through the extraordinary journey, we have become even firmer in our original aspirations. Under the leadership of the CPC, China Baowu has left precious red footprints in its striving history, and now is writing a new chapter of serving the country with steel in the new era. In 2021, China Baowu Party Committee held high the great banner of socialism with Chinese characteristics, adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and fully implemented the guiding principles of the Party's 19th National Congress and all plenary sessions of the 19th Party Central Committee, and thoroughly studied and implemented the important speeches and instructions of General Secretary Xi Jinping on China Baowu. We carried out in-depth study and education on the Party history and the activities of "doing practical things for people", and promoted the new great project of Party building in the new era, to ensure high-quality development with high-quality Party building.

贯彻落实习近平新时代中国特色社会主义思想，从党的百年奋斗史中汲取智慧和力量

Implement Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and Draw on Wisdom and Strength from the Party's Century-old History of Struggle

中国宝武坚持和完善“第一议题”制度，深入学习贯彻习近平总书记“七一”重要讲话精神、十九届六中全会精神，以“七个一”系列活动为载体庆祝中国共产党成立100周年，带领各级党组织和全体党员持续弘扬伟大建党精神，汲取历史智慧，不忘初心使命，勇于担当作为，不断深化“全面对标找差，创建世界一流”，在改革发展、科技创新等重要方面取得显著成效，交出了一份亮丽的成绩单，“十四五”开局良好。

China Baowu adheres to and improves the "First Topic" system and carries out in-depth learning of the guiding principles of the "July 1" important speech by General Secretary Xi Jinping and of the Sixth Plenary Session of the 19th CPC Central Committee. We celebrated the centenary of the founding of the CPC by holding the "Seven Ones" series of activities. The Party organizations at all levels and all Party members have carried forward the great founding spirit of the Party, drawn on historical wisdom, stayed true to our original aspiration and founding mission, and pressed ahead with great courage. We carried out "comprehensive benchmarking campaigns to fill gaps and create a world-class enterprise", and achieved remarkable results in such key aspects as reform, development, and scientific and technological innovation. With these wonderful outcomes, we achieved a good start in the 14th Five-Year period.

截至2021年12月 As of December 2021

306 个

中国宝武党委数（含本级）
China Baowu has had 306 Party Committees (including headquarters level)

283 个

党总支数
283 General Party Branches

3043 个

党支部数
3,043 Party Branches

3632 个

党组织数
3,632 Party Organizations

75903 名

党员数（在岗）
75,903 Party Members (on duty)

85328 名

党员数（总数）
85,328 Party Members (total)



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- 了解中国宝武 1950 年前红色历史大事记
Scan the QR code to learn about the red historical events of China Baowu before 1950.

- 2021 年 6 月 17 日，中国宝武开展“丹心碧血铸钢魂”红色主题展览活动，通过重温先辈用生命和热血书写的红色故事，牢记钢铁报国的初心使命，汲取智慧和前行的力量。

On June 17, 2021, China Baowu carried out the red-themed exhibition activity of "Spirit of Steel". By reviewing the red stories of our ancestors, we kept in mind the original mission of serving the country with steel, and drew on wisdom and strength to move forward.





2021年6月21日，中国宝武举行庆祝中国共产党成立100周年主题歌咏会，用诗与歌讲述中国共产党100年波澜壮阔的史诗画卷，展现了在中国共产党的领导下一代代宝武人书写的钢铁华章。
On June 21, 2021, China Baowu held a themed singing meeting to celebrate the centenary of the founding of the CPC. With poems and songs, we eulogized the magnificent CPC history and showed great touching stories of generations of Baowu people under the leadership of the Communist Party of China.

2021年6月，在庆祝中国共产党成立100周年之际，国务院国资委命名首批100个中央企业爱国主义教育基地，突出展示在中国共产党领导下中央企业百年发展中涌现的先进精神、先进典型和铸就的大国重器。中国宝武旗下宝钢股份宝山基地、武钢博物馆、太钢李双良纪念馆、重庆工业博物馆、不忘初心信念永恒——洛耐职工怀念习仲勋同志展览等五个爱国主义教育基地入选。

In June 2021, to celebrate the centenary of the founding of the CPC, the State-owned Assets Supervision and Administration Commission of the State Council named the first 100 patriotic education bases in central enterprises, highlighting the advanced spirit, model workers and cases, and the pillars of a great power during the centennial development of the central enterprises under the leadership of CPC. Five patriotic education bases of China Baowu were selected into this list, including Baoshan Base of Baosteel, Museum of WISCO, Li Shuangliang Memorial Hall of TISCO, Chongqing Industrial Museum, and “Staying True to the Original Aspiration – Employees of Luoyang Institute of Refractories Research Co., Ltd. Cherishing the Memory of Comrade Xi Zhongxun Exhibition.



2021年7月1日，中国宝武举行以“红色基因百年辉煌，钢铁报国铸梦起航”为主题的庆祝中国共产党成立100周年座谈会。
On July 1, 2021, China Baowu held a symposium to celebrate the centenary of the founding of the CPC with the theme of “Keep Serving the Country with Steel in the Glory of a Century”.



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专题视频《淬炼》
Feature video “Quenching”

以高质量党建引领高质量发展，践行新发展理念

Lead High-quality Development with High-quality Party Building and Practice the New Development Philosophy

中国宝武持续深入开展“学讲话、展后劲、促强大”主题活动，深入学习习近平总书记考察调研中国宝武重要讲话精神，聚焦生产经营重点任务、疑难问题，攻坚克难，将组织优势转化为发展优势、竞争优势，在钢铁行业中率先提出“双碳”目标，按照习近平总书记重要批示精神，系统谋划、科学制订实施中国宝武“双碳”行动方案，引领行业践行绿色低碳战略。国企改革三年行动按计划推进，国有资本投资公司运营日趋成熟，分业分级发展格局基本确立，绩效驱动型战略执行体系上下贯通，市场化体制机制创新工程系统推进，多家子公司混改取得突破，企业内生动力和活力大大激发，“超越自我、跑赢大盘、追求卓越、全球引领”理念深入人心。

China Baowu continued to carry out themed activities of “learning speeches, tapping into potential, and boosting strength” and in-depth study of the guiding principles of General Secretary Xi Jinping’s important speech during his inspection tour of China Baowu. Focusing on key tasks and difficult problems in production and operation, we worked to crack difficulties and transform organizational advantages into development drivers and competitive edge. We were the first in the steel industry to propose the “Dual-Carbon” target. Following the guiding principles of General Secretary Xi Jinping’s important instructions, we systematically planned and formulated a science-based action plan for China Baowu in this regard, to lead the green and low-carbon development in the industry. We are advancing the three-year campaign for SOE reform on schedule. As a result, the state-owned capital investment companies have become more mature in their operation, the development paradigm by industry and level has been established, the strategic performance-driven execution system has been implemented from top to bottom, the project for innovation in market-based systems and mechanisms has been progressing systematically, and breakthroughs have been made in the mixed-ownership reform of many subsidiaries. Benefiting from all of the above measures, we have seen our endogenous driving force and vitality invigorated, and the concept of “outdoing ourselves, outperforming in the overall market, striving for excellence, and maintaining a leadership position in the world” has taken root in the hearts of Baowu people.



2021年10月12日，中国宝武和上海联合产权交易所联合举办中国宝武钢铁集团有限公司混合所有制改革项目专场推介会。
On October 12, 2021, China Baowu and Shanghai United Assets and Equity Exchange jointly held a special promotional event for the mixed-ownership reform project of China Baowu Steel Group Corporation Limited.



中国宝武党委一届六次全委（扩大）会暨 2022 年干部大会、纪委一届六次全委（扩大）会
The Sixth Plenary Party Committee (Expanded) Meeting of the First China Baowu Party Committee and
the 2022 Officials' Meeting and the Sixth Plenary Party Committee (Expanded) Meeting of the First
Discipline Inspection Commission

加强党的领导与完善公司治理相统一，健全完善现代企业制度

Strengthen the Party Leadership While Enhancing Corporate Governance through Improved Modern Enterprise System

中国宝武全面落实《关于中央企业在完善公司治理中加强党的领导的意见》各项要求，系统优化重大决策体系，形成“三重一大”决策制度实施办法、重大事项决策权责清单、董事会授权决策方案、各决策主体会议管理办法等修订方案。修订完善后的重大事项决策体系，进一步完善了党委、董事会、经理层等治理主体决策权限、董事会授权决策事项及形式、“三重一大”事项的基本决策程序、党委前置研究讨论事项和研判标准等，注重处理好规范与效率、发展与风险防范关系，确保各决策主体责任明确、高效协同、规范运行，有力促进决策水平整体提高，做到在重大决策上将党委把关定向与董事会科学决策有机融合，在经营管理上将党委推进保障与经理层贯彻落实有机融合。

China Baowu fully implements the requirements of the *Opinions on Strengthening the Party's Leadership in the Improvement of Corporate Governance by Central Enterprises* to systematically optimize the major decision-making system, fostering the implementation measures for the decision-making mechanism for “Three Majors and One Large” matters (major issues, major personnel appointments and dismissals, investments in major projects and use of large sums of money), the list of decision-making powers and responsibilities for major matters, the plan for Board of Directors to authorize decision-making, the management measures for the decision-making subjects’ meeting, and other revised plans. The revised decision-making system for major matters has further improved the decision-making authority of the Party committee, the Board of Directors, managers and other governance subjects, the matters and forms for the Board of Directors to authorize decision-making, the basic decision-making procedures for “Three Majors and One Large” matters, the matters for pre-research and discussion and judgment standards by the Party committee, etc. We pay attention to striking a balance between norms and efficiency, and between development and risk prevention, and ensure a clear definition of rights and responsibilities, efficient collaboration and standard operation among each decision-making subject, to boost the overall decision-making level. We aim to combine the Party committee setting the general direction with the science-based decision-making by the Board of Directors and integrate the Party committee promotion with the implementation at the managerial level.

持续强化“三基建设”，夯实党建基础工作

Strengthen the “Three Bases” Construction to Consolidate the Foundation for Party Building

中国宝武坚持和落实党的建设和企业改革同步谋划、党的组织及工作机构同步设置、党组织负责人及党务工作人员同步配备、党建工作同步开展，实现体制对接、机制对接、制度对接和工作对接，积极探索境外基层党建工作、混合所有制企业党建工作等新问题、新难点，确保党的领导、党的建设在现代企业制度中得到体现；加强党建工作标准化规范化建设，编制《党委工作标准》和《党支部工作标准》；加强党委书记、党支部书记和党务工作者培训，完善中国宝武党支部书记研修会，有序开展党员集中轮训，深入推进党员“登高计划”活动，持续开展“三基建设”专项检查，大力推动钢铁生态圈党组织结对共建工作，有效解决“空白班组”问题，不断优化党组织设置，提升基层党建工作质量。

China Baowu conducts planning of the Party building concurrently with the corporate reform, sets up the Party organization concurrently with the working body, and appoints the head and common staff of the Party organization concurrently with the promotion of the Party building efforts, thereby achieving linkages in institutions, mechanisms, systems, and practical work contents. We actively explore solutions to new problems such as Party building work at the overseas grassroots level and in mixed-ownership enterprises, to ensure that Party leadership and Party building are included in the modern enterprise system. We have standardized the Party building efforts by compiling the *Standards for the Work of Party Committees and the Standards for the Work of Party Branches*. We have strengthened the training of Party committee secretaries, Party branch secretaries and Party affairs workers, improved China Baowu Training Session for the Party Branch Secretaries, provided centralized rotational training for Party members in an orderly fashion, and pushed forward the “Ascension Plan” activities for Party members. We continue to carry out the “Three Bases Construction” special inspection, promote the paired construction of Party organizations in the iron & steel ecosystem, solve the problem of “vacant teams”, and continuously optimize the setup of Party organizations, in an effort to improve the quality of grass-roots Party building efforts.

责任专题 | Column on Responsibility

争做双碳引领者 实现绿色化发展

Strive to be a Leader in Carbon Peaking and Carbon Neutrality for Green Development

我国力争 2030 年前实现碳达峰、2060 年前实现碳中和，是以习近平同志为核心的党中央经过深思熟虑作出的重大战略决策，事关中华民族永续发展和构建人类命运共同体，充分体现了一个负责任大国对人与自然前途命运的深切关注和主动担当。2020 年以来，习近平总书记先后考察调研中国宝武太钢集团、马钢集团，对中国宝武碳达峰碳中和工作作出重要批示。中国宝武要主动承担责任、加强技术创新、加快转型升级，坚定不移地走绿色低碳发展之路！习近平总书记的重要指示批示，饱含对中国宝武的殷殷嘱托和深切期望，是肯定、鼓舞，更是期许和鞭策。中国宝武不断提高政治站位，充分领会、准确把握推进碳达峰碳中和的政治责任和历史使命，全力以赴完成“双碳”大考，努力把中国宝武打造成为新时代低碳创新转型的新标杆。

China strives to achieve carbon dioxide peaking by 2030 and carbon neutrality by 2060. This is a major strategic decision made by the Party Central Committee with Comrade Xi Jinping at the core after careful consideration. It is relevant to the sustainable development of the Chinese nation and the building of a community with a shared future for mankind. It shows the deep concern and proactive responsibility of a responsible major country for the shared future of man and nature. Since 2020, General Secretary Xi Jinping has inspected and investigated TISCO and Magang Group of China Baowu and made important instructions on China Baowu's carbon dioxide peaking and carbon neutrality target. China Baowu will take the initiative to assume responsibility, strengthen technological innovation, accelerate transformation and upgrading, and unswervingly follow a green and low-carbon development approach! The important instructions of General Secretary Xi Jinping are full of exhortations and high expectations for China Baowu. The instructions give us affirmation, encouragement and more, expectation and spur further improvement. China Baowu continuously enhances its political stance, obtains a full and accurate grasp of the political responsibility and historical mission of promoting carbon dioxide peaking and carbon neutrality, will go all out to pass the great test in this regard, and strives to build China Baowu into a new benchmark of low-carbon innovation and transformation in the new era.

中国宝武碳减排宣言 China Baowu Carbon Emission Reduction Declaration

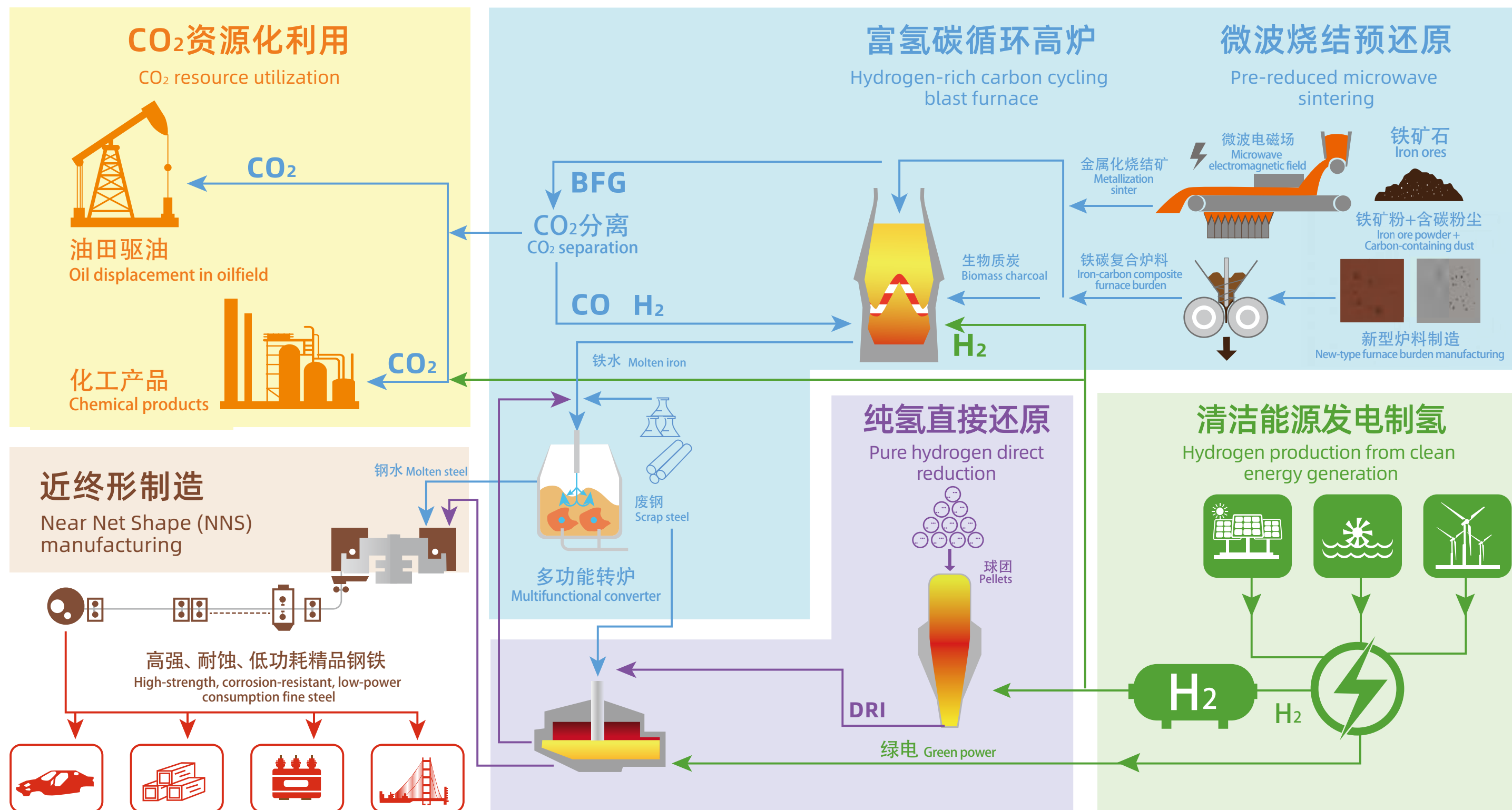
作为全球第一大钢企和我国钢铁行业的龙头企业，中国宝武决心以习近平生态文明思想为指引，担纲新时代行业绿色低碳发展的坚定引领者，探索钢铁行业实现碳中和路径。2021年1月20日，中国宝武党委一届五次全委（扩大）会暨2021年干部大会上，中国宝武党委书记、董事长陈德荣正式宣告，中国宝武将在2023年力争实现碳达峰、2025年具备减碳30%工艺技术能力、2035年力争减碳30%、2050年力争实现碳中和。

As the world's largest steel company and the leading enterprise in the steel industry of China, China Baowu is determined to, following the guidance of Xi Jinping's thought on ecological civilization, act as a firm leader in the green and low-carbon development of the steel industry in the new era, and explore the path to achieve carbon neutrality in the steel industry. On January 20, 2021, at the Fifth (expanded) Plenary Session of the First Party Committee of China Baowu and 2021 Cadres' Congress, Chen Derong, Secretary of the Party Committee and Chairman of China Baowu, officially announced that China Baowu will strive to realize Carbon Peak by 2023, achieve the technological capability of reducing carbon by 30% by 2025, and strive for carbon reduction by 30% by 2035 and carbon neutrality by 2050.



中国宝武碳中和冶金技术路线图

China Baowu Carbon Neutrality Metallurgical Technology Roadmap



碳中和冶金技术方向 Carbon Neutrality Metallurgical Technology Direction	中国宝武的代表性行动、计划 Representative Actions and Programs of China Baowu
<p>极致能效 世界钢协数据表明，过去50年钢铁行业吨钢能耗降低61%，能源强度尚有15%—20%的下降潜力。聚焦余热余能资源化、提升界面能效的创新与应用，实现全流程能源效率提升，挑战极致能效。</p> <p>Ultimate energy efficiency Data from the World Steel Association (WSA) shows that energy consumption per ton of steel in the steel industry has been reduced by 61% over the past 50 years, and there is still a potential for a 15-20% reduction in energy intensity. Focusing on recycling waste heat and waste energy resources, and improving the innovation and application of interface energy efficiency, to achieve the improvement of energy efficiency in the whole process and challenge ultimate energy efficiency.</p>	<p>宝钢股份：积极开展四基地内外部工序能耗对标，提升生产能源使用效率，降低主要工序能耗，推进实施行业最新最佳可行技术（BACT）应用。</p> <p>Baosteel: Actively carry out energy consumption benchmarking for internal and external processes of the four bases, improve energy efficiency in production, reduce energy consumption in major processes, and promote the implementation of the latest best available control technology (BACT) application in the industry.</p>
	<p>重庆钢铁：2021年，投用及推进的节能降碳项目共15个，其中7个已投用、8个正在按时间节点推进，均在2022年投用。待项目全部投用，每年可节约标煤9.843万吨、减少二氧化碳排放28.19万吨。</p> <p>Chongqing Iron & Steel: In 2021, a total of 15 energy conservation and carbon reduction projects have been put into operation and promoted, 7 of which have been put into service and 8 are being promoted as scheduled. All of these projects will be put into operation in 2022. After all of these projects are put into operation, 98,430 tons of standard coal will be saved and 281,900 tons of carbon dioxide emissions will be reduced per year.</p>
<p>富氢碳循环高炉 以富氢碳循环为主要技术手段，最大程度利用碳的化学能，以降低高炉还原剂比为方向，加上绿色电加热和原料绿色化技术措施，实现高炉流程的大幅减碳。</p> <p>Hydrogen-rich carbon cycling blast furnace With hydrogen-rich carbon cycling as the main technical means, maximizing the utilization of chemical energy of carbon to reduce the blast furnace reductant ratio, combined with the technical measures of green electric heating and green raw materials, to achieve significant carbon reduction in the blast furnace process.</p>	<p>八钢公司：作为世界唯一的工业级低碳冶金实验平台的八钢富氢碳循环高炉已完成第二阶段工业试验内容，成果优于计划目标，燃料比突破历史新低。风口喷吹脱碳煤气，减碳效果10%以上；喷吹焦炉煤气，减碳效果15%以上，初步形成富氢碳循环高炉低碳操作技术。</p> <p>Bayi Iron & Steel: Bayi Iron & Steel's hydrogen-rich carbon cycling blast furnace, the world's unique industrial-grade low-carbon metallurgical experimental platform, has completed the items of the second stage of the industrial experiment, and the results are better than the planned targets, with fuel ratio breaking through a new historical low. The tuyere injection decarburization gas has achieved a carbon reduction effect of more than 10%; the coke oven gas injection has achieved a carbon reduction effect of more than 15%. A low-carbon operation technology for hydrogen-rich carbon cycling blast furnace has been preliminarily formed.</p>
<p>氢基竖炉 使用清洁能源制取氢气，开发氢基竖炉直接还原炼铁工艺，实现近零碳排放的钢铁冶炼过程，是实现碳中和非常重要的路径。</p> <p>Hydrogen-based shaft furnace Using clean energy to produce hydrogen, developing a hydrogen-based shaft furnace direct-reduction iron-making process, and realizing iron and steel smelting process with near-zero carbon emissions are very important paths to achieving carbon neutrality.</p>	<p>宝钢股份湛江钢铁：零碳示范工厂百万吨级氢基竖炉工程正式开工，该项目是国内首套百万吨级氢基竖炉，也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。项目预计2023年底建成，投产后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。</p> <p>Baosteel Zhanjiang Iron & Steel: Zero Carbon Demonstration Plant megaton hydrogen-based shaft furnace project has been officially commenced, which is the first megaton hydrogen-based shaft furnace in China and the first direct reduction production line integrating hydrogen and coke-oven gas for industrial production. The project is expected to be completed by the end of 2023, and after it is put into operation, it can reduce carbon dioxide emissions by more than 500,000 tons per year compared with the same scale of molten iron output in the traditional pre-ironmaking whole-process blast furnace iron-making process.</p>

碳中和冶金技术方向 Carbon Neutrality Metallurgical Technology Direction	中国宝武的代表性行动、计划 Representative Actions and Programs of China Baowu
<p>近终形制造 近终形制造技术与传统工艺相比，流程更短，生产过程更加高效，能耗及排放更低，被认为是近代钢铁工业发展中的一项重大工艺技术革新。</p> <p>Near Net Shape manufacturing Compared with the traditional process, the Near Net Shape manufacturing technology is shorter and more efficient in the production process and has lower energy consumption and emissions. It is considered to be a major technological innovation in the development of the modern steel industry.</p>	<p>中国宝武已经开发出薄带连铸连轧技术，连同全球冶金技术工作者已经探索出的薄板坯连铸连轧技术、棒线材连铸连轧技术，将是轧制区域碳中和的重要工艺路线。在未新建产线的情况下，中国宝武最近正在推进棒线生产线的直接轧制，在重庆钢铁一条棒线产线上实现了直轧，同时正在筹划在新疆建设一座全新的、极致短流程的薄带连铸零碳工厂。</p> <p>China Baowu has developed the Thin Strip Continuous Casting and Casting Rolling technology, together with continuous casting and continuous rolling technology for thin slabs, wire rods and bars that has already been explored by global metallurgical technologists will be an important process route for carbon neutrality in the rolling area. In the absence of new production lines, China Baowu is recently promoting direct rolling of wire rods and bars, which has been achieved on a production line of wire rods and bars of Chongqing Iron & Steel. Meanwhile, China Baowu is planning to build a brand-new, thin strip continuous casting zero-carbon plant of extremely short process in Xinjiang.</p>
<p>冶金资源循环利用 充分利用好含铁含碳固废、钢铁循环材料和有机生物质资源是实现钢铁绿色低碳发展的关键路径。</p> <p>Cyclic utilization of metallurgical resources Making full use of iron-containing and carbon-containing solid waste, steel recycling materials and organic biomass resources is the key path to achieving green and low-carbon development of steel.</p>	<p>自2019年开始，中国宝武大力推进转炉流程的大比例废钢冶炼技术，指标最优的鄂城钢铁吨钢铁水消耗达到720公斤。欧冶链金积极布局全国乃至全球范围的废钢收集、加工网络，全国市场占有率已达第一。</p> <p>Since 2019, China Baowu has vigorously promoted the large-proportion scrap steel smelting technology for the converter process, and the consumption of molten iron per ton of steel by Echeng Iron & Steel with the best metric has reached 720 kg. Ouyeel Blockchain Finance and Metal Recycling Resources Co., Ltd. has actively laid out a nationwide and even a global network for scrap steel collection and processing, and the share in nationwide market has reached the first.</p>
<div>  <p>CO₂回收及利用 构建C到CO、CO到CO₂及CO₂资源利用的全生命周期使用技术，拉长碳的价值链，将CO₂固化与现代冶金连成一体，打造净零排放的新型碳循环产业链，形成碳和冶金生态系统，实现钢铁行业可持续的绿色发展。</p> <p>CO₂ recovery and utilization Building a full life-cycle use technology from C to CO, CO to CO₂ and CO₂ resource utilization to extend the value chain of carbon; link CO₂ sequestration with modern metallurgy to create a new carbon cycling industrial chain with net zero-emission, and form a carbon and metallurgical ecosystem, so as to realize sustainable green development of the steel industry.</p> </div>	<p>八钢公司：八钢公司COREX生产线，通过大量工艺技术革新，利用炉顶煤气循环利用和二氧化碳捕集分离两大突破性技术，每年可减少二氧化碳排放20万吨。</p> <p>Bayi Iron & Steel: Bayi Iron & Steel COREX production line, through numerous process technology innovations, is capable of reducing CO₂ emissions by 200,000 tons per year by means of two breakthrough technologies: TGRBF and CO₂ Capture and Separation.</p>
	<p>韶钢松山：探索二氧化碳资源化利用的途径、技术和方法，研究应用微藻固碳、循环煅烧石灰窑及二氧化碳资源化回收技术等先进技术，结合地质利用或封存、化工利用、生物利用等，形成完整的二氧化碳捕集、利用一体化试点示范项目工程。</p> <p>Shaoguan Iron and Steel Songshan: Exploring the approaches, technologies and methods of carbon dioxide resource utilization, researching and applying advanced technologies such as microalgal carbon sequestration, circulating calcined lime kiln and carbon dioxide resource recovery, and combining geological utilization or storage, chemical utilization, biological utilization, etc., to form a complete pilot demonstration project integrating carbon dioxide capture and utilization.</p>

全球低碳冶金创新联盟

Global Low-carbon Metallurgical Innovation Alliance

2021年11月18日，由中国宝武倡议并联合全球钢铁业及生态圈伙伴单位共同发起的全球低碳冶金创新联盟宣布成立，由来自世界15个国家的62家企业、高等院校、科研机构共同组建。联盟定位于低碳冶金创新领域的技术交流平台，目的是聚集全球钢铁业及上下游企业、大学及研究机构的研发资源，合作开展基础性、前瞻性低碳冶金技术开发；促进技术合作、技术交流、技术转化，促进低碳技术的工程化和产业化，形成钢铁低碳价值创新链，推动钢铁工业的低碳转型。联盟成员将遵循开放原则、愿景认同原则、知识产权保护原则，积极应对气候变化，共同为钢铁工业的未来、为人类文明进步作出贡献。

On November 18, 2021, the Global Low-carbon Metallurgical Innovation Alliance, initiated by China Baowu and jointly launched by the global steel industry and ecosystem partners, was announced to be established, which consists of 62 enterprises, colleges and universities, and scientific research institutions from 15 countries around the world. The Alliance is positioned to be a technology exchange platform in the field of low-carbon metallurgical innovation. It aims to gather R&D resources from the global steel industry and upstream and downstream enterprises, universities and research institutions to cooperate and develop basic and forward-looking low-carbon metallurgical technologies; enhance technological cooperation, exchange and transformation; facilitate the engineering and industrialization of low-carbon technologies; form a low-carbon value innovation chain for steel and promote the low-carbon transition of the steel industry. The members of the Alliance will actively respond to climate change and jointly make contributions to the future of the steel industry and the progress of human civilization by following the principles of openness, vision identification and intellectual property protection.



“作为世界最大的钢铁生产商，中国宝武积极发挥带头作用，发起成立全球低碳冶金创新联盟，推动绿色低碳技术进步，意义非凡。

As the world's largest steel producer, it is of great significance for China Baowu to play a leading role in initiating the establishment of a global low-carbon metallurgical innovation alliance to promote the advancement of green and low-carbon technologies.

”

——世界钢铁协会总干事 埃德温·巴松
--- Edwin Basson, Director General, World Steel Association

技术创新引领钢铁低碳发展倡议书

Initiative for Technological Innovation Leading Low-carbon Development of Iron and Steel

2021年11月18日举行的全球低碳冶金创新联盟成立大会上，中国宝武党委常委、副总经理，全球低碳冶金创新联盟秘书长侯安贵代表联盟宣读了《技术创新引领钢铁低碳发展倡议书》，倡议（节选）：

At the inaugural ceremony of the Global Low-carbon Metallurgical Innovation Alliance held on November 18, 2021, Hou Angui, Standing Committee Member of the Party Committee and Vice President of China Baowu, and Secretary General of the Global Low-carbon Metallurgical Innovation Alliance, read out the *Initiative for Technological Innovation Leading Low-carbon Development of Iron and Steel* on behalf of the Alliance, the initiative (excerpt) reads:

■ 技术创新引领钢铁低碳发展。钢铁生态圈的广大成员应各尽所能、各展所长，积极探索低碳工艺路径，实施钢铁生产流程优化，全力降低温室气体排放。

Technological innovation leads low-carbon development of iron and steel. Members of the iron & steel ecosphere should exert their abilities and strengths to actively explore low-carbon process paths, optimize steel production processes, and make every effort to reduce greenhouse gas emissions.

■ 打造开放透明的国际化交流平台。围绕绿色低碳工艺、绿色产品、钢铁及相关产业耦合技术、碳捕集及利用技术、清洁能源技术等开展深入交流，为实现钢铁低碳转型集思广益、贡献智慧与力量。

Create an open and transparent international exchange platform. Carry out in-depth exchanges in the fields of green and low-carbon processes, green products, coupling technologies of steel and related industries, carbon capture and utilization technologies, clean energy technologies, etc., so as to collect useful ideas and contribute wisdom and strength to the realization of low-carbon transition of steel.

■ 共建、共享平等、开放的交流模式和氛围。共同研究钢铁绿色低碳发展方向，分析低碳研究案例，共享资讯信息，推动全球钢铁行业绿色可持续发展。

Jointly build and share an equal and open communication mode and atmosphere. Jointly research the direction of green and low-carbon development of steel, analyze low-carbon research cases, share information and boost the green and sustainable development of the global steel industry.

多元协同，推动低碳发展

Diversified Synergy to Promote Low-carbon Development

中国宝武碳排放主要来自于钢铁生产，然而碳中和工作不仅仅是钢铁单元的事。“一基五元”协同推进碳中和是中国宝武的重要优势。从研发到工程化策划设计，从原料、成品到能源开发等，“一基五元”在多年的专业化整合基础上都培育出相应的能力，为低碳冶金创新研发、工程化到最后落地提供了强大支撑。

Carbon emissions of China Baowu mainly come from steel production, but carbon neutrality is not just a matter of steel units. Collaborated promotion of “One Basis and Five Industries” to push carbon neutrality is an important advantage of China Baowu. From R&D to engineering planning and design, from raw materials and finished products to energy development, “One Basis and Five Industries” have cultivated corresponding capabilities on the basis of years of specialized integration, providing strong support for the innovative R&D, engineering and final implementation of low-carbon metallurgy.



绿色钢铁新生态助力实现人类更美好生活

New green steel ecology contributes to better life for mankind

中国宝武贯彻新发展理念，加快技术创新，坚定不移走生态化优先、绿色低碳的高质量发展道路；以绿色制造、绿色产品和绿色产业作为核心路径，率先进行低碳转型，身体力行绿色发展，并承担生态圈链主的责任，为上下游合作伙伴作出表率，引领并促进整个钢铁新生态绿色化，为人类的美好生活作出新的贡献。

China Baowu puts the new development philosophy into practice, accelerates technological innovation, and unswervingly follows the high-quality development path of ecological priority and green low-carbon; taking green manufacturing, green products and green industry as the core path, China Baowu takes the lead in the low-carbon transition, practically carries out green development, and assumes the responsibility of the ecosystem chain leader to set a good example for upstream and downstream partners, thus leading and promoting the greening of the whole new steel ecology and making new contributions to a better life for mankind.

责任专题 | Column on Responsibility

鱼渔同授： 精准对接施策 助力乡村振兴

中国宝武认真贯彻落实党中央、国务院关于巩固拓展脱贫攻坚成果同乡村振兴有效衔接的决策部署，全力践行央企政治责任和社会责任，按照国家乡村振兴局、国务院国资委部署要求，积极适应机构转型、工作转轨新形势，严格落实“四个不摘”要求，干部队伍交接平稳，资金保障及时有力，政策调整精准有效，深度聚焦产业帮扶、就业帮扶、教育帮扶，全员全体系全产业链助力帮扶地区加快农业农村现代化，谱写乡村振兴新篇章。

China Baowu conscientiously implements the decisions and arrangements of the CPC Central Committee and the State Council on consolidating and expanding the effective connection between the achievements of poverty alleviation and rural revitalization. To fully practice the political and social responsibilities of a central enterprise, we follow the deployments of the National Rural Revitalization Administration and the State-owned Assets Supervision and Administration Commission of the State Council, to actively adapt to the new trend of institutional transformation and work transition, and strictly implement the requirements for “Four Maintains” during the transitional period. We ensure that the handover of officials and teams is stable, the funding guarantee is timely and adequate, and the policy adjustment is precise and effective. We focus on assistance in industries, employment and education. All of our members in the whole industry chain of all the systems are involved in helping the assisted areas to modernize the agriculture and rural areas at a faster pace, so as to write a new chapter in rural revitalization.

加强组织领导 Strengthen Organizational Leadership

领导带头表率 Set examples by leaders

主要负责同志深入国家乡村振兴重点帮扶县广南县、国家生态文明建设示范区罗田县调研考察；7名领导班子成员赴6个定点帮扶县调研考察8次，与地方党委政府共商振兴良策。

Our main leaders have surveyed and investigated Guangnan County (a key county to receive assistance in pursuing rural revitalization) and Luotian County (a national pilot zone for ecological civilization construction); 7 leading members went to 6 designated assistance counties for survey and investigation for 8 times to discuss with the local party committees and governments on good policies for revitalization.

授渔

计划
授人以鱼不如授人以渔

Implement Targeted Policies to Help with Rural Revitalization



2021年9月17日，中国宝武总经理、党委副书记胡望明一行到云南省文山州广南县调研，共商定点帮扶工作，全力助推当地振兴发展，并实地考察了中国宝武援建的相关项目。
On September 17, 2021, a team led by Hu Wangming, General Manager of China Baowu and Vice Secretary of the Party Committee, visited Guangnan County, Wenshan Prefecture, Yunnan Province. They discussed the designated assistance work to fully boost the local revitalization and development, and investigated the relevant projects assisted by China Baowu.

强化顶层设计 Strengthen top-level design

制定定点帮扶和对口支援工作实施方案、“十四五”对口支援西藏和青海涉藏州县工作规划，发布《中国宝武乡村振兴“授渔”计划》，将“巩固拓展脱贫攻坚成果办实事”纳入“我为群众办实事”实践活动重点项目。

We have formulated an implementation plan for designated assistance and pairing support, and a work plan for pairing support to Tibet and Tibetan-related prefectures/counties in Qinghai during the 14th Five-Year Plan period. Moreover, we have released the “Teach the Fishing” Plan for Rural Revitalization of China Baowu to include “Consolidating and Expanding Poverty Alleviation Achievements and Doing Practical Things for the People” into the key project of the “Doing Practical Things for the People” campaign.



2021年8月，中国宝武正式发布乡村振兴“授渔”计划，积极打造乡村振兴工作特色品牌，成为助力乡村振兴全面实现的央企先行示范。
In August 2021, China Baowu officially released the “Teach the Fishing” Plan for rural revitalization to actively create a characteristic brand of rural revitalization, becoming a leading pilot demonstration of central SOEs to assist the full realization of rural revitalization.

逐级压实责任
Consolidate responsibilities at various levels

明确要求各部门、各单位将助力乡村振兴作为“一把手”工程纳入年度重点专项工作；召开专题工作会议35次，推动帮扶任务按年度计划落地落实；组织对各帮扶县实地调研走访，听取地方党委政府对年度帮扶工作的意见。

All departments and units are explicitly required to include facilitating rural revitalization as a “top priority” project in annual key special work; we have held 35 topical working meetings to promote the implementation of assistance tasks required by the annual plan and organized the field survey and investigations on assistance counties to listen to the opinions of the local party committees and governments on the annual assistance work.

巩固督查体系
Consolidate supervision system

党委巡视办、纪委、审计部深化协同督导机制，全年实施督导各县贯彻落实中央重大决策部署行动26次，帮助发现政策执行过程中出现的新情况25个，提出有针对性的建议报告20份。

The Inspection Office of the Party Committee, the Discipline Inspection Commissions, and the Audit Departments deepened the collaborative supervision mechanism. In 2021, they have supervised the implementation of the CPC Central Committee’s major decisions and deployments 26 times in the assistance counties, during which, they have helped identify 25 new issues in the process of policy implementation, and submitted 20 targeted suggestions and reports.

选优派强干部
Select and Assign Competent Cadres

完成干部轮换和
任职培训
Complete cadres rotation and tenure training

续派9名届满到期帮扶干部，共有20位作为中央单位派出的挂职帮扶干部、驻村第一书记全身心地投入到地方乡村振兴事业中；实施“重走脱贫攻坚长征路，开启乡村振兴新动能”专题培训班，完成新任职帮扶干部及帮扶县基层干部上岗培训。

9 assistance cadres whose terms have expired were assigned to continue their posts, and a total of 20 temporary assistance cadres and the first secretary of the village, dispatched by the central unit, devoted themselves to the local rural revitalization. Moreover, we also held a topical training course on “Retrace the Long March of Poverty Alleviation and Open up New Driving Force of Rural Revitalization” to complete the training programs for newly assigned assistance cadres and community-level cadres in assistance counties.

乡村振兴‘授渔’计划，既是中国宝武助力乡村振兴战略擘画的新蓝图，也是中国宝武坚决扛起乡村振兴政治责任和社会责任的行动宣言，是帮扶思路和帮扶方式从‘输血’向‘造血’、从‘授人以鱼’向‘授人以渔’的重大升级转换。

The ‘Teach the Fishing’ Plan for rural revitalization is not only a new blueprint for China Baowu to boost the strategic outline of rural revitalization but also the action declaration for China Baowu to resolutely carry the political responsibility and social responsibility of rural revitalization, which is a significant upgrade transformation of assistance ideas and methods, changing from ‘blood transfusion’ to ‘blood creation’, from ‘give people fish’ to ‘teach people to fish’.



——中国宝武总经理、党委副书记 胡望明
-- Hu Wangming, General Manager of China Baowu and Vice Secretary of the Party Committee



案例 | 助力筑牢边境口岸疫情防控安全屏障

CASE | Assist to build a security barrier for COVID-19 prevention and control at border ports

中国宝武定点帮扶的云南省江城县，地处中老越三国交界，脱贫摘帽前是深度贫困县。随着越南、老挝新冠肺炎疫情不断暴发扩散，偷渡回国、境外人员回流等情况频发，江城县疫情防控形势空前严峻复杂。

中国宝武以高度的政治责任担当，发挥资金、人才、资源优势，在2021年初按计划拨付1740万元无偿帮扶资金后不久，面对江城县发来的应急演练、疫苗接种、重点抵边村寨管控、黄脊竹蝗防治紧急援助需求，及时定向增投640万元，短时间内迅速改善边境县医疗条件。

中国宝武帮扶干部全力以赴，多方协调防疫资源。挂职普洱市委常委、副市长的刘海平同志及时将江城县守边防疫的实际困难需求传递给中国宝武，协调下属宝钢股份增投无偿帮扶资金专项用于江城县疫情防控。挂职普洱市乡村振兴局副局长的孙凤龙同志，放弃假期与家人团聚的机会，驻守边境防疫卡点一个多月，成为普洱守边的央企挂职干部第一人。

Jiangcheng County in Yunnan Province, under the designated assistance of China Baowu, is located at the border of China, Laos and Vietnam, and it was a deeply impoverished county before poverty alleviation. With the continuous outbreak and spread of COVID-19 in Vietnam and Laos, the situation of people being smuggled back to China and people returning from abroad occurred frequently, so the COVID-19 prevention and control in Jiangcheng County became unprecedentedly severe and complex.

With a high degree of political responsibility, China Baowu gave full play to our advantages in funds, personnel and resources. Shortly after allocating RMB 17.4 million of free assistance funds as planned in early 2021, in the face of emergency assistance demands from Jiangcheng County for emergency drilling, vaccination, control of key border villages, and prevention and control of Ceracris Kiangsu Tsai, we timely directed additional funds of RMB 6.4 million, and the medical conditions in border counties were rapidly improved in a short time.

Our assistance cadres spared no efforts to coordinate COVID-19 prevention materials. Liu Haiping, a temporary Standing Committee Member of Pu'er Municipal Party Committee and deputy mayor, timely transmitted the actual difficulties and demands of border defence and COVID-19 prevention in Jiangcheng County to China Baowu, and coordinated with Baosteel (a subordinate company) to provide additional funds of free assistance for COVID-19 prevention and control in Jiangcheng County. Sun Fenglong, a temporary deputy director of Pu'er Rural Revitalization Bureau, gave up the opportunity to get together with his family during the holiday, and was stationed at the border COVID-19 prevention station for more than a month, becoming the first temporary cadre from central SOEs guarding the border in Pu'er.

关心关爱帮扶干部及家属

Care for assistance cadres and their families

以党史学习教育为契机，集中部署开展“我为群众办实事——关爱外派干部专项行动”，挂职帮扶干部派出单位群团组织建立专门工作组，精准掌握外派帮扶干部急难愁盼问题，帮助解决现实困难，将温暖及时传递给帮扶干部及其家人。

Taking the opportunity of the study and education of party history, we deployed and conducted “Doing Practical Things for the People - Special Campaign on Caring for Expatriate Cadres”. The units and groups dispatched by the temporary assistance cadres organized to establish a special working group, which accurately grasped the urgent, difficult, worried and expected issues of expatriate assistance cadres, and helped solve the practical difficulties to timely deliver the warmth to the assistance cadres and their families.

促进乡村振兴

Promote Rural Revitalization

严格落实“四个不摘”要求，确保资金投入

Strictly implement the requirements of “Four Maintains” to ensure fund input

2021年，中国宝武投入无偿帮扶资金2亿元，其中定点帮扶资金9030万元，对口支援资金1.1亿元。投入定点帮扶地区有偿资金2380万元；引进无偿帮扶资金1325.8万元，同比增长70.6%；引进有偿帮扶资金6856万元；继续加大对乡村振兴重点帮扶县广南县的资金支持力度，投入帮扶资金（含无偿和有偿）2750万元，引进帮扶资金（含无偿和有偿）1992.5万元，合计同比增长63%。

In 2021, China Baowu invested RMB 200 million for free assistance, including RMB 90.3 million for designated assistance and RMB 110 million for pairing support, among which, the paid funds in the amount of RMB 23.8 million were invested in designated assistance regions; we introduced RMB 13.258 million of free assistance funds, with a year-on-year growth of 70.6%; we introduced RMB 68.56 million of paid funds. In addition, we continued to increase the fund support for Guangnan County (a key assistance county for rural revitalization) by investing RMB 27.5 million in assistance funds (including free funds and paid funds) and introducing RMB 19.925 million in assistance funds (including free funds and paid funds), with a total year-on-year growth of 63%.



2 亿元

中国宝武投入无偿帮扶资金

China Baowu invested RMB 200 million for free assistance

9030 万元

其中定点帮扶资金

including RMB 90.3 million for designated assistance

1.1 亿元

对口支援资金

RMB 110 million for pairing support

2380 万元

为定点帮扶地区投入有偿资金

invested RMB 23.8 million of paid funds in designated assistance regions

1325.8 万元

引进无偿帮扶资金

introduced RMB 13.258 million of free assistance funds

6856 万元

引进有偿帮扶资金

introduced RMB 68.56 million of paid funds



延伸阅读 Further reading

“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

案例 | 钢铁生态圈助力数字乡村建设

CASE | Iron & steel ecosphere assists digital rural construction

中国宝武依托下属宝信软件成熟的工业信息化技术迭代优势和成功应用经验，聚焦“智慧农业+数字乡镇”建设领域，帮助黄冈市罗田县建设乡村数字经济和乡村数字治理双轮驱动“云平台”，打造智慧应用场景，实现数据融合应用，提升乡村发展质量。2021年11月，中国宝武总经理、党委副书记胡望明与黄冈市委书记张家胜共同为中国宝武武钢新村数字乡村馆揭牌，数字乡村平台正式上线。

Relying on the iterative advantages and successful application experience on well-developed industrial information technology of Baosight, we focused on the “intelligent agriculture + digital villages and towns” construction field, helped Luotian County of Huanggang City construct the two-wheel driven “cloud platform” of the rural digital economy and rural digital governance to create intelligent application scenarios, realizing the data fusion applications and improving the quality of rural development. In November 2021, Hu Wangming, General Manager of China Baowu and Vice Secretary of the Party Committee, and Zhang Jiasheng, Secretary of Huanggang Municipal Party Committee, jointly unveiled the digital Village Pavilion of China Baowu WISCO New Village, and the digital village platform was officially launched.



多措并举落实“五大振兴”任务

Multiple measures are taken to implement the “Five Significant Revitalization Tasks”

产业振兴

Industrial revitalization



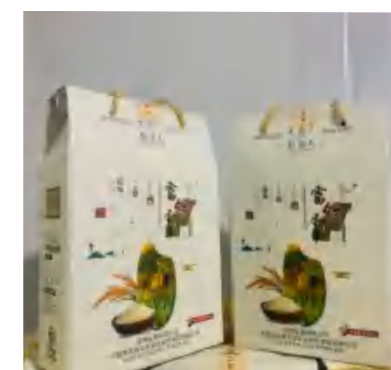
3073 人

带动脱贫人口转移就业

3,073 poor people were provided with job opportunities

为6个定点帮扶县引进36个帮扶项目、招商引资6756万元，围绕促进一二三产业融合发展，立足自身工业产业优势积累，聚焦农业农村数字经济、数字乡村治理等帮扶优势，甄选各县地标优品助其产业发展壮大，依靠产业发展带动脱贫人口转移就业3073人，直接招用脱贫人口31人。

We introduced 36 assistance projects and invited RMB 67.56 million of investment promotion for 6 designated assistance counties. Centering on promoting the primary, secondary and tertiary industry integration development, based on the accumulation of their industrial advantages, focusing on the assistance advantages of agricultural and rural digital economy and digital rural governance, we screened excellent products from these counties to boost their industries develop. Relying on industrial development, 3,073 poor people were provided with job opportunities, and 31 people who had been lifted out of poverty were directly recruited.



宝钢金属铁粉包衣水稻种植项目促进农民增收、农业增效和农村富裕。

Baosteel Metal's iron powder coated rice planting project promotes the increase of rural income, agricultural efficiency and rural prosperity.



宝武碳业携手云南省普洱市宁洱县探索实践“双碳”目标牵引下的乡村振兴新模式。

Baowu Carbon joined hands with Ning'er County, Pu'er City, Yunnan Province to explore and practice a new mode of rural revitalization driven by the “Dual-Carbon” goal.

人才振兴

Personnel
revitalization

为6个定点帮扶县培训基层干部4934人次、乡村振兴带头人1420人次、各类专业技术人才7738人次；对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1335人次。

We have trained 4,934 person-times of community-level cadres, 1,420 person-times of rural revitalization foregoers, and 7,738 person-times of professional and technical personnel for 6 designated assistance counties. In addition, we continued to increase training support for Guangnan County (a key assistance county for rural revitalization), training 1,335 person-times of personnel and cadres.



4934 人次
培训基层干部
We have trained
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1420 人次
培训乡村振兴带头人
1,420 person-times
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7738 人次
培训各类专业技术人才
7,738 person-times
of professional and
technical personnel



2021年10月，中国宝武在罗田县举办乡村振兴专题培训班。
In October 2021, China Baowu held a special training course on rural revitalization in Luotian County.

文化振兴

Cultural
revitalization

助力宁洱县、镇沅县、广南县教育事业，为宁洱县小学定制实施“精准关怀、可持续提升”计划，实施镇沅县中小学宿舍楼改造和修缮工程、广南县中高职“雨露计划”学生资助项目；助力江城县挖掘民族文化和地域文化特色符号，培养乡村特色产业带头人，引导扶持休闲旅游业发展；助力罗田县挖掘红色文化资源和地方特色文化资源，实施胜利红色文化公园、罗田吊锅文化传承推广项目；助力上林县围绕文化铸魂，大力弘扬时代新风，传承发展优秀农耕文化。

We assisted the development of education in Ning'er County, Zhenyuan County and Guangnan County. We customized the implementation of the "Precise Care, Sustainable Improvement" plan for primary schools in Ning'er County, and we implemented the dormitory renovation and repair projects for primary and secondary schools in Zhenyuan County as well as the "Rain Dew Plan" student funding project for secondary and higher vocational schools in Guangnan County. Moreover, we assist Jiangcheng County to develop ethnic culture and regional cultural characteristics and cultivate the foregoers of rural characteristic cultural industry development to guide and support the development of leisure tourism. Furthermore, we assisted Luotian County in developing red cultural resources and local characteristic cultural resources and carrying out the implementation of Cultural Inheritance and Promotion projects, such as the Shengli Red Cultural Park and the Luotian Hanging Pot. In addition, we assisted Shanglin County to focus on cultural orientation, vigorously promoting the new trend of the era, and inheriting and developing the excellent farming culture.

宝武碳业帮助改善提升宁洱县学校教育软硬件水平。
Baowu Carbon helped improve the software and hardware level of school education in Ning'er County.



中国宝武援建云蒙村文化活动中心，提升村民精神风貌。
China Baowu assisted in the construction of the Cultural Activity Center in Yunmeng Village to improve the spiritual outlook of the villagers.



生态振兴

Ecological revitalization

投入改善农村人居环境资金1351.2万元，实施农村厕改222户，帮助实施生活垃圾和污水治理10个村，投入完善农村生活设施资金1908.2万元。

A total of RMB 13.512 million was invested to improve the rural living environment, renovating 222 rural toilets and helping 10 villages govern household garbage and sewage, and we also invested RMB 19.082 million to improve the rural living facilities.



中国宝武帮扶班多村改善基础设施和生态环境，带来村容村貌的提档升级，为乡村旅游业发展奠定基础。

China Baowu assisted Banduo Village to improve its infrastructure and ecological environment, which brought the upgrading of the village appearance and laid a foundation for the development of rural tourism.

“现在，在外忙碌一天后，回到家就可以痛痛快快地洗个热水澡。特别是对我们开办民宿的家庭来说，解决了洗澡问题，更多的游客就愿意住下来。”

Now, after a busy day, I can come home to have a hot bath comfortably. Especially for our Bed and Breakfast families, once the bathing issue is solved, more tourists are willing to stay.

——班多村村民 项旦

-- Xiang Dan, a villager of Banduo Village

“以前厕所建在院墙外，两块砖头一个坑，三块木板围四边，冬天冷来夏天臭。现在我们家家户户都用上了抽水马桶，生活和城里人没啥两样。”

In the past, the toilet was built outside the courtyard wall, with two bricks and a pit and three boards around four sides, and it was cold in winter and smelly in summer. Now every family has access to flush toilets, and our life is no different from that of urban people.

——班多村村民 才洛卓玛

-- Tselo Drolma, a villager of Banduo Village

组织振兴

Organizational revitalization

指导动员子公司与定点帮扶县开展支部结对共建31对，参与结对共建脱贫村26对，助力基层党组织和党员队伍建设；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28个，扶持农村合作社28个，帮助建立帮扶车间16个。

We guided and mobilized our subsidiaries to jointly construct 31 pairs of party branches with the designated assistance counties, and we participated in the joint construction of 26 pairs of poverty alleviation villages, assisting the construction of community-level Party organizations and Party members team. In addition, we helped cultivate new types of agricultural operation entities to develop and expand the rural collective economy, supporting 28 leading enterprises, 28 rural cooperatives, and 16 assistance workshops.

案例 | 武钢集团：党建援藏，书写乡村振兴新篇章

CASE | WISCO: “Party Construction to Aid Tibet” writes a new chapter of rural revitalization

“党建援藏”是武钢集团拓展援藏领域、推进乡村振兴工作的新举措。为切实提高县、村、社区干部的基层治理水平和素质，武钢集团在武钢党校开办“丁青县村（社区）干部能力素质提升培训班”和“八宿县全领域党员干部培训班”。本着“差什么学什么、缺什么补什么”的原则，培训安排了以“看、思、悟”为主线的培训课程，让学员们走进红色，锤炼政治素养；走进工厂，感受中国力量；走进社区，学习典型模式；走进学校，促进民族团结。两期培训均已如期顺利完成，两县参加培训的基层干部表示收获非常大。例如，丁青的几位村书记在罗田燕儿谷参观了智慧农业和直播带货后表示，西藏有很多特色农产品，也想通过这些方式去宣传，让“西藏宝贝”走出高原，让更多人了解。

“Party Construction to Aid Tibet” is a new measure of WISCO to expand the area of aiding Tibet and promote rural revitalization. In order to practically improve the level and quality of community-level governance of county, village and community cadres, WISCO has launched the “Training Course for Improving the Ability and Quality of Village (Community) Cadres in Dingqing County” and the “Training Course for All Party Members and Cadres in Basu County” in WISCO Party School. In line with the principle of “learn what is inadequate and make up for what is missing”, the training courses were arranged with “seeing, thinking and understanding” as the main line, so that the trainees could walk into the red to temper their political literacy, walk into the factories to feel the power of China, walk into the communities to learn the typical mode, and walk into the schools to promote national unity. The two training courses have been completed as scheduled, and the community-level cadres participating in the training courses from the two counties said that they have gained a lot. For example, several village secretaries of Dingqing County visited intelligent agriculture and live-streaming sales in Yan’er Valley of Luotian County and said that there were many featured agricultural products in Tibet. They also wanted to publicize the “Tibetan Treasure” from the plateau in this manner, letting more people know about it.



诚信

发展之基 走好改革路

Integrity

Foundation of Development for Better Reform

诚信有多大的容量、能够得到多少人的认同，事业就能拓展到多大范围。诚信一直是中国宝武的立身之本、核心价值追求。中国宝武不断完善公司治理机制、深化国企改革、坚定反腐倡廉，矢志成为值得相关方充分信任的世界一流伟大企业。

An enterprise can expand its business to the extent as its integrity and people's recognition can allow it. Integrity has always been the foundation and core value pursuit of China Baowu. We keep improving our corporate governance mechanism, deepening the reform as a state-owned enterprise, combat corruption and upholding integrity. We are committed to growing into a world-class enterprise worthy of the trust of all stakeholders.

2021 中国宝武年度人物颁奖典礼

2021 CHINA BAOWU PERSON OF THE YEAR AWARD CEREMONY



可持续发展目标



完善公司治理

IMPROVE CORPORATE GOVERNANCE

中国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，持续提升运行效能。

Insisting on the unity of strengthening the leadership of the Party and improving corporate governance, and centering on the construction of a standardized and efficient board of directors, China Baowu consolidated the institutional foundation and optimized the operation mechanism to constantly improve the operation efficiency.

奖项荣誉 Awards and Honors

2021年6月26日，国务院国资委下发《关于开展国有企业公司治理示范企业创建活动的通知》，中国宝武成功创建集团层面公司治理示范企业。

On June 26, 2021, the State-owned Assets Supervision and Administration Commission of the State Council issued the *Notice on the Establishment of Corporate Governance Demonstration Enterprises of State-owned Enterprises*, and China Baowu succeeded in establishing corporate governance demonstration enterprises at the group level.



完善董事会制度建设

Improve system construction of the board of directors

依据国务院国资委完善中国特色现代企业制度的基本制度规范的最新要求，形成董事会及专门委员会议事规则、授权管理制度、授权决策方案，完善“三重一大”决策制度实施办法，制定重大事项决策权责清单和各决策主体会议管理办法，确保董事会运作规范、有章可循。

According to the latest requirements of the State-owned Assets Supervision and Administration Commission of the State Council on improving the basic system and regulation of modern enterprise systems with Chinese characteristics, we formulated the rules of procedure, authorization management system, and authorization decision-making program for the board of directors and special committees to improve the measures for implementing the “Three Majors and One Large” decision mechanism, and we also formulated rights and liabilities list in making major decisions and the management measures of decision-making body meetings to ensure the standardized and rule-based operation of the board of directors.

加强董事会与各治理主体的协同

Strengthen the coordination between the board of directors and various governance bodies

重视信息沟通机制在公司治理中的作用，构建多渠道沟通模式，落实相关措施，使得各治理主体形成工作合力。及时向国务院国资委上报重大事项，征求出资人的审批或指导意见。坚持党的领导与完善公司治理相统一，确保董事会在决策中全面了解党组织意图。

We attached importance to the role of information communication mechanism in corporate governance, so we built a multi-channel communication mode to implement relevant measures, and made all governance bodies form a joint force in work. Moreover, we reported major issues to the SASAC of the State Council promptly and solicited the approval or guidance of investors. In addition, we insisted on the unity of the Party's leadership and the improvement of corporate governance to ensure that the board of directors can fully understand the intentions of the Party organization in decision-making.

强化外部董事履职保障

Strengthen the mechanism for ensuring the performance of duties of outside directors

制定外部董事履职保障工作方案，持续强化外部董事履职保障。坚持专项信息报送机制，提供外部董事履职的有效信息保障。坚持外部董事调研制度，确保各类决策在信息透明且充分被掌握的基础上进行。2021年，公司策划组织3次专项调研，为外部董事了解子公司队伍情况、掌握公司战略实施情况提供有力支撑。2021年，公司成功策划实施首次外部董事战略务虚会。

We formulated the work plan for ensuring the performance of duties of outside directors, and continuously strengthened the mechanism for ensuring the performance of duties of outside directors. Moreover, we insisted on the special information reporting mechanism to provide effective information for ensuring the performance of duties of outside directors. In addition, we insisted on the survey system of outside directors to ensure that various decisions were made based on transparent and fully understood information. In 2021, we have planned and organized 3 special surveys, providing strong support for outside directors to understand the team situation of the subsidiaries and grasp the implementation of the corporate strategy. In 2021, we have successfully planned and implemented the first strategic theory-discussing meeting of outside directors.





深化国企改革 DEEPEN SOES REFORM

2021年，中国宝武纵深推进国企改革再添亮点。国企改革三年行动在重点领域重要环节取得突破，混合所有制改革稳妥有序，相关体制机制创新成效显著，企业与干部员工活力有效激发。专项改革任务落实见效，在国务院国资委国有重点企业三个管理标杆创建行动中获评4项管理标杆。

In 2021, China Baowu highlighted the deep promotion of SOE reform. We made a breakthrough in the key link and key field of the three-year campaign for SOE reform, for example, the reform of mixed ownership was steady and orderly, the innovation of relevant systems and mechanisms has achieved notable results, and enterprises, cadres and employees were effectively energized. Moreover, the special reform tasks were implemented effectively, and we were awarded 4 management benchmarks in the establishment of the three management benchmarks of key state-owned enterprises by the State-owned Assets Supervision and Administration Commission of the State Council.

奖项荣誉 Awards and honors

2021年7月13日，国务院国资委下发《关于印发国有重点企业管理标杆创建行动标杆企业、标杆项目和标杆模式的通知》，中国宝武4个管理标杆创建成功，包括1个标杆模式、1个标杆项目和2个标杆企业。

On July 13, 2021, the State-owned Assets Supervision and Administration Commission of the State Council issued the *Notice on Printing and Distributing Benchmark Enterprises, Benchmark Projects and Benchmark Modes for the Establishment of Management Benchmark in Key State-owned Enterprises*, and China Baowu successfully created 4 management benchmarks, including 1 benchmark mode, 1 benchmark project and 2 benchmark enterprises.



标杆模式
Benchmark mode

中国宝武企业整合融合管理模式
China Baowu enterprise integration management mode



标杆项目
Benchmark project

中国宝武绩效驱动型战略执行体系
China Baowu performance-driven strategy implementation system



标杆企业
Benchmark enterprises

宝钢股份、马钢集团
Baosteel, Magang Group



深入推进国企改革三年行动 Deepen three-year campaign for SOE reform

全面落实改革任务 Fully implement reform tasks

加强组织领导，制定改革三年行动实施方案和任务清单，扎实推进各项改革任务。全面完成改革规定动作，同时结合实际创造性开展改革自选动作，在子公司董事会应建尽建、落实子公司董事会职权、开展子公司经理层任期制和契约化管理、落实外部董事占多数、合规信息披露等方面有突破性进展。

We strengthened organization and leadership to formulate three-year campaign implementation plans and task lists for reform, and we made solid progress in all reform tasks. Moreover, we fully completed the required reform actions, and we also creatively conducted the optional reform actions based on the actual situation. Furthermore, breakthroughs have been made in the establishment of the board of directors in subsidiaries, the implementation of the functions and powers of the board of directors in subsidiaries, the implementation of the tenure system and contractual management of managers in subsidiaries, the implementation of the majority of outside directors, and the disclosure of compliance information.

稳妥推进混合所有制改革 Steadily promote mixed ownership reform

积极推进新材料业、智慧服务业、资源环境业等优质资产及产业金融业细分板块混改上市，举办混改项目专场推介会暨全面金融服务签约，专项推荐拟混项目，优先引入有协同效应的产业投资人和战略投资者。推进一级子公司实施混改或分类业务混改，成熟一家推进一家。宝武特冶根据钛金行业特点和发展现状，引入非公资本实施混改，成立特冶钛金。宝武碳业聚焦做大做强碳基新材料业务，提升专业化经营水平和综合竞争力，引入五家战略投资者实施混改。宝钢金属对轻量化业务宝玛克实施混改，通过增资扩股引入战略投资者。

We actively promoted the listing through mixed-ownership reform in high-quality assets and industrial financial industries (such as new material, intelligent service, resources and environment), and held special promotion events and comprehensive financial service contracts for mixed ownership projects, especially recommending the proposed mixed-ownership projects, and giving priority to introducing industrial investors and strategic investors with synergistic effects. Moreover, we promoted the implementation of mixed-ownership reform in tier I subsidiaries or mixed-ownership reform in classified businesses and conducted the mixed-ownership reform one by one when ready. For example, according to the characteristics and development status of the titanium industry, Baowu Special Metallurgy introduced non-public capital to implement mixed-ownership reform and established the Special Metallurgy Titanium. Baowu Carbon focused on expanding and strengthening carbon-based new material business and improving professional operation level and comprehensive competitiveness, it introduced five strategic investors to implement mixed-ownership reform. Baosteel Metal conducted mixed-ownership reform for lightweight business Baomarc and introduced strategic investors through a capital increase and share expansion.



- 2021年12月23日，宝钢金属宝玛克科技混改项目在上海联交所公开挂牌。

On December 23, 2021, the mixed-ownership reform project of Baosteel Metal Baomark Technology was publicly listed on Shanghai United Assets and Equity Exchange.

加强管理体系和管理能力建设

Strengthen the construction of the management system and management capacity

管控架构持续完善，总部建设不断深化

Continuously improve the management and control structure and constantly deepen the construction of the headquarters

公司按照国有资本投资公司的定位要求，推行“资本运作层——资产经营层——生产运营层”三层管控架构。公司总部持续深化以“管资本”为核心的“五大体系”，法人治理、战略规划、产业研判、资本运作、风险管控等功能持续强化，信息化、数字化、智慧化审计和监督手段不断丰富。

According to the positioning requirements of state-owned capital investment companies, we practiced a three-level management and control structure of “capital operation level - asset operation level - production operation level”. Our Headquarters continued to deepen the “five systems” with “capital management” as the core, as a result, the corporate governance, strategic planning, industrial research and judgment, capital operation, risk control and other functions were continuously strengthened, and information-based, digitalized and intelligent auditing and supervising measures were constantly enriched.

“一总部多基地”建设渐入佳境

The construction of “one headquarters and multiple bases” is getting better

资产经营层积极探索实践“一总部多基地”管理模式，一批符合专业化整合要求、匹配市场化发展需要的模式逐渐成型。

The management mode of “one headquarters and multiple bases” has been actively explored and practiced at the asset operation level, and a batch of modes that met the requirements of professional integration and matched the needs of market-oriented development have been formed gradually.

- 宝钢股份以“5+1”中心、产品事业部、工序管理部建设为抓手，形成基于“专业化、标准化”的“强协同、强矩阵”集中一贯管理模式。

Baosteel has formed a centralized and consistent management mode of “strong coordination and strong matrix” based on “specialization and standardization” with the construction of a “5+1” center, product division and process management department.

- 中南钢铁通过“四统四化”“四个共享”“四能四则”实现跨基地高效协同支撑，形成基于“平台化、生态化”的平台协同管理模式。

China South Steel has realized the cross-base efficient collaborative support through “four unities, and platformization, professionalization, ecologicalization and marketization”, “four sharings”, “four functions and four principles”, and has formed a platform collaborative management model based on “platformization and ecologicalization”.

- 宝武资源通过打造“四板块、四协同”矩阵式业态，构建形成贯通产业链环节的“五位一体”全供应链管理模式。

After establishing a matrix business type of “four segments and four coordinations”, Baowu Resources has constructed and formed a five-in-one full supply chain management mode covering industrial chain links.

- 宝武碳业强化子产业核心基地作用，构建“一中心、多核心、分布式”跨区域跨基地资源共享业态，形成以产品为维度的产业协同管理模式。

Baowu Carbon has intensified the role of the core base of the sub-industry to construct a cross-regional and cross-base resource sharing business type of “one center, multiple cores and distributed type”, forming a product-oriented industrial collaborative management mode.

持续完善绩效驱动型战略执行体系

Continuously improve the performance-driven strategy implementation system

围绕“全面对标找差，创建世界一流”，按照“超越自我、跑赢大盘、追求卓越、全球引领”绩效导向，坚持跑赢大盘，将ROE分位值作为“追求卓越”的重要标准，将“三高两化”战略指标达到世界一流作为“全球引领”主要标志。强化契约精神，与子公司签订任期经营与战略任务责任书，下达年度经营管理任务书，颁发组织绩效荣誉激励奖，推动460家法人单位经理层成员签订经营业绩责任书，有效激发子公司经营管理团队干事创业的精气神。

Centering on “seeking the gap by comprehensive benchmarking, creating the world-class enterprise”, and according to performance orientation of “outdo self, outperform the market, pursue excellence, lead globally”, we insisted on outperforming the market, so we took ROE tantile as an important criterion of “pursue excellence”, and the world-class “high starting point, high configuration, high investment, projectization, professionalization” strategic indicators were taken as the main mark of leading global. Moreover, we strengthened the spirit of the contract. We signed the term operation and strategic task responsibility letter with the subsidiaries and issued the annual operation and management task letter. In addition, we granted the honorary incentive award for organizational performance and promoted the manager-level members of 460 legal entities to sign the operation performance responsibility letter, effectively stimulating the spirit of the operation and management team of the subsidiaries.



健全审计体系

IMPROVE AUDIT SYSTEM

中国宝武着力构建集中统一、全面覆盖、权威高效的内部审计体系，建设运用智慧审计系统，丰富审计方法，提高审计效能，实施从合规审计向绩效审计、从人工审计向智慧审计转型，通过健全审计整改制度、一体化推进内外部审计问题整改、审计成果共享运用、完善违规追责工作体系等措施构建审计整改闭环管理长效机制，支撑国家政策落地、公司战略实施和内控体系优化。2021年通过内部审计挽回损失1.25亿元，挖潜、盘活资金9.4亿元。

We strived to build a centralized and unified, comprehensive, authoritative and efficient system of internal audit, build and apply the intelligent audit system, use more audit methods, improve the audit efficiency, and realize the transformation from compliance audit to performance audit and from manual audit to smart audit. Through a sound system of audit and rectification, integrated promotion of rectification on internal and external audit issues, sharing and application of audit achievement, and improvement of the system of accountability for violation, we built a long-term mechanism of audit and rectification closed-loop management to support the implementation of national policies, the implementation of corporate strategy and the optimization of the internal control system. In 2021, we have recovered losses of RMB 125 million through internal audit, and have tapped potential and revitalized funds of RMB 940 million.



1.25 亿元

2021年通过内部审计挽回损失

In 2021, we have recovered losses of RMB 125 million through internal audit

9.4 亿元

挖潜、盘活资金

tapped potential and revitalized funds of RMB 940 million

奖项荣誉 Awards and honors

公司总部《中国宝武经济责任审计实现“全覆盖、一审多用、一审多果”的思路探索和创新实践》获中国内部审计协会颁发的“新时代内部经济责任审计的思路与方法”优秀论文奖。武钢集团《审计助力企业剥离办社会职能改革顺利推进》在中国内部审计协会举办的“内部审计促进组织贯彻落实党和国家重大政策措施”典型经验展示活动中被推选为典型经验。

The Approach Exploration and Innovative Practice of China Baowu's Economic Responsibility Audit Featuring "Full Coverage, One Audit for Multiple Uses and One Audit with Multiple Results" published by our Headquarters won the Excellent Paper Award themed the "Approaches and Methods of Internal Economic Responsibility Audit in the New Era" issued by China Institute of Internal Audit. WISCO's Audit Helps Enterprises Strip Social Functions Smoothly was selected as a typical experience in the typical experience exhibition event "Internal Audit Promotes the Organizations to Implement Major Policies and Measures of the Party and the State" held by the China Institute of Internal Audit.



大数据审计

Big data audit

强化数据赋能，开发客商、招投标、采购等智慧审计功能，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，对非经常性损益、业务招待费、客商、招投标等领域开展在线穿透式监督，通过“非现场审计”与“现场审计”的有机结合提高审计效率和审计质量。

We strengthened data empowering, developed intelligent audit functions such as businessmen, tendering and bidding, procurement and so on, and we built an audit project implementation mechanism that can organically integrate "swift foreground, intelligent middle-ground and decision-making background". Moreover, we conducted online penetrating supervision over non-recurring profits and losses, business entertainment expenses, businessmen, tendering and bidding and other fields, and we organically combined the "off-site audit" and "on-site audit" to improve the audit efficiency and audit quality.

战略绩效审计

Strategic performance audit

围绕贯彻落实国家重大决策部署开展公车改革等审计项目，促进政令畅通。围绕战略关注重点开展年度经营绩效、净资产收益率、多元产业市占率、中长期激励等审计项目，确保公司战略有效落地、重点工作有序推进。

Centering on the implementation of major national decisions and deployments, we conducted audit projects (for example, the reform of official business vehicles) to promote the smooth implementation of government orders and policies. Moreover, focusing on strategic concerns, we conducted audit projects such as annual operating performance, ROE, market share of diversified industries, and mid-term and long-term incentives to ensure effective implementation of corporate strategy and orderly progress of key work.

投资审计

Investment audit

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。

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 conducted 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.

经营审计 Operating audit

开展经济责任审计并重点加强任职期间审计，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。创新开展“集中交叉审计”，统筹调配审计资源，发挥协同效应。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。

We conducted economic responsibility audits and focused on the audit during the tenure to objectively reflect the financial status and operating results, promptly discover major operating risks and room for cost reduction and efficiency improvement, and effectively promote the controlled and compliant operation of operating and management activities following the corporate objectives. We also innovatively conducted the “centralized cross-audit” to coordinate and allocate audit resources for the realization of synergistic effects. In addition, we carried out the net asset audit of property rights alteration to provide a strong guarantee for key online businesses such as equity investment and asset transfer.

内部控制审计 Internal control audit

聚焦财务、购销、信息化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。

We focused on finance, purchase and marketing, information and other key fields to implement supervision, discover internal control deficiencies, and propose management optimization advice. According to the development stage and business characteristics of each subsidiary, we strengthened the supervision and management of internal control evaluation in a targeted manner to promote the further improvement and optimization of the internal control review mechanism, and constantly improve the capacity of the internal control system.



完善风险管理 IMPROVE RISK MANAGEMENT

中国宝武作为国有资本投资公司试点企业和创建世界一流示范企业，结合“管资本”的功能定位，围绕四个突出，不断优化完善与国有资本投资公司相匹配的抗风险能力，持续提升风险管理水平。2021年，国际环境变化与新冠疫情防控风险、重大并购重组项目的策划与实施风险、矿产资源保障风险、部分子公司债务结构优化与金融风险防范、安全环保风险、一级子公司体系能力建设风险等各项重大风险总体可控，未发生重大风险事件。

As a pilot enterprise of state-owned capital investment companies and a company to establish a world-class demonstration enterprise, China Baowu has constantly optimized and improved its anti-risk ability to match state-owned capital investment companies and continuously improved its risk management level by centering on the four highlights and the functional positioning of “capital management”. In 2021, changes in the international environment and the risk of prevention and control of COVID-19, the planning and implementation risks of a major merger, acquisition and reorganization projects, the risks of mineral resources security, the optimization of debt structure and financial risk prevention in some subsidiaries, the risk of safety and environmental protection, the system capacity building risk in tier I subsidiaries and other major risks were generally controllable, and no major risk event occurred.

突出主体责任 Highlight the main responsibility

建立党委防范化解重大风险的工作机制，完善董事会工作规则，充分发挥党委“把方向、管大局、促落实”和董事会“定战略、作决策、防风险”作用，强化重大风险防控政治担当。

We established a working mechanism for party committees to prevent and resolve major risks, and improve the working rules of the boards of directors to give full play to the role of party committees in “guiding the direction, managing the overall situation and promoting the implementation” and the role of the boards of directors in “formulating the strategies, making the decisions and preventing against risks”, strengthening their political responsibility in preventing and controlling major risks.

突出体系建设 Highlight system construction

以“强内控、防风险、促合规”为目标，积极推进重大风险体系建设，构建形成有规可依、上下联动、惩防结合的风险管理体系，筑牢重大风险管理防线。

With the goal of “strengthening internal control, preventing risks, and promoting compliance”, we actively promoted the construction of a major risk system, established and formed a risk management system in which rules and regulations are available to follow, upper and lower levels are linked, and punishment and prevention are combined, consolidating the defense line of major risk management.



完善风险管理

突出预研预判

Highlight pre-research and pre-judgment

密切关注国际、国内市场变化，深入开展风险评估测试，做到关口前移、防患于未然，争取重大风险防控主动性。

We paid close attention to the changes in the international and domestic markets and conducted in-depth risk assessments and tests to take preventive measures, striving for initiatives in preventing and controlling major risks.

突出重点防控

Highlight key prevention and control

主动作为，定期排查重大领域和关键环节风险隐患，及时制定风险应对措施，全面强化“投、融、管、退”全过程的风险防控，持续推动企业高质量发展，坚决守住不发生重大风险底线。

We took the initiative to regularly check risks and hidden dangers in major fields and key links, and timely formulated risk response measures to comprehensively strengthen risk prevention and control in the whole process of “investment, financing, management and withdrawal”. In addition, we continued to promote the high-quality development of the enterprise, and firmly kept the bottom line of preventing major risks.



全面从严治党

COMPREHENSIVELY AND STRICTLY GOVERNING THE PARTY

中国宝武始终坚持全面从严治党战略方针，通过扎实有效的工作，持续提升党风廉政建设和反腐败工作成效，为公司高质量发展提供了坚强的政治保障。

China Baowu has always adhered to the strategic policy of comprehensively and strictly governing the Party, and we have continuously improved the effectiveness of the construction of Party conduct and Government integrity and anti-corruption through solid and effective work, providing a strong political guarantee for the high-quality development of the Company.

突出政治监督

Highlight political supervision

整合监督力量，创新监督方式，聚焦贯彻落实习近平总书记考察调研中国宝武时重要讲话精神加强监督，聚焦贯彻落实习近平总书记关于中国宝武碳达峰、碳中和的重要批示精神加强监督，聚焦贯彻落实党中央重大决策部署加强监督，提高政治监督的质效。

We integrated the power of supervision and innovated the methods of supervision by emphasizing the enhanced supervision for the implementation of the guiding principles of General Secretary Xi Jinping's important speech during his inspection tour of China Baowu, the implementation of the spirit of General Secretary Xi Jinping's important instructions on the carbon peaking and carbon neutrality goals of China Baowu, and the implementation of the major decisions and deployments of the CPC Central Committee, thus improving the quality and efficiency of political supervision.

强化日常监督

Strengthen daily supervision

贯通融合纪检、巡视、审计及职能监督，强化监督合力，重点围绕“十四五”规划、国企改革三年行动、供给侧结构性改革、“卡脖子技术”攻关、乡村振兴、钢铁产量压减、疫情防控等开展监督，推进党中央决策部署不折不扣落实。

We integrated the disciplinary inspection, inspection, audit and functional supervision to strengthen the resultant force of supervision, and we focused on the “14th Five-year Plan” planning, the three-year campaign for SOE reform, the structural reform on the supply side, the tackling of “technology being hit in the throat”, the rural revitalization, the steel output reduction, and the COVID-19 prevention and control to conduct the supervision, and promote the strict implementation of the decision and deployment of the CPC Central Committee.

完善大监督体系

Improve the overall supervision system

明确责任清单，一体布置年度重点项目，建立月评价、年考核机制。探索构建与“一总部多基地”管控模式相匹配的大监督体系。完善“上下联动、区域管理、交叉监督”工作机制，组建区域监督执纪小组，统筹纪检力量集中办案，进一步推进治理体系和治理能力现代化。

We defined the list of responsibilities to integrate the arrangement on annual key projects and established monthly evaluation and annual assessment mechanisms. Moreover, we explored the construction of an overall supervision system matching the management and control mode of “one headquarters and multiple bases”. Furthermore, we improved the working mechanism of “coordination between the upper and lower levels, regional management, and cross-supervision” to set up regional supervision and discipline executive teams, coordinate disciplinary inspection forces to handle cases, and promote the modernization of the governance system and capacity.

强化政治巡视

Strengthen political inspection

盯紧盯牢中央巡视反馈问题整改，累计完成148项措施及4个专项攻关项目的整改落实。开展两轮巡视，巡视13家基层党组织，发现问题173个。处置问题线索44件、立案8件、纪律处分9人次、对93人采取了组织处理或组织措施，巡视利剑作用进一步彰显。

We have paid close attention to the rectification of problems feedback by the central inspection, and have completed the rectification and implementation of 148 measures and 4 special projects. Moreover, two rounds of inspections were carried out in 13 community-level Party organizations, and 173 problems were found. Furthermore, 44 clues of problems were dealt with, 8 cases were put on record, 9 people were disciplined, and 93 people were subject to organizational disposal or measures, further highlighting the function of inspection.

纠“四风”树新风

Rectify the “four bad styles” and establish new ones

从严查处违规公款吃请、购买高档烟酒等违反中央八项规定精神问题，立案44件、纪律处分48人次、对194人采取了组织处理或组织措施。坚决整治形式主义、官僚主义问题，对不担当不作为等责任落实不到位的问责85人次。

We severely investigated and dealt with the issues in violation of the CPC Central Committee’s “Eight-point Decision” in the form of entertaining people with public funds and buying high-grade tobacco and alcohol, putting 44 cases on record, taking disciplinary action against 48 people, and taking organizational disposal or measures against 194 people. In addition, we resolutely rectified formalism and bureaucratism and held 85 people accountable for their failure to fulfill their responsibilities and duties.



延伸阅读 Further reading

“四风”：形式主义、官僚主义、享乐主义和奢靡之风

“Four bad styles”: formalism, bureaucratism, hedonism and extravagance



坚持标本兼治

Address both the symptoms and root causes of corruption

强化不敢腐的震慑机制 Strengthen the deterrent mechanism against corruption

全年共受理信访举报等1164件，经研判处置问题线索709件、立案231件、结案236件、党纪纪处分245人次。

In 2021, 1,164 complaints and reports were accepted, 709 clues were disposed of after research and judgment, 231 cases were put on record, 236 cases were closed, and 245 people were disciplined by the Party and government.



1164 件

全年共受理信访举报等
In 2021, 1,164 complaints and reports were accepted

709 件

经研判处置问题线索
709 clues were disposed of after research and judgment

245 人次

党纪纪处分
245 people were disciplined by the Party and government

强化不能腐的防范机制 Strengthen the prevention mechanism against corruption

修订完善《合规审查管理办法》《关于进一步规范领导人员和管理者及其亲属、其他特定关系人经商办企业的规定》等制度，推进守法合规体系建设，进一步扎紧制度笼子。

We revised and improved the *Measures for the Management of Compliance Review and the Provisions on Further Regulating the Business Operation of Leading Personnel, Managers, Their Relatives and Other Related Person* to promote the construction of a law-abiding and compliance system and further tighten the institutional cage.

强化不想腐的自律机制 Strengthen the self-discipline mechanism against corruption

组织领导干部学习党规党纪、通报典型案例74件次、专题通报违规经营案件5件次，进一步加强守法合规培训，教育警醒各级管理者。

We organized leaders and cadres to study Party rules and disciplines and notified 74 typical cases and 5 cases of improper operation. In addition, we further strengthened law-abiding and compliance training to educate and alert managers at all levels.

创新

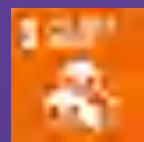
勇毅前行 释放驱动力

Innovation

Press Ahead by Releasing Driving Force

创新是引领发展的第一动力。中国宝武坚信，创新必将促进企业边界的拓展和能力的提升，是企业做强做优做大的重要驱动力。2021年，中国宝武积极作为、自立自强，在观念创新、资源配置以及体制机制创新等方面不断突破。

Innovation is the first driving force for development. China Baowu holds that innovation will expand an enterprise's business boundary and improve its capabilities, serving as its key driving force to become stronger, better and bigger. In 2021, China Baowu has made continuous breakthroughs in innovation in various aspects covering ideas, resource allocation, system and mechanism, etc.



可持续发展目标



强化技术创新

STRENGTHEN TECHNICAL INNOVATION

中国宝武坚持创新驱动战略，进一步优化科技创新体系，以绿色为统领，紧紧围绕绿色制造、绿色产品、绿色产业开展科技创新工作。2021年，公司研发投入强度达3.2%，专利申请4395件，其中发明专利3168件，创造历史新高。科技创新硕果累累，宝钢股份牵头项目“特高压高效输电装备用超低损耗取向硅钢开发与应用”荣获国家科技进步二等奖，与产业链相关单位合作获得1项一等奖、4项二等奖。在冶金科学技术奖评选出的24项特等奖、一等奖中，中国宝武11个项目（牵头6项、参与5项）榜上有名，占比45.8%；其中，牵头项目“热轧无缝钢管在线组织性能调控关键技术、装备开发及应用”荣获特等奖，“环境友好型搪瓷用钢关键技术研究及应用”等5个项目获得一等奖。

China Baowu insisted on the innovation-driven strategy, further optimized the scientific and technological innovation system, and took green as the guide to conduct scientific and technological innovation work closely centering on green manufacturing, green products and green industries. In 2021, our R&D investment strength has reached 3.2%, and 4,395 patent applications have been applied, including 3,168 invention patents, creating a new record. Our scientific and technological innovation has achieved yielded fruitful results, for example, the project “Development and Application of Ultra-low Loss Grain-oriented Silicon Steel for Ultra-High Voltage and High Energy Efficiency Power Transmission and Transformation Equipment” led by Baosteel has won the second prize in the National Science and Technology Progress Award, and we have won 1 first prize and 4 second prizes in cooperation with relevant units of the industrial chains. Among the 24 special prizes and first prizes selected by the China Metallurgical Science and Technology Award, 11 projects of China Baowu (6 projects led by China Baowu and 5 projects participated) have been listed, accounting for 45.8%, in which, the project “Development and Application of Key Technology and Equipment for On-line Structural Performance Regulation of Hot Rolled Seamless Steel Pipe” led by us has won the special prize, and five projects including the “Research and Application of Key Technology for Environment-friendly Enamel Steel” has won the first prize.



3.2%

研发投入强度
R&D investment strength

4395

专利申请
Patent applications

3168

发明专利
Invention patents

聚焦国家战略任务，引领钢铁材料升级

Focus on National Strategic Tasks to Lead the Upgrade of Steel Materials

中国宝武成功研发出可用于630℃超超临界机组的新型耐热钢材料G115，成功通过国家市场监督管理总局的可行性评审，属国际首创，成为全球唯一可用于630℃超超临界机组的成熟材料。应用宝武先进材料的630℃超超临界机组的发电效率可提升至50.16%，煤耗可降低至每千瓦时245克，相比现有的600℃超超临界机组每年可节煤2亿吨，减少污染物排放5亿吨。

China Baowu successfully developed G115, a kind of new heat-resistant steel material that can be used in 630℃ ultra-supercritical units, which has successfully passed the feasibility review of the State Administration for Market Regulation. It is the first of its kind in the world and the only mature material that can be used in 630℃ ultra-supercritical units. The power generation efficiency of the 630℃ ultra-supercritical units using the advanced Baowu materials can be increased to 50.16% and the coal consumption can be reduced to 245 grams per kWh. Compared with the existing 600℃ ultra-supercritical units, it can save 200 million tons of coal and reduce 500 million tons of pollutant emissions per year.

中国宝武为金沙江白鹤滩水电站建设提供厚板、热轧及硅钢关键用材，与产业链用户携手为这一世界超级清洁能源工程撑起了“钢筋铁骨”。其中，为全部16台水电站机组蜗壳提供1.2万吨800MPa级低焊接裂纹敏感性高强钢，为12台水电站机组转子提供1.6万吨750MPa级热轧高强磁轭钢，为核心发电机组和配套输电变压器提供了近3万吨无取向和取向硅钢产品。

China Baowu provides key materials such as thick plates, hot-rolled and silicon steel for the construction of Baihetan Hydropower Station on the Jinsha River, holding up the “steel and iron bones” of this world super clean energy project together with industrial chain users. Among them, China Baowu provided 12,000 tons of 800 MPa grade high strength steel with low susceptibility to weld cracking for volutes of all the 16 hydropower units, and 16,000 tons of 750 MPa grade hot rolled high strength magnetic yoke steel for rotors of 12 hydropower units and provided nearly 30,000 tons of non-oriented and grain-oriented silicon steel products for core generating units and supporting power transmission transformers.

瞄准关键核心技术，突破“卡脖子”难题

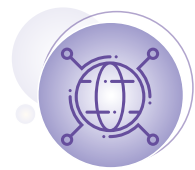
Aim at Key and Core Technologies to Solve Bottleneck Issues

承担央企使命，服务国家重大工程。中国宝武为载人航天火箭发动机提供高温合金和精密合金等材料，为神舟十二号载人飞船推进舱发动机提供核心材料高温钛合金，为全球首座20万千瓦高温气冷堆核电站示范工程提供625合金材料。

Undertaking the mission of central enterprises to serve national major projects. China Baowu has provided high-temperature alloy and precision alloy for the manned space rocket engines, core material high-temperature titanium alloy for the propelling module engine of Shenzhou XII manned spacecraft, and 625 alloy material for the demonstration project of the world's first 200,000-kilowatt high-temperature gas-cooled reactor nuclear power plant.

聚焦“卡脖子”问题，实现技术突破。高纯净度三联冶炼某合金棒材制备工艺通过中国航发技术评审，初步实现进口替代，为实现我国航空发动机关键材料自主可控提供保障；完成超大型固体火箭发动机壳体研制，解决多项关键技术难题，填补国内空白，达到国际前沿技术水平。

We achieved technical breakthroughs with a concentration on bottleneck issues. The preparation process of certain alloy bars with high purity triple smelting has passed the technical review of Aero Engine Corporation of China (AECC), which has preliminarily realized the import substitution and provided a guarantee for the independent control of key materials for China's aero-engine. The development of a super-large solid rocket engine shell has been completed, which has addressed a number of key technical challenges, filled the domestic gap in this field and reached the international frontier technology level.



驱动数智转型

DRIVE DIGITAL AND INTELLIGENT TRANSFORMATION

中国宝武聚焦数智化战略任务，持续打造一张工业互联网，推进实践智慧制造2.0“三跨融合”互联互通，追求极致效率。

We focused on the digital and intelligent strategic task and continued to establish an industrial internet to promote the practice of intelligent manufacturing 2.0 “Three-cross Integration” connectivity and pursue the ultimate efficiency.

深化云基础设施和工业互联网平台建设应用

Deepen the construction and application of cloud-based infrastructure and industrial Internet platforms

2021年按计划完成“宝之云”全国节点的部署，节点之间互联互通，形成分布式云服务架构。基于互联网技术构建了中国宝武工业互联网平台基础架构，完成规划中73个服务组件基础研发工作，发布宝武工业互联网平台V3.0版本。截至2021年底，公司内ePlat节点总数共计26个，接入企业31家；iPlat节点25个，部署企业8家，平台上登记应用总数达400多个，共享服务数8000多个，有效地支撑了业务发展和生态圈建设。

In 2021, the deployment of “bgcloud” nationwide nodes was completed as scheduled, and the nodes were interconnected to form a distributed cloud service architecture. Based on Internet technology, we have built the infrastructure of China Baowu Industrial Internet Platform, completed the basic R&D of 73 service components in the plan, and released the V3.0 of Baowu Industrial Internet Platform. As of the end of 2021, there were 26 ePlat nodes in the Company and 31 connected enterprises, and 25 iPlat nodes and 8 deployed enterprises, in addition, more than 400 applications were registered on the Platform, and more than 8,000 services were shared, which effectively support business development and ecosystem construction.

推进跨产业、跨空间、跨界面“三跨融合”

Promote the “Three-cross Integration” of cross-industry, cross-space and cross-interface

在统一的工业互联网体系架构下，跨产业互通融合方面，推进钢铁成品交易、物流、原料、工业品、设备等平台与钢铁单元平台对接互通；跨空间互通融合方面，围绕落实“一总部多基地”管控模式，实施一体化平台化运营和跨基地同工序专业化整合，打造网络化、矩阵式的管理模式；跨界面融合试点方面，由宝钢股份率先探索，从基层组织变革和打通界面增效两个维度开展策划，按“人机、人人、机机”等开展探索。

Under the unified industrial Internet architecture, in respect of the cross-industry connectivity and integration, we promoted the docking and connectivity between the platforms of finished steel transactions, logistics, raw materials, industrial products and equipment and the steel unit platforms. In respect of cross-space connectivity and integration, we focused on the implementation of the “one headquarters and multiple bases” management and control mode to conduct the integrated platform operation and cross-base professional integration of the same process, and create a networked and matrixed management mode. In respect of cross-interface integration and pilot, Baosteel took the lead in exploring, and conducted planning from the two dimensions of grassroots organizational reform and opening up interface enhancement, exploring it in terms of “man-machine, man-man and machine-machine”.

2021 年，子公司智慧制造工作进展：

The progress of intelligent manufacturing of subsidiaries in 2021:

宝信软件

Baosight

参与编写由中国电子技术标准化研究院主导的《制造业数字化转型路线图》，牵头《钢铁行业智能工厂集控中心建设要求》等一批团体标准的编制，引领行业发展。

Participated in compiling the Digital Transformation Roadmap for Manufacturing Industry led by China Electronics Standardization Institute, and took the lead in preparing a number of organization standards such as *Requirements for Construction of Intelligent Factory Centralized Control Center in Steel Industry*, leading the development of the industry.

欧冶云商

Ouyeel

持续推进中国宝武内产成品营销、物流服务上平台，马钢股份成为中国宝武首个线上线下全品种上物流平台的基地，中南钢铁鄂城钢铁、太钢集团宁波宝新、八钢公司也在年内完成平台化运营。

Continuously promoted the marketing and logistics services of self-developed finished products of China Baowu to go live on the platform, and Masteel became the first base of China Baowu with all varieties of online and offline services going live on the logistics platform. Echeng Iron & Steel of China South Steel, Ningbo Baoxin of TISCO and Bayi Iron & Steel also finished platform operation in 2021.



宝武水务智慧环控中心
Baowu Water Intelligent Environmental Control Center

宝武智维

Baowu Equipment Intelligent Technology

牵头召开中国宝武设备智能运维体系建设推进领导小组会议，推动设备智能运维全覆盖，已完成中国宝武内外设备接入32.6万台，智能运维商业模式加速落地复制，行业影响力不断增强，在钢铁生态圈中的地位显著提升。

Took the lead in holding the leadership group meeting for construction and promotion of intelligent operation and maintenance system for equipment in China Baowu, and promoted the complete coverage of intelligent operation and maintenance for equipment. It has completed the access of 326,000 sets of internal and external equipment of China Baowu. The intelligent operation and maintenance business mode has been implemented and replicated rapidly, obtaining an increasingly industrial influence and a significant boost in the position in the iron & steel ecosystem.

欧冶工业品

Ouyeel Industrial Products

提前全面完成中国宝武11个钢铁基地工业品集中采购专业化整合任务，实现已整合钢铁单位库存同口径下降9.4亿元，下降幅度24.6%。

Completed, ahead of schedule, the specialized integration of centralized procurement of industrial products in 11 steel bases in China Baowu, and realized a reduction of RMB 940 million in the inventory of integrated steel units, with a decrease of 24.6%.

宝钢工程

Baosteel Engineering

与中钢国际联动推进的“数字化设计”项目获得第三届央企熠星创新创意大赛二等奖，为2016年创赛以来中国宝武最好成绩。

The “digital design” project promoted jointly with Sinosteel International won the second prize in the 3rd Yixing Innovation and Creativity Competition of Central SOEs, which was the best result for China Baowu since the competition was launched in 2016.



马钢股份产品质量智能管控平台
Masteel Product Quality Intelligent Control Platform



统筹创新管理

COORDINATE INNOVATIVE MANAGEMENT

2021年，中国宝武持续优化技术创新体系，强化体系保障能力，为公司推动创新发展奠定坚实的制度和管理基础。

In 2021, we continued to optimize the technical innovation system and strengthen the system support capacity, laying a solid institutional and management foundation for the Company to promote innovation and development.

规划引领

Planning and leading

发布《中国宝武“十四五”科技专项规划》，明确“十四五”科技创新工作指导思想、基本原则、规划目标、重大技术布局及保障措施等。同时，为推动专项规划各项工作落地，同步制定了规划实施纲要。

We issued the *China Baowu 14th Five-Year Special Plan for Science and Technology* to clarify the guiding ideology, basic principles, planning objectives, major technical layout and supporting measures of the 14th Five-year Plan for science and technology innovation. Meanwhile, we also promoted the implementation of all works of the specific planning and formulated the implementation outline of the planning simultaneously.

研发机构专业化整合

Professional integration of R&D institutions

成立“中国宝武中央研究院太钢技术中心”“中国宝武中央研究院不锈钢研发中心”，将太钢不锈钢相关研发科室与中央研究院不锈钢技术中心整合为9个技术领域团队，实施“一体化策划、团队化运作、区域化分工、矩阵式协同”，有效承担产品集中研发和技术支撑各基地现场的职责。

We established the “TISCO Technical Center under Central Research Institute of China Baowu” and the “Stainless Steel R&D Center under Central Research Institute of China Baowu” to integrate the TISCO Stainless Steel R&D departments and the Stainless Steel Technical Center under Central Research Institute into nine technical teams, and we implemented the “integrated planning, team work, regional division, matrixed coordination” to effectively undertake the responsibilities of centralized product R&D and the technical support for each base site.

综合材料解决方案体系

Integrated material solution system

按“行业集中、专业管理、资源统筹”原则，积极构建“综合材料解决方案中心”全新商业模式，汽车、硅钢、冷热轧产品联合实验室稳步运作，向内对接产品、向外对接行业，加快从钢铁到材料、从单一产品开发到面向行业 and 用户提供解决方案转变的步伐。

According to the principle of “industry concentration, professional management, resources coordination”, we actively built a new business mode in the form of an “integrated material solution center”, and the joint laboratory of automotive, silicon steel, cold & hot rolling product worked steadily. We docked products inward and docked industry outward to accelerate the transformation from steel to materials as well as from the development of single products to the provision of solutions for industries and users.

产学研合作

Industry-university-research cooperation

坚持开放式创新，推进国内外产学研战略合作，搭建战略共享机制和平台。依托上海交通大学共建“未来钢铁联合研究中心”，聚焦冶金工艺、绿色制造、智能制造等关键技术以及引领技术开展合作；与北京科技大学共建“先进金属材料联合研究院”，围绕金属材料、工艺技术、近终形制造、绿色制造、智能制造等领域开展交流与策划；联合同济大学等单位成立“上海多源固废协同处理和能源化工程技术研究中心”，搭建产学研用联合体，进一步解决城市多源固废的资源化及能源化利用问题。

We insisted on open innovation and promoted the strategic cooperation of industry-university-research at home and abroad to build mechanisms and platforms for strategic sharing. We relied on Shanghai Jiao Tong University to jointly build the “Future Steel Joint Research Center”, focusing on key technologies such as metallurgical process, green manufacturing, intelligent manufacturing and leading technologies for cooperation. We also jointly built the “Joint Research Institute of Advanced Metal Materials” with University of Science and Technology Beijing to conduct exchanges and planning on metal materials, process technology, Near Net Shape manufacturing, green manufacturing, intelligent manufacturing and other fields. We cooperated with Tongji University and other units to set up the “Shanghai Multi-source Solid Waste Collaborative Disposal and Energy Engineering Technology Research Center”, and built an industry-university-research-application consortium to further solve the problems of multi-source solid waste resource and energy utilization in the cities.



- 宝钢股份与上海交通大学共建“未来钢铁联合研究中心”。
Baosteel and Shanghai Jiao Tong University jointly established the “Future Steel Joint Research Center”.



- 宝武环科与北京科技大学开启产学研战略合作。
Baowu Environment and Resource Technology and the University of Science and Technology Beijing (USTB) launched the industry-university-research strategic cooperation.

国际化科技合作

International scientific and technological cooperation

宝钢欧洲研发中心正式运行，充分利用当地的技术、人才、市场（用户）三大优势，与意大利材料研究所合作的“锌铝镁镀层胶粘性研究”等8个首轮研究项目实质性启动并取得了阶段性成果。宝武碳业与伯明翰大学成立联合研究中心，克服疫情困难，通过十数次云端交流探讨了炭材料产业最新技术进展，就研发方向与目标达成共识，首个合作项目已开展相关技术测试实验。

The European R&D Center of Baosteel has been officially put into operation. It made full use of the three advantages of local technology, personnel and market (users), and eight first-round research projects such as “Research on the Adhesive Properties of Zinc, Aluminum and Magnesium Coatings” cooperated with the Italian Institute of Materials have been substantively launched and achieved periodic results. In addition, Baowu Carbon established a joint research center with the University of Birmingham. They overcame the difficulties brought by COVID-19, discussed the latest technological progress of the carbon material industry through dozens of cloud-based exchanges, and reached a consensus on the R&D direction and objectives, and the first cooperative project has carried out relevant technical testing experiments.

重点技术交流活动

Key technical exchange events

- 宝钢股份协办“2021年可持续发展钢铁冶金技术国际学术会议”。
Baosteel co-organized “2021 International Academic Conference on Sustainable Development of Iron and Steel Metallurgy Technology”.



- 组织“全球技术转移大会”等品牌活动，深化产学研合作。
The brand events such as “Global Tech- Matching Fair” were held to deepen the industry-university-research cooperation.

职工岗位创新

Employee post innovation

构建职工岗位创新体系和运行机制

Establish employee post innovation system and operating mechanism

发布《职工岗位创新管理办法》，建立由职工创新活动中心、职工创新基地、职工创新工作室、职工创新小组、“献一计”活动构成的梯次衔接、覆盖全员的职工岗位创新体系，明确平台建设、项目管理、组织保障等运行机制，完善了从“点子”到成果的职工岗位创新成果评选体系。

We issued the *Measures for the Management of Employee Post Innovation* and established an employee post innovation system composed of an employee innovation activity center, employee innovation base, employee innovation studio, employee innovation group and “Offer Advice” activities, which connects hierarchically and covers all employees. In addition, we clarified the operating mechanism of platform construction, project management and organizational support, etc., and improved the evaluation system of employee post innovation achievements from “idea” to achievement.

“献一计”活动牵引岗位创新成果转化

“Offer Advice” activities promote the transformation of post innovation achievement



● 优秀职工岗位创新成果奖
Excellent Employee Post Innovation Achievement Award



163 个

征集并发布挂牌项目

163 listing projects were collected and released

59.9 万个

年内职工累计献计

Our employees have offered 599,000 pieces of advice in total

深入推进全员献计活动，开展挂牌征集“金点子”活动，征集并发布163个挂牌项目。年内职工累计献计59.9万个、采纳39.3万个、实施12.6万个，评选出106个“金点子”、499个“银点子”、999个“好点子”。开展首届“优秀职工岗位创新成果奖”评选，评出特等奖3项、一等奖9项、二等奖47项、三等奖261项，最高单项奖励10万元。一大批职工岗位创新成果在外部“争金夺银”，2项成果分别获冶金科学技术奖一等奖、三等奖；1项成果获上海市科技进步二等奖；33项成果荣获全国机械冶金建材行业职工技术创新成果奖。在第25届全国发明展上，职工岗位创新成果荣获金奖53项、银奖65项、铜奖68项，金奖获奖比例比去年提升7.4%，并首次赢得展会大奖“世界知识产权组织最佳女性发明奖”。

We deeply promoted the offering advice activities by all employees and conducted the activity of listing and collecting “golden ideas”, collecting and releasing 163 listing projects. In 2021, our employees have offered 599,000 pieces of advice in total, with 393,000 adopted and 162,000 implemented, and we have selected 106 “golden ideas”, 499 “silver ideas” and 999 “good ideas”. Moreover, we have conducted the first “Excellent Employee Post Innovation Achievement Award” selection, and awarded 3 special prizes, 9 first prizes, 47 second prizes, and 261 third prizes, with the highest individual award of RMB 100,000. Furthermore, a large number of employees post innovation achievements were “competing for gold or silver” prizes externally, for example, 2 achievements have won the first prize and third prize respectively in China Metallurgical Science and Technology Award, 1 achievement has won the second prize of Shanghai Science and Technology Progress Award, and 33 achievements have won the employee technical innovation achievement award of national machinery, metallurgy and building materials industries. In addition, in the 25th National Invention Exhibition, our employee post innovation achievements have won 53 gold prizes, 65 silver prizes and 68 bronze prizes, with the proportion of gold prizes increased by 7.4% compared with last year, and we have won the “World Intellectual Property Organization Award for Best Female Invention” for the first time in this Exhibition.

绿色

知行合一 点亮生命色

Green

Knowledge-Action Unity for

Brighter Color of Life

绿色发展是生态文明建设的必然要求，绿色也是中国宝武发展的生命底色，是新时代中国宝武的价值追求。我们坚决推进绿色制造、绿色产品和绿色产业三大绿色行动，以绿色统领低碳、精品、智慧创新发展，走高端化、绿色化发展之路，注重知行合一和行为养成，做“绿色工作”的践行者和“绿色生活”的倡导者，努力使绿色成为全体员工、利益相关方乃至生态圈伙伴工作和生活的底色。

Green development is the prerequisite for promoting ecological progress. Becoming greener bolsters is China Baowu's sustainable development and its value pursuit in the new era. We are committed to advancing green manufacturing, green products and green industry. With greenness running through our development approach toward the low-carbon, premium, smart and innovative trend, we aim to embark on a green development path characterized by high-end products. We pay attention to the "unity of knowledge and practice" and the fostering of good habits. We are practitioners of "green work" and advocates of "green life", striving to promote the green work and life idea among all of our employees, stakeholders and partners in the industrial ecosystem.



可持续发展目标



绿色制造

GREEN MANUFACTURING

2021年，中国宝武统筹推进生产经营发展和生态环境保护，“三治四化”成果进一步巩固，绿色发展水平持续提升。

In 2021, we promoted the development of production & operation and the protection of the ecological environment in a coordinated way. The achievements of “Three Treatments and Four Doing” were further consolidated, and the level of green development was continuously improved.

能源环保管理

Energy and Environmental Protection Management

管理方针

Management guideline

公司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 thinking 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 energy and environmental protection management.

管理原则

Management principles

公司实行法人负责、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.

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



管理制度

Management system

公司不断完善能源环保管理办法，形成《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》《环保事件管理办法（重大突发环境事件应急预案）》《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 Environmental Protection Compliance*, *Management Measures for Environmental Accident Risk Control of Enterprise*, *Environmental Incident Management Measures (Emergency Plan for Major Environmental Emergencies)*, and *Management Measures for Accountability on Environmental Protection Events*.

能源环保管理体系

The management system of energy and environmental protection

公司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，大部分单位还通过了能源管理体系认证。

All steel manufacturing enterprises of the Company have passed the certification of 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，公司通过制定《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 of enterprises, 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.

清洁生产工作

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.

绿色城市钢厂

Green urban mill

修订《中国宝武绿色城市钢厂评价指标体系》，突出低碳权重、强调技术引领、重视结果导向、严控环境风险。各单位聚焦绿色发展指数，有针对性地制定对标提升目标和举措计划。2021年，公司长流程钢铁企业绿色发展指数总体比上年提升9.6分。

We revised the *Evaluation Index System of Green Urban Mill in China Baowu*, with the aim of highlighting low-carbon weight, strengthening technical leading, emphasizing results orientation, and strictly controlling environmental risks. All units focused on the green development index and formulated benchmarking improvement objectives and action plans in a targeted manner. In 2021, the overall green development index of our long-process steel enterprises has increased by 9.6 points compared with the previous year.

节约能源资源

Save Energy and Resources

能耗对标提升

Improve energy consumption benchmarking

指标体系化

深入研究关键工序能耗对标方法、铁钢比及热送热装对节能效果影响等，实施《中国宝武钢铁基地主要工序关键能效指标对标评价方法》（V1.0），修订《铁钢比变化与节能降耗效果分析方法（试行）》，编制《热送热装与节能降耗效果分析方法》。

Systematization of indicators

China Baowu took a deep dive into energy consumption benchmarking methods for key processes, iron-steel ratio and the influence of hot delivery and hot charging on energy-saving effect, etc., implemented the *Benchmarking Evaluation Method for Key Energy Efficiency Indicators of Main Processes in China Baowu Steel Base* (V1.0), revised the *Analysis Method for Iron-Steel Ratio Change and Energy Saving and Consumption Reduction Effect (Trial)*, and compiled *Analysis Method for Hot Delivery and Hot Charging and Energy Saving and Consumption Reduction Effect*.

对标常态化

持续推进工序能耗对标工作，形成PDCA（计划——执行——检查——提升）持续改进机制，各基地在产线分组能效竞赛中你追我赶，争当能效标杆。通过工序对标，能耗下降或持平的工序占比逐渐提升，炼焦、烧结、高炉、COREX、转炉（碳钢）、转炉（不锈钢）及能源系统7大单元有12项单项指标、共计73次刷新标杆值，总结出最佳实践9项。

Normalization of benchmarking.

China Baowu continues to advance the process of energy consumption benchmarking to form a PDCA (Plan - Do - Check - Act) continuous improvement mechanism, and the bases compete with each other to be the benchmark for energy efficiency of production lines. By means of process benchmarking, the proportion of processes with reduced or flat energy consumption has gradually increased. There are 12 individual indicators in 7 major units – coking, sintering, blast furnace, COREX, converter (carbon steel), converter (stainless steel) and energy system, which have refreshed benchmark values for a total of 73 times, and summarized 9 best practices.

发展循环经济

Develop circular economy



5.76 亿度

年发电量

An annual power generation capacity of 576 million KWH

5 万吨

减少二氧化碳排放

reducing carbon dioxide emissions by 50,000 tons

高炉煤气回收利用

Recovery and utilization of blast furnace gas

太钢不锈80兆瓦超高温亚临界煤气锅炉发电机组是将高炉煤气回收利用于高效发电的绿色节能环保装置。该机组循环热效率可达38%，年发电量5.76亿度，减少二氧化碳排放5万吨，可为太原市居民提供冬季供热100万平方米，具有煤气利用率高、发电热效率高、环保效益好、社会效益良等特点，是钢铁企业高炉煤气高效利用的示范项目。

TISCO Stainless Steel's 80 MW ultra-high temperature sub-critical gas boiler generator unit is a green energy-saving and environment-friendly device that recycles and applies blast furnace gas for efficient power generation. The cycle thermal efficiency of the unit can reach 38%, with an annual power generation capacity of 576 million KWH, reducing carbon dioxide emissions by 50,000 tons. It can provide winter heating for 1 million square meters for Taiyuan residents, featuring a high gas utilization rate, high thermal efficiency of power generation, good environmental benefits and social benefits, etc. It is a demonstration project of high efficient utilization of blast furnace gas in iron and steel enterprises.

余热利用项目

Waste heat recovery project

宝钢德盛65兆瓦余能利用机组充分利用富余的高炉煤气生产电力和蒸汽供企业自用，年设计发电量20504万度，减少二氧化碳排放14万吨。宝钢工程“钢铁工业余热梯级综合利用方法及其关键技术开发与应用”入围世界钢铁协会“可持续发展卓越成就奖”。

Baosteel Desheng 65 MW waste energy recovery unit made full use of surplus blast furnace gas to produce electricity and steam for the enterprise's use, which had an annual designed power generation capacity of 205.04 million kWh, and reduced carbon dioxide emissions by 140,000 tons. Baosteel Engineering's "Development and Application of Steel Industrial Waste Heat Comprehensive Cascade Utilization Method and Key Technology" was shortlisted for the "Outstanding Achievement Award for Sustainable Development" of the World Steel Association.



100%

厂内含铁资源的返生产循环使用率

100% of the iron-containing resources in the factory were returned to production lines for reuse

420 万吨

废钢用量

The consumption of scrap steel of 4.2 million tons

废钢回收利用

Recovery and utilization of scrap steel

宝钢股份对厂内废钢实施源头分类回收与用户按钢种使用，提升厂内废钢的利用价值。2021年，公司确保了厂内含铁资源的100%返生产循环使用。转炉冶炼的废钢占比保持在18%，电炉冶炼的废钢占比保持在 60%。废钢用量从2020年的385万吨提高到420万吨。

Baosteel implements source-separated recovery of scrap steel in the factory and users use steel by grades to enhance the utilization value of scrap steel. In 2021, the Company ensured that 100% of the iron-containing resources in the factory were returned to production lines for reuse. The proportion of scrap steel from converter smelting remained at 18% and that from electric furnace smelting remained at 60%. The consumption of scrap steel has increased from 3.85 million tons in 2020 to 4.2 million tons.

钢渣制备高性能橡胶功能充填料

Steel slag used for producing high-performance rubber functional filling material

马钢股份通过实施钢渣粉改性项目，利用钢渣填料取代30%炭黑原料并制成橡胶输送带覆盖胶，其性能满足国标要求，不仅拓展钢渣高附加值利用途径，还可降低橡胶生产成本及碳排放。项目形成发明专利2项、中钢协团体标准1项。

Through the steel slag powder modification project, Masteel uses steel slag filler to replace 30% carbon black raw materials and makes rubber conveyor belt covering rubber, whose performance can meet the requirements of national standards. It not only expands the high value-added utilization approach of steel slag, but also reduces the cost of rubber production and carbon emissions. The project has applied for 2 invention patents and 1 group standard of the China Iron and Steel Association.



■ 钢渣制备高性能橡胶功能充填料
Producing High-performance Rubber Filler from Steel Slag

降低污染排放

Reduce Pollution Emissions

废气超低排

Ultra-low emission of exhaust gas



87 项

公司重点推进项目

The Company has mainly promoted 87 projects

44 项

2021年已完成项目

44 projects have been completed in 2021

系统策划，项目化推进废气超低排放改造。通过召开经验分享会，策划、组织清洁运输、无组织排放和有组织排放评估监测技术要点培训，达成尽早开展超低排放预评估工作的共识。公司重点推进项目87项，2021年已完成44项。

Systematic planning and project-based promotion of transformation of ultra-low emission of exhaust gas. By holding experience sharing meetings, planning and organizing training on technical points of clean transportation, and assessing and monitoring unorganized emissions and organized emissions, a consensus has been reached on the early implementation of ultra-low emission pre-assessment. The Company has mainly promoted 87 projects and 44 projects have been completed in 2021.

全面提速，集中力量加快推进“废气超低排”。深入现场、全力推进12家单位完成超低排放预评估工作；组织太钢不锈编写超低排放改造工作实践专题报告，组织太钢不锈、宝钢股份湛江钢铁及宝武水务编制3份技术应用清单；形成超低排放提速方案，下达《超低排放提速任务书》；继太钢不锈之后，2021年宝钢股份湛江钢铁获得超低排放A级认定。

Speed up all aspects and focus on accelerating the “ultra-low emission of exhaust gas”. China Baowu went deep into the site and made every effort to promote 12 units to complete the pre-assessment of ultra-low emission; organized TISCO Stainless Steel to prepare a special report on the practice of ultra-low emission transformation and organized TISCO Stainless Steel, Baosteel Zhanjiang Iron and Steel and Baowu Water to compile 3 technology application lists; formed an ultra-low emission speed-up program and issued the Ultra-low Emission Speed-up Assignment Book; following TISCO Stainless Steel, Baosteel Zhanjiang Iron and Steel obtained the ultra-low emission class-A certification in 2021.

宝钢股份

Baosteel

自主研发高炉热风炉烟气净化技术装置系统并顺利建成投产，填补国内空白。整套系统达到“无人值守、定期巡检”的自动化水平，是宝钢股份深入推进钢铁行业A级企业创建、实施超低排放改造的又一重要成果。

Independently developed the system of blast furnace (BF) hot-blast stove flue gas purification technology and put it into operation, which has filled the domestic gap. The whole system reaches the automation level of “unattended and regular inspection”, which is another important achievement of Baosteel in promoting the establishment of class-A enterprises in the steel industry and the implementation of ultra-low emission transformation.



中南钢铁韶钢松山

Shaoguan Iron and Steel Songshan of China South Steel

2021年，组织实施烧结、焦化、发电烟气脱硫脱硝等废气超低排项目14项，废气超低排实现率达到60%以上。

In 2021, it has organized the implementation of 14 ultra-low emission projects of exhaust gas including flue gas desulfurization and denitrification for sintering, coking, power generation, etc., with a realization rate of ultra-low emission above 60%.

马钢集团马钢股份

Masteel of Magang Group

2021年，马钢股份本部立项投资约11.5亿元，启动实施29项超低排放改造项目，实现92%以上钢铁产能改造任务；长江钢铁立项投资2亿元，实施6项超低排放改造项目。

In 2021, Masteel has invested about RMB 1.15 billion to start 29 ultra-low emission transformation projects, achieving the transformation tasks of more than 92% of steel production capacity; Changjiang Steel has established an investment of RMB 200 million to implement 6 ultra-low emission transformation projects.

八钢公司

Bayi Iron & Steel

120吨转炉三次除尘项目、焦炭料场封闭项目、石灰石料场封闭项目等多个废气超低排项目投运，达到超低排放标准。

120-ton converter three-time dedusting project, coke yard closure project, limestone yard closure project and many other exhaust gas ultra-low emission projects have been put into operation, which have reached the ultra-low emission standards.



八钢公司 120 吨转炉三次除尘项目
Bayi Iron & Steel 120-ton converter three-time dedusting project

废水零排放 Zero discharge of wastewater

积极搭建先进技术和平台。邀请中国钢铁工业协会、水利部长江水利委员会、行业专家等讲解废水零排放相关政策、新技术；组织各单位介绍和共享冶金、焦化、矿山等节约用水及治水先进技术、典型案例、管理经验；通过专题交流研讨，支撑废水零排放能力提升。

Actively build advanced technology and management sharing platform. China Baowu invited the China Iron and Steel Association, Changjiang Water Resources Commission of the Ministry of Water Resources, industry experts, etc. to explain policies and new technologies related to zero discharge of wastewater; organized units to introduce and share advanced technologies, typical cases and management experiences of water conservation and water management in metallurgy, coking and mining, etc.; provided support for capacity enhancement in zero discharge of wastewater through thematic exchanges and seminars.

中南钢铁韶钢松山

Shaoguan Iron and Steel Songshan of China South Steel

制定下发废水减量专项攻关奖励考核方案，推进废水治理项目，实现废水水质改善和减量。2021年推进中水回用、雨污分流等5项废水治理改造项目，吨钢废水排放量同比下降57.7%。

Developed and issued a special incentive and assessment program for wastewater reduction to promote wastewater treatment projects and achieve quality improvement and reduction of wastewater. In 2021, 5 wastewater treatment transformation projects such as reclaimed water recycling and rainwater and sewage diversion were advanced, and the wastewater discharge per ton of steel decreased by 57.7% year on year.

马钢集团马钢股份

Masteel of Magang Group

立项投资6.73亿元，实施北区废水深度处理综合利用、北区生化废水提标零排放、北区雨污分流等废水零排放改造项目。2021年，废水排放量较上年度下降30.17%。

Invested RMB 673 million to implement wastewater zero discharge transformation projects such as the deep treatment and comprehensive utilization of wastewater in the north area, zero discharge of the upgrading of biochemical wastewater in the north area, and the diversion of rainwater and sewage in the north area. In 2021, the wastewater discharge decreased by 30.17% compared with the previous year.



马钢集团六汾河污水处理系统
Magang Group Liufenhe Wastewater Treatment System



■ 太钢集团再生水常态化供应汾河公园湿地
Regular Supply of TISCO Reclaimed Water to Fenhe Park Wetland

太钢集团

TISCO

各基地24项“废水零排放”工作任务均按计划完成，太钢不锈重点完成再生水常态化供应汾河公园湿地、工业废水一膜深度处理系统提效改造、取向硅钢区域废水资源化等项目。

All the 24 “zero discharge of wastewater” tasks for the bases were completed as planned. TISCO Stainless Steel focused on completing projects such as the regular supply of reclaimed water to Fenhe Park Wetland, efficiency improvement of industrial wastewater one-membrane deep treatment system, and recycling of wastewater in grain-oriented silicon steel area.

宝武水务

Baowu Water

2021年5月，宝武水务与冶金工业信息标准研究院携手向中国钢铁工业协会提出《钢铁企业综合废水零排放处理技术规范》等团体标准立项申请并于2021年8月11日通过协会评审。2021年12月，宝武水务“钢铁冶金行业废水零排放处理技术”入选《国家鼓励的工业节水工艺、技术和装备目录（2021年）》。

In May 2021, Baowu Water and China Metallurgical Information and Standardization Institute jointly applied to China Iron and Steel Association for the establishment of group standards such as *Technical Specification for Comprehensive Zero Discharge Treatment of wastewater from Iron and Steel Enterprises*, which passed the assessment of the Association on August 11, 2021. In December 2021, Baowu Water's *Wastewater Zero Discharge Treatment Technology for Iron and Steel Metallurgy Industry* was included in the *Catalog of Industrial Water Saving Processes, Technologies and Equipment Encouraged by the State (2021)*.

推进落实“长江大保护”行动计划。以示范项目建设为重点，各相关单位制定并落实“长江大保护”行动年度计划，并定期跟踪废水零排放绩效指标及主要项目进展；沿江6大主要钢铁基地（中南钢铁重庆钢铁、宝钢股份武钢有限、中南钢铁鄂城钢铁、马钢集团马钢股份、宝钢股份梅钢公司、宝钢股份宝山基地）共明确废水零排放项目36项，2021年完成16项，其中宝钢股份宝日汽车板废水零排放示范项目实现负荷试车。

Promote the implementation of the Action Plan for Yangtze River Protection. Focusing on the construction of demonstration projects, all relevant units formulated and implemented the annual Action Plan for Yangtze River Protection, and tracked the performance indicators of wastewater zero discharge and the progress of major projects regularly. A total of 36 wastewater zero discharge projects have been identified for the 6 major steel bases along the river (Chongqing Iron and Steel of China South Steel, Baosteel WISCO, Echeng Iron & Steel of China South Steel, Masteel of Magang Group, Meishan Iron and Steel of Baosteel, and Baoshan Base of Baosteel), 16 of which have been completed in 2021, of which the wastewater zero discharge demonstration project of Baosteel-NSC/Arcelor Automotive Steel Sheets has achieved loaded test run.

固废不出厂

No solid waste leaving the factory

夯实基础，巩固成果，推动长流程钢铁基地全面完成既定任务目标。组织各基地开展自查自纠、总结培训、经验分享、专题研修等工作，在公司能环部组织的专家团队支撑下，首批推进的8家基地（宝钢股份宝山基地、梅钢公司、湛江钢铁、武钢有限，中南钢铁韶钢松山、鄂城钢铁，八钢公司、太钢集团宝钢德盛）已经全面完成固废不出厂既定任务目标，2019年以后新进集团的7家基地按计划落实固废不出厂方案。

Lay a solid foundation, consolidate the achievements, and promote the long-process steel base to fully complete the established task objectives. China Baowu organized the bases to carry out self-examination and self-correction, summary training, experience sharing and special research and studies, etc. With the support of the expert team organized by the Energy and Environment Department of the Company, we have promoted 8 bases (Baoshan Base, Meishan Iron and Steel, Zhanjiang Iron and Steel, WISCO of of Baosteel; Shaoguan Iron and Steel Songshan, Echeng Iron & Steel of of China South Steel; Bayi Iron & Steel; Baosteel Desheng of TISCO) in the first batch to fully complete the established task objectives of “no solid waste leaving the factory”, and 7 bases joining the Group after 2019 has implemented the “no solid waste leaving the factory” program as scheduled.

技术创新，标准引领，提高资源利用效率和价值，提升固废产品化水平。公司能环部研究编制《钢铁企业固废不出厂管理指南》系列标准；中央研究院开展“热态渣高值利用及协同处置关键技术开发与应用”研究；宝武环科制订并落实《钢渣价值提升三年行动方案》。

Technological innovation and standards lead the way to improve the efficiency and value of resource utilization and enhance the level of turning solid waste into products. The Energy and Environment Department of the Company researched and compiled a series of standards of the *Guidelines for Management of ‘No Solid Waste Leaving Factory’ of Iron and Steel Enterprises*; the Central Research Institute researched the “Key Technology Development and Application for High-Value Utilization and Cooperative Disposal of Thermal Slag”; Baowu Environment and Resource Technology formulated and implemented the *Three-Year Action Plan for Steel Slag Value Promotion*.

发挥优势，认定资质，多基地协同处置危险废物，解决城市难点痛点问题。宝钢股份宝山基地取得危废经营许可证，具备每年5万吨的协同处置能力；宝武环科金资公司获得每年0.5万吨铁质废油桶及油漆涂料桶预处理资质；中南钢铁韶钢松山冶金炉窑协同处置工业固体废物项目顺利获得环评批复，取得每年18万吨危险废物经营许可证。

Give full play to the advantages, identify the qualifications, and collaboratively dispose of hazardous waste in multiple bases to address challenging problems in cities. Baoshan Base of Baosteel has obtained the hazardous waste operation license, with a collaborative disposal capacity of 50,000 tons per year; Baowu Environment and Resource Technology Financial Asset Company has obtained the pre-treatment qualification for handling 5,000 tons of iron waste oil drums and paint barrels per year; the project of coordinated disposal of industrial solid waste in the metallurgical furnace of Shaoguan Iron and Steel Songshan of China South Steel has successfully obtained the EIA approval as well as the hazardous waste operation license for 180,000 tons per year.

中国宝武“固废不出厂”创新探索的实践经验获国家部委认可

China Baowu’s innovative exploration of “no solid waste leaving the factory” was recognized by the Departments of National Ministries

工信部将《宝武集团创新探索“固废不出厂”模式》纳入“十三五”工业资源综合利用典型案例。

The Ministry of Industry and Information Technology (MIIT) incorporated *Baowu Group’s Innovative Exploration of the ‘No solid waste leaving the factory’ model* into Typical Cases of Comprehensive Utilization of Industrial Resources in the “13th Five-Year Plan”.

国家发改委发布《关于“十四五”大宗固体废弃物综合利用的指导意见》，明确提出“在钢铁冶金行业推广‘固废不出厂’”。

The National Development and Reform Commission (NDRC) issued the *Guidance on the Comprehensive Utilization of Bulk Solid Waste in the “14th Five-Year Plan”*, which put forward to “promote the ‘No solid waste leaving the factory’ in iron and steel metallurgical industries”.

国家发改委、科技部、工信部、自然资源部联合发布《绿色技术推广目录（2020年）》，其中的“节能环保组产业”收录中国宝武“滚筒法冶金钢渣高效清洁处理技术”。

NDRC, Ministry of Science and Technology (MOST), MIIT and Ministry of Natural Resources jointly issued the *Catalogue of Promotion of Green Technologies (2020)*, in which the “energy-saving and environmental protection group industries” includes ‘Efficient and Clean Roller Treatment Technology for Metallurgical Steel Slag’ of China Baowu”.

绿色包装和运输 Green Packaging and Transportation



● 太钢集团钢卷外包装
TISCO Steel Coil Outer Packaging

太钢集团钢卷外包装采用回收的塑料、木屑等，经高温、压制、防霉变等工序制造而成，外观精美的同时便于用户拆解，还能最大程度回收再利用。

The steel coils' outer packaging materials of TISCO are made of recycled plastic and wood chips through high temperature, pressing, anti-mildew and other processes. They are not only beautiful but also convenient for users to disassemble and recycle to the maximum extent.

2021年3月，宝武重工自主研发的混铁车保温加盖机器人在马钢股份顺利完成首次热负荷试车，属国内钢铁行业首创。该机器人采用密闭式轻量化箱型结构，显著降低铁水运输途中烟气、粉尘外排和热辐射对环境带来的不利影响。

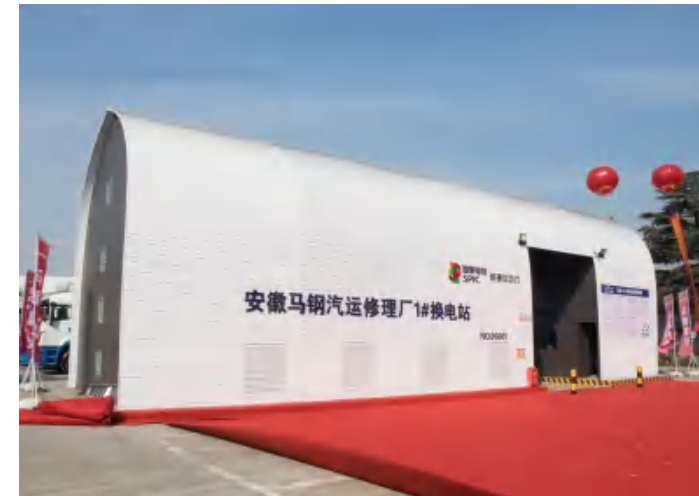
In March 2021, Baowu Heavy Industry independently developed the torpedo car with heat preservation and capping robot completed its first hot load test run in Masteel, which was the first of its kind in the steel industry in China. The robot adopts a closed lightweight box structure, which significantly reduces the adverse impact on the environment caused by fumes, dust emissions and heat radiation during molten iron transportation.

2021年11月，由宝钢股份、宝信软件、大连重工等联合开发的全球首创全无人智慧铁水运输系统成功上线测试。系统由灵巧鱼雷车和智慧铁路两部分构成，灵巧鱼雷车采用自动驾驶、纯电力驱动。按年生产1500万吨铁水计算，每年可节约标煤4000吨，减少二氧化碳排放量1万吨。

In November 2021, the world's first fully unmanned intelligent molten iron transportation system jointly developed by Baosteel, Baosight and DHI.DCW was successfully tested online. The system consists of two parts, the dexterous torpedo car and the intelligent railway, and the former is designed as automatic driving and pure electric driven, which can save 4,000 tons of standard coal and reduce carbon dioxide emissions by 10,000 tons per year based on the annual production of 15 million tons of molten iron.



● 纯电重卡
Pure Electric Heavy Truck



2021年12月31日，马钢物流第一批48台纯电重卡及换电站顺利交付。纯电重卡具有零排放、无污染、低噪音等优点。

On December 31, 2021, the first 48 pure electric-driven heavy trucks and Battery Swapping Stations of Magang Logistics were successfully delivered. The pure electric heavy truck has the advantages of zero-emission, no pollution and low noise.

● 换电站
Battery Swapping Station

2021年太钢不锈钢两台油电混动机车投运，90%以上作业任务可用纯电模式运行，相比原先GK1B型机车，每月减少综合油耗10.2吨、减排二氧化碳31.8吨，根除火车冒烟现象，成为一道亮丽的“流动风景线”。

In 2021, two gasoline-electric hybrid locomotives of TISCO Stainless Steel were put into operation, with more than 90% of operation tasks can be run in pure electric mode. Compared with the original GK1B locomotives, it can reduce comprehensive fuel consumption by 10.2 tons and carbon dioxide emissions by 31.8 tons per month, and eradicate the phenomenon of smoky trains, becoming a beautiful "mobile scenery line".



● 油电混动机车
Gasoline-electric Hybrid Locomotive

绿色产品 GREEN PRODUCTS

2021年，中国宝武聚焦高强度、高耐蚀和高效能绿色产品技术，开展绿色设计，创新制造工艺，取得丰硕的绿色产品成果。

In 2021, China Baowu focused on green product technologies with high strength, high corrosion resistance and high performance, carried out the green design, innovated the manufacturing process, and achieved fruitful green product results.

宝钢股份

Baosteel

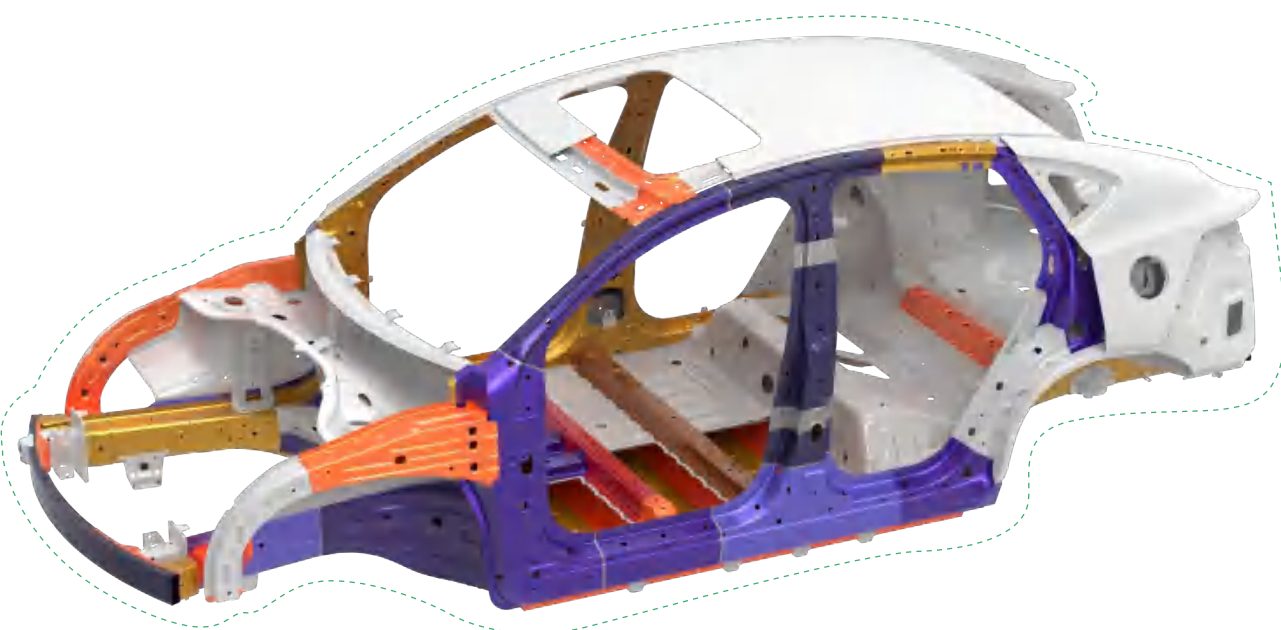


870 亿 千瓦时
年节电可达

Annual electricity saving of up to 87 billion kWh

高耐蚀锌铝镁镀层钢板可用于建筑用途，其平面耐蚀性较镀铝锌提高了50%以上，服役寿命承诺可由20年延长至30年；极低铁损取向硅钢可用于制造新1级能效配变，替代我国配网高耗能变压器，年节电可达870亿千瓦时，节能减碳效益巨大；吉帕级高性能汽车钢板可用于汽车制造，如果500万个汽车电池包采用吉帕钢®，减排效果相当于增加了约66—110万亩森林。

High corrosion-resistant zinc-aluminium-magnesium coated steel plate can be used for building purposes, its plane corrosion resistance is more than 50% higher than that of aluminium-zinc plating, with a committed service life extended from 20 years to 30 years. Grain-oriented silicon steel with extremely low iron loss can be used for manufacturing new primary energy efficiency distribution transformers, replacing the high energy-consuming transformers in China's distribution network, which can provide an annual electricity saving of up to 87 billion kWh and huge energy-saving and carbon-reduction benefits. X-GPa® High-performance automobile steel sheet can be used in automotive manufacturing. If 5 million automotive battery packs are made of X-GPa® steel, the emission reduction effect will be equivalent to an increase of about 660,000~1.1 million mu (440~733.33 square kilometers) of the forest.



● 高性能汽车钢板——吉帕钢®
High-performance Automobile Steel Sheet -X-GPa®

马钢集团

Magang Group

CL65K新材质车轮可以满足川藏铁路高海拔、大坡道、低温潮湿服役条件，已获得国铁集团CRCC证书并成功应用于中车集团“复兴号”高原内电双源动力集中型动车组项目。

CL65K new material wheels can meet the high altitude, large and long ramp, low temperature and humid service conditions on Sichuan-Tibet Railway. It has been awarded a CRCC certificate by China Railway and has been successfully applied in the project of the “Fuxing” plateau internal electric dual-source powered centralized locomotive set project by CRRC.

太钢集团

TISCO

超高牌号无取向硅钢服务“国之重器”白鹤滩水电站，在百万千瓦巨型水电机组上得到成功应用。

The ultra-high grade non-oriented silicon steel has been successfully applied in a giant hydropower unit of one million kilowatts of the “National Pillar” Baihetan Hydropower Station.



● “国之重器”白鹤滩水电站
“National Pillar” Baihetan Hydropower Station

绿色产业 GREEN INDUSTRY

中国宝武围绕钢铁主业，大力发展绿色能源、绿色产业金融、绿色资源、绿色新材料、绿色智慧服务等，支撑公司绿色发展战略有效落地，引领钢铁行业绿色发展进程。

Around the main industry of steel, China Baowu vigorously develops green energy, green industrial finance, green resources, green new material and green intelligent service to support the effective implementation of the Company's green development strategy and lead the green development process of the steel industry.

绿色能源 Green Energy

绿色能源产业聚焦光伏与风能发电、水电解制氢、氢气储运及储能电站电池等方向，聚焦技术与装备开发，逐步把为绿色钢铁保驾护航的“铁饭碗”端在自己手里。2021年中国宝武绿色电力消纳19.9亿千瓦时。

The green energy industry focuses on photovoltaic, wind power generation, hydrogen production by water electrolysis, hydrogen storage and transportation, energy storage power station battery, etc., and technology and equipment development, so as to gradually and firmly grasp the “iron rice bowl” of escorting for green steel in our own hands. In 2021, China Baowu had a consumption of 1.99 billion kilowatt-hours of green electric power.

- 2021年9月，宝武清能马钢气体4号制氢装置顺利投入试生产，装置设计产能2000立方米每小时，是中国宝武马鞍山区域最大规模制氢机，有效助力公司“长江氢走廊”布局。

In September 2021, the Magang No. 4 hydrogen production factory of Baowu Clean Energy was successfully put into trial production, with a designed capacity of 2,000 cubic meters per hour, which is the largest hydrogen production factory in Maanshan region of China Baowu, effectively contributing to the Company's layout of “Yangtze River Hydrogen Corridor”.

- 2021年10月，作为沪豫合作第二批项目和三门峡市重点工程，宝武清能在三门峡市投资建设的源网荷储一体化绿色供电园区项目开工。一期规划设计风电建设规模达150兆瓦，投产后每年绿电发电量可达3.5亿千瓦时。

In October 2021, as the second batch of the Shanghai-Henan cooperation project and a key project of Sanmenxia City, the integrated source-grid-load-storage green power supply park project invested by Baowu Clean Energy in Sanmenxia City started its construction. The planned wind power construction scale of the first phase is 150 MW, and the annual green power generation will reach 350 million kWh after it is put into operation.



12200 吨

年减排二氧化碳

An annual carbon dioxide emission reduction of 12,200 tons

- 2021年11月，由宝武清能承建的宝钢股份煤场全门架料场厂房光伏发电项目并网发电，项目总建设规模约为17.4兆瓦，年发电量1432万千瓦时，年减排二氧化碳约12200吨。

In November 2021, the photovoltaic power generation project of the full-gantry stockyard plant of Baosteel coal yard constructed by Baowu Clean Energy was connected to the grid for power generation. The total construction scale of the project is about 17.4 MW, with an annual power generation of 14.32 million kWh and an annual carbon dioxide emission reduction of 12,200 tons.



100981 块

该项目在厂房屋面安装晶硅光伏板

The project installed 100,981 monocrystalline silicon photovoltaic panels on the roof of the plant

- 2021年12月，宝钢股份湛江钢铁装机量48.2兆瓦的光伏发电（一期）工程顺利并网。该项目在厂房屋面安装了100981块单晶硅光伏板，总面积达41.25万平方米，年平均发电量4755万千瓦时，相当于年节约标煤1.57万吨，年减排二氧化碳4.69万吨。

In December 2021, the photovoltaic power generation (Phase I) project with an installed capacity of 48.2 MW of Zhanjiang Iron and Steel of Baosteel was successfully connected to the grid. The project installed 100,981 monocrystalline silicon photovoltaic panels on the roof of the plant, with a total area of 412,500 square meters and an annual average power generation of 47.55 million kWh, equivalent to an annual saving of 15,700 tons of standard coal and an annual carbon dioxide emission reduction of 46,900 tons.



● 宝钢股份湛江钢铁屋顶光伏项目
Rooftop Photovoltaic Project of Zhanjiang Iron and Steel of Baosteel



宝武铝业屋顶光伏项目
Rooftop Photovoltaic Project of Baowu Aluminum



中南钢铁韶钢松山屋顶光伏项目
Rooftop Photovoltaic Project of Shaoguan Iron and Steel Songshan of China South Steel

绿色产业金融 Green Industrial Finance

绿色产业金融包含绿色信贷、绿色债券、绿色基金、碳金融等产品体系，可以有效拓展金融支持绿色发展的广度和深度。中国宝武已经设立每年3500万元的低碳冶金创新基金，助力低碳创新研究；联合建信投资、国家绿色基金等社会资本发起设立宝武绿碳私募投资基金，帮助绿色低碳技术成果转化以及推动能源转型；计划在2035年之前投入2000亿元，助力实现减碳目标。

Green industrial finance includes green credit, green bonds, green funds, carbon finance and other product systems, which can effectively expand the broadness and depth of financial support for green development. We have set up an annual low-carbon metallurgy innovation fund of RMB 35 million to help low-carbon innovation research, and we together with CCB Investment, National Green Fund and other social capitals have launched and set up the Baowu Green and Low-carbon Private Investment Fund to help transform green and low-carbon technological achievements and promote energy transformation. In addition, we planned to invest RMB 200 billion by 2035 to help achieve the carbon reduction goals.

宝钢股份

Baosteel

2021年9月6日，宝钢股份在银行间市场成功发行上海市首单可持续发展挂钩债券（中期票据），共募集金额50亿元，期限3年。第三个计息年度利率根据2023年度可持续发展绩效目标（如吨钢氮氧化物排放量等）完成情况确定。

It successfully issued Shanghai's first sustainable development-linked bond (medium-term note) in the interbank market on September 6, 2021, raising RMB 5 billion over 3 years. The third interest-bearing annual interest rate is subject to the achievements of sustainable development performance targets (such as nitrogen oxide emissions per ton of steel, etc.) in 2023.

华宝信托

Hwabao Trust

2021年4月成立华宝信托ESG系列——碳中和集合资金信托计划，是我国宣布碳达峰、碳中和目标以来，国内信托行业首批直接参与碳排放配额交易的投资型信托。9月底，由华宝信托担任受托机构、中国建设银行发起的“飞驰建融2021年第九期财产权信托项目（碳中和、绿色信贷专项包）”在银登中心成功登记流转，规模42.06亿元，入池基础资产均为建设银行发放的绿色信贷资产。

The carbon neutrality pooled fund trust plan under the Hwabao Trust ESG series was established in April 2021, which is the first investment trust directly participating in carbon emission quota trading in China's trust industry since China announced the goal of carbon peak and carbon neutrality. At the end of September 2021, the "9th Property Rights Trust Project of Feichi Jianrong in 2021 (special package for carbon neutrality and green credit)", initiated by China Construction Bank and trusted to Hwabao Trust, was successfully registered and circulated in Banking Credit Assets Registration and Circulation Center in the amount of RMB 4.206 billion, and the pooled underlying assets were all green credit assets issued by China Construction Bank.

华宝基金

Hwabao WP Fund

是中国金融学会绿色金融专业委员会“碳中和愿景下的绿色金融路线图”课题中唯一的公募基金参与者。2021年9月，华宝基金参与中国金融学会绿色金融专业委员会等众多机构共同发起的北京ESG投资（基金）生态倡议，以全面推动中国ESG基金体系构建，助力我国绿色产业金融体系健康快速发展。

It is the sole publicly offered funds participant in a project called "Green Finance Roadmap under Carbon-neutral Vision" by the Green Finance Committee of the China Society for Finance and Banking. In September 2021, Hwabao WP Fund participated in the Beijing ESG Investment (Fund) Ecological Initiative jointly initiated by the Green Finance Committee of the China Society for Finance and Banking and many other institutions to comprehensively promote the construction of the China ESG fund system and facilitate the healthy and rapid development of the green industrial finance system in China.

财务公司

Finance Company

为欧冶链金开展首单绿色融资租赁（售后回租）业务，合计金额 1100万元；运用央行绿色票据再贴现，将再贴现资金投向绿色企业，2021年全年累计办理再贴现27.86亿元。

Launched the first green finance lease (sale-and-leaseback) business for Ouyeel Blockchain Finance and Metal Recycling Resources, with a total amount of RMB 11 million; exploited the rediscount policy of green notes of the People's Bank of China, and invested the rediscounted funds into green enterprises. In 2021, a total amount of RMB 2.786 billion of the rediscount has been handled.

绿色资源

Green Resources

中国宝武对接国家资源能源战略，创新商业模式，提高国内矿山整合与开发力度，实施产能倍增计划，加快海外矿山资产盘活与开发速度，加大再生钢铁原料企业的兼并重组步伐，建立健全废钢回收、加工配送体系，提高绿色资源保障能力。坚持产城融合，依托城市钢厂的装备、技术和资源优势，以城市矿山开发、资源综合利用为方向，强化科技创新，打造行业领先的资源利用与环保产业。

Dovetailing with national resource and energy strategies, China Baowu innovated its business models, improved its efforts in domestic mine integration and development, implemented capacity multiplication plans, accelerated overseas mine asset revitalization and development, stepped up mergers and acquisitions of recycled steel material enterprises, and established a robust system for recycling, processing and distributing of scrap steel, to strengthen the green resource guarantee capacity. Furthermore, the Company, insisting on industry-city integration and leveraging the advantages of urban steel mills in terms of equipment, technology and resources, has strengthened its scientific and technological innovation and built an industry-leading resource utilization and environmental protection industry orienting towards urban mining development and comprehensive utilization of resources.

宝武资源

Baowu Resources

聚焦海外矿山重点项目，加快海外优质矿山的建设。依托公司雄厚的投融资能力，聚焦优质稀缺资源，通过项目投资、风险勘探、矿权运作、产融结合等多元化运作手段，构筑资源产业合作平台。2021年，公司境外矿山板块充分发挥国际化优势，海外核心项目和存量铁矿资源投资开发取得重大进展。

accelerated the construction of overseas high-quality mines with focus on key projects in overseas mining. Relying on the Company's solid investment and financing capacities and focusing on high-quality scarce resources, the Company has built a resource industry cooperation platform through diversified operation means including project investment, risk exploration, mineral rights operation, and integration of production and finance. In 2021, the Company's overseas mining segment gave full play to its internationalization advantages and made significant progress in the investment and development of overseas core projects and investment and development of stock iron ore resources.

宝武环科

Baowu Environment and Resource Technology

协同建设“城市钢厂”，为各钢铁基地固废保产返产和处置利用提供有力保障，年内建设投运南京基地钢渣棒磨生产线、湛江基地转底炉二期和三高炉配套工业废弃物分选处置等项目。

cooperated in the construction of an “urban steel mill” to provide a strong guarantee for the return and disposal and utilization of solid waste in the steel bases. Within the year, it has built and put into operation the steel slag rod mill production line at Nanjing base, as well as the second phase of rotary hearth furnace and No.3 blast furnace supporting industrial waste sorting and disposal projects at Zhanjiang base.

绿色智慧服务

Green Intelligent Services

为响应国家“十四五”规划，推动钢铁企业向智慧、绿色方向发展，中国宝武积极推进绿色智慧服务业发展，为钢铁行业绿色和智能转型升级贡献智慧和力量。

In response to the national “14th Five-Year Plan” to push forward steel enterprises toward intelligent and green development, China Baowu has actively promoted the development of a green intelligent service industry, contributing wisdom and strength to the green and intelligent transition and upgrading of the steel industry.

宝钢工程

Baosteel Engineering

不断拓展产业生态圈咨询业务，全年以节能降耗、绿色低碳为主题，成功开展包钢集团、铜陵有色、莱钢钢铁和宝钢德盛四项碳达峰碳中和低碳咨询服务项目，为韶钢、红钢、玉钢、莱钢和宝钢德盛编制节能“十四五”规划。

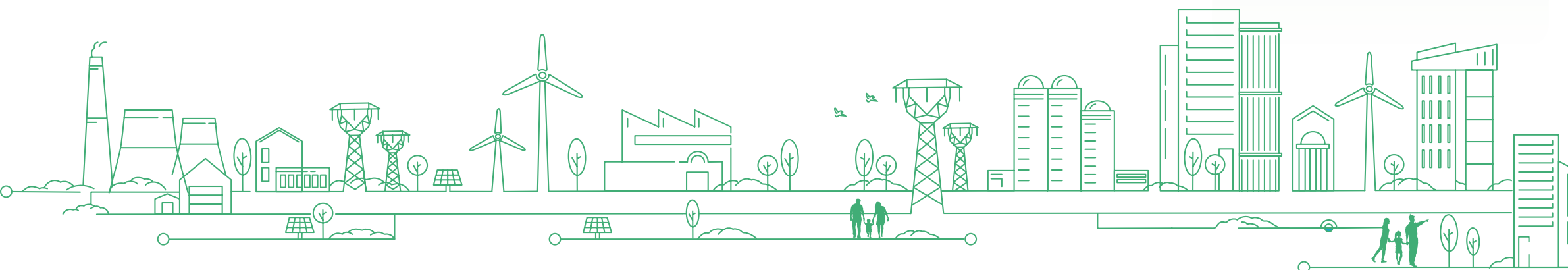
continuously expanded the consulting business in the industrial ecosystem, successfully carried out four service projects of carbon peaking, carbon neutrality and low-carbon consulting for Baotou Steel Group, Tongling Nonferrous Metals Group, Laiwu Steel Group and Baosteel Desheng surrounding the theme of energy-saving and consumption reduction, green and low-carbon, and prepared “14th Five-Year Plan” for energy saving for Shaoguan Iron and Steel, Honghe Iron and Steel, Yunnan Yuxi Iron and Steel Group, Laiwu Steel Group and Baosteel Desheng.

宝信软件

Baosight

深入研究钢铁行业节能、环保和资源利用的数字化解决方案和工艺装备技术，开发有利于节能减排的智能系统、智能装备、智能模型。策划碳资产管理系统、碳交易信息化平台方案，完成宝武清能双碳管理平台规划。宝信软件与中国工业互联网研究院、上海易碳数字科技有限公司合作成立双碳创新联合实验室，开展双碳相关研究及实验工作。公司提交的“钢铁生产工序能源管理系统技术规范”通过国家工信部评审，成为钢铁行业首批52项碳达峰行业标准之一。

carried out in-depth research on digital solutions and process equipment technologies for energy saving, environmental protection and resource utilization in the steel industry, and developed intelligent systems, intelligent equipment and intelligent models that are conducive to energy saving and emission reduction. It planned a carbon asset management system and carbon trading information platform solutions and completed the planning of a dual carbon management platform for Baowu Clean Energy. Baosight has set up a Dual-Carbon Innovation Joint Laboratory to carry out research and experimental work related to dual carbon in cooperation with the China Academy of Industrial Internet and Shanghai E-Carbon Digital Technology Co., Ltd (E-C DIGITAL). The “Technical Specification for Energy Management System of Steel Production Processes” submitted by the Company has passed the evaluation of the State MIIT and become one of the first 52 industry standards for carbon peak in the steel industry.



绿色运营 GREEN OPERATION

绿色是中国宝武的生命底色，中国宝武积极开展生态恢复与治理工作，保护生物多样性，着力打造花园式绿色钢厂，矢志不渝地守护碧水蓝天。同时，中国宝武坚持以身作则，深入推进绿色办公，开展环保教育宣贯活动，让绿色工作和绿色生活成为全体宝武人的行动自觉。

Becoming greener bolsters China Baowu's sustainable development. We conduct ecological restoration and governance, protect biodiversity, strive to build garden-style green steel mills, and are committed to protecting clear waters and blue sky. In addition, China Baowu plays an exemplary role by further promoting green office and holding environmental protection education and publicity activities, so that every Baowu people can identify and practice green work and green life with concrete actions.

厂区周边环境治理

Environmental governance around the factory

宝钢股份

Baosteel



566万平方米

宝钢股份武钢有限总绿化面积

Baosteel WISCO has a total green area of 5.66 million square meters

41.11%

宝钢股份梅钢公司绿化覆盖率

Baosteel Meishan Iron and Steel has a green coverage rate of 41.11%

武钢有限全面整治既有绿地，推进生态修复，总绿化面积达566万平方米，绿化覆盖率达32%，获评“全国冶金绿化先进单位”。梅钢公司每年投入近亿元用于厂容环境整治，绿化覆盖率由2016年的37.61%增至2021年的41.11%，获评“江苏省工业旅游区”，通过“国家AAA级旅游景区”创建评审。

WISCO has comprehensively rectified the existing green area to promote ecological restoration, with a total green area of 5.66 million square meters and a green coverage rate of 32%, which has been awarded the "National Advanced Greening Unit in Metallurgical Industry". Meishan Iron and Steel invests nearly RMB 100 million every year for the improvement of factory appearance and environment, and its green coverage rate has increased from 37.61% in 2016 to 41.11% in 2021. It has been awarded as "Industrial Tourism Area of Jiangsu Province" and has passed the evaluation of "National AAA Level Tourist Attraction".



● 宝钢股份在第十届中国花博会打造的“宝钢花园”

The "Baosteel Garden" created by Baosteel at the 10th China Flower Expo



中南钢铁

China South Steel

韶钢松山2021年完成绿化工程及绿化整治8项，新增绿化面积4.68万平方米，厂区绿化覆盖率达41.92%；鄂城钢铁全力打造3A景区标准的绿色智慧城市花园钢厂，厂区绿化率提升到40.6%，获评国家级“绿色工厂”，通过“国家AAA级旅游景区”创建评审。

Shaoguan Iron and Steel Songshan has completed 8 greening projects and greening renovation projects in 2021, adding 46,800 square meters of green area and covering 41.92% of the factory. Echeng Iron & Steel has made every effort to build a green, intelligent, urban garden steel mill with the standard of a 3A tourist attraction. The greening rate of the factory has increased to 40.6%, and it has been awarded as a national “Green Factory” and has passed the evaluation of “National AAA Tourist Attraction”.

马钢集团

Magang Group

马钢股份本部2021年新建绿地28.8万平方米，改造绿地10万平方米，绿地率和绿化覆盖率分别达到32.4%和33.9%，实现了从“盆景”到“风景”的景观提升。

The headquarters of Masteel added 288,000 square meters of green area and renovated 100,000 square meters of green area in 2021, achieving a 32.4% greening rate and 33.9% green coverage rate respectively, and realizing the landscape improvement from “bonsai” to “scenery”.



● 马钢集团景观提升工程
Landscape Improvement Project in Magang Group

太钢集团

TISCO

太钢不锈2021年环境绿化投入金额合计5340.3万元，其中新栽植树木1.59万株、种植花卉及草坪等地被植物11.97万平方米。主厂区绿地率为28.7%，绿化覆盖率达33%。

TISCO Stainless Steel has invested RMB 53,403 million on environmental greening in 2021, including 15,900 newly planted trees and 119,700 square meters of ground cover plants such as flowers and lawns. The greening rate of the main factory was 28.7%, and the green coverage rate was 33%.

八钢公司

Bayi Iron & Steel

2021年新增绿化面积11.5万平方米，新增乔木1.3万棵、灌木2.3万棵，厂区绿化覆盖率已达49%。

In 2021, it has added 115,000 square meters of green area, 13,000 trees and 23,000 shrubs, and the green coverage rate of the factory has reached 49%.



● 八钢公司
Bayi Iron & Steel

深化绿色办公

Deepen green office



无纸化办公

Paperless office

优化升级智慧办公平台，坚持推进无纸化办公。通过系统优化使公司总部外网带宽提升200%，智慧工作PC端门户各栏目平均响应时间提速超170%，移动端公文打开附件环节提速152%，取得了“立竿见影”的效果。同时，结合公司实际制定《智慧办公系统4.0数字化升级改造工作方案》。

We optimized and upgraded the intelligent office platforms, and insisted on the promotion of paperless office. After system optimization, the bandwidth of the external network in our Headquarters has been increased by 200%, the average response time of each column of the intelligent work PC portal has been increased by more than 170%, and the access speed of attachments in the official document at the mobile terminal has been increased by 152%, achieving "immediate results". Meanwhile, according to our actual conditions, the "Intelligent Office System 4.0 Digital Upgrade and Transformation Work Plan" has been formulated.

绿色生活

Green lifestyle

通过积极宣贯和引导，在中国宝武总部职工食堂实现了100%使用可降解环保手提袋和打包餐盒。在总部停车场安装22个充电桩并投入使用，为驾驶新能源汽车上下班的员工提供充电便利。

After active publicity and guidance, the employee canteen of China Baowu Headquarters has achieved 100% use of degradable environment-friendly tote bags and packaged meal boxes. 22 charging piles were installed in the parking lot of our Headquarters and put into use to facilitate charging for employees who drive new energy vehicles to and from work.

绿色楼宇

Green building

总部公共区域按上班和下班时间定点开灯和关灯，地下室停车场区域非高峰时间段仅保留部分照明。空调系统按室内CO₂含量提供新风量，实施新风系统预热回收，过渡季节空调采用室外新风供给室内需求。

The lights in the public area of our Headquarters are turned on and off at a fixed time subject to the on-duty time and off duty time, and during off-peak hours, only some lighting in the basement parking lot area is reserved. The air conditioning system provides fresh air volume according to the indoor CO₂ content, and we implement preheating and recovery of the fresh air system. In addition, we adopt outdoor fresh air to supply indoor demand in the transition season.

培育绿色文化

Cultivate green culture

中国宝武重视环保培训和宣教，在全国节能宣传周和全国低碳日来临之际，公司在总部开展日常碳减排知识普及活动，发起“绿色低碳有你有我”行动倡议。倡议实施每周一天“绿色出行日”，鼓励自驾车上下班的员工乘坐公共交通工具上下班；倡议节约用能器材；倡议食堂饭菜或食物打包时，自备环保袋，减少使用塑料袋。

We attached great importance to environmental protection training, publicity and education. On the occasion of National Energy Conservation Publicity Week and National Low Carbon Day, we conducted daily carbon emission reduction knowledge popularization activities at our Headquarters, and initiated the action initiative of "Green and Low-carbon with You and Me". The initiative is to implement a "green travel day" every week, encouraging employees to commute by public transportation instead of by car. We also advocate the economizing on energy and materials, and further propose our employees to take away the canteen meals or food with their environment-friendly bags and reduce the use of plastic bags.



太钢集团公益青年联盟在老军营社区开展垃圾分类入户宣传。
TISCO Public Welfare Youth Alliance carried out the household publicity on garbage classification in the Laojunying Community.



马钢集团组织厂区环保公众日开放活动。
Magang Group organized the opening activities of environmental protection public day in the factory.

共享

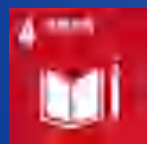
休戚相关 奏响和谐曲

Sharing

Close Correlation for Louder Chorus of Harmony

中国宝武倡导“没有竞争对手，只有合作伙伴”的共享理念，与员工、客户、供应商和社区等利益相关方及全体生态圈伙伴，一同参与、一同建设、一同尽力、一同奋斗、一同享有发展成果，努力成为一家受到行业尊重、充满家国情怀、勇于担当构建人类命运共同体重任的企业。

China Baowu advocates the sharing concept of “there are no competitors, but only partners”. We work alongside our employees, customers, suppliers, communities and other stakeholders, as well as all of the ecosystem partners, to share the responsibility of joint contribution and construction and share the fruit of common development. We strive to become an enterprise that is respected in the industry, practices patriotism, and dares to shoulder the responsibility of building a community with a shared future for mankind.



可持续发展目标





大家庭的归属感

THE SENSE OF BELONGING OF BIG FAMILY

中国宝武坚持成果共享，满足广大员工对美好生活的向往，全面提升员工能力素质，全面推进岗位创新和价值创造，让员工在中国宝武实现高质量发展、共建钢铁生态圈中获得看得见、摸得着、感受得到的利益，构筑“有钱、有闲、有趣”的美好生活，与企业共命运、同成长，提升员工获得感、幸福感、安全感。2021年，中国宝武开展职工、管理者对“有钱、有闲、有趣”发展理念落实情况的总体评价，其中员工满意度比例75.09%，较2020年上升0.82个百分点，管理者满意度比例81.67%，较2020年上升0.83个百分点。

We insisted on the achievements sharing to satisfy our employees' yearning for a better life. We comprehensively improved the ability and quality of our employees, promoted the post innovation and value creation, and enabled our employees to obtain the visual, touchable and perceived interests during our realization of high-quality development and co-building iron & steel ecosphere, building a life of "wealth, leisure and fulfillment", sharing destiny and growing together with the enterprise to enhance their sense of gain, happiness and security. In 2021, we conducted an overall evaluation of employees and managers on the implementation of the "wealth, leisure and fulfillment" development concept, of which, the employee satisfaction rate was 75.09%, with 0.82% higher than that in 2020, and the manager satisfaction rate was 81.67%, with 0.83% higher than that in 2020.

保障员工权益

Protect the rights and interests of employees

平等雇佣

Equal employment

公司严格遵守《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。2021年，公司共有员工总数为222595人。

China Baowu strictly abides by the *Labor Law*, *Labor Contract Law* and other laws and regulations, adheres to equal employment, and advocates diversity and equal opportunity, opposes any form of forced labor, harassment and abuse, signs labor contracts with employees according to the law, pays social insurance in accordance with regulations to continuously improve labor and employment management. By the end of 2021, there were 222,595 employees in the Company.

按专业技术职称分类（单位：人）

Composition of Professional Titles & Skills (Unit: Person)

高级职称 Senior Professional Title	中级职称 Intermediate Professional Title	初级职称 Primary Professional Title	未评职称 No Professional Title
8972	19971	8850	16296

按学历分类（单位：人）

Education Background Structure (Unit: Person)

研究生及以上 Graduate or Above	大学 Undergraduate	大专 Junior College	中专 Secondary Technical School	技校 Technical Specialized School	高中 Senior Middle School	初中及以下 Junior Middle School or Below
11370	47875	51617	12154	13021	21186	28236

按年龄分类（单位：人）

Age Structure (Unit: Person)

25岁及以下 25 or Below	26岁至30岁 Between 26 and 30	31岁至35岁 Between 31 and 35	36岁至40岁 Between 36 and 40	41岁至45岁 Between 41 and 45	46岁至50岁 Between 46 and 50	51岁至55岁 Between 51 and 55	56岁至60岁 Between 56 and 60	61岁及以上 61 or Above
5518	12393	22801	24164	33803	43853	32196	10677	54

按技术等级分类（单位：人）

Technical Level (Unit: Person)

高级技师 Senior Technician	技师 Technician	高级工 Senior Worker	中级工 Intermediate Worker	初级工 Primary Worker	无技能等级 No Technical Level
2810	10255	44371	22911	13617	37406

注：以上数据为在岗员工口径。
Note: the above data are calculated according to on-the-job employees.



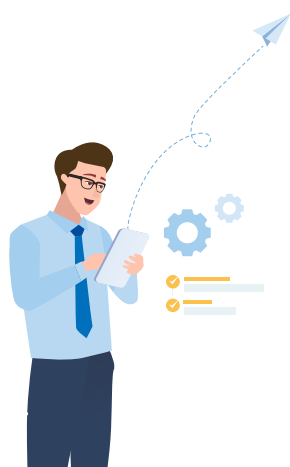
案例 | 响应国家号召，积极带动就业

CASE | Respond to the national call to actively promote employment

2021年，中国宝武响应国家号召，积极带动就业。深挖岗位需求，组织各一级子公司发布800多个适合高校毕业生就业岗位，带头吸纳高校毕业生；按照第十一届中央企业面向西藏、青海、新疆高校毕业生专场招聘活动要求，为“三地招聘”专场提供702个就业岗位；积极落实乡村振兴就业帮扶要求，在宁洱县、罗田县等对口帮扶地区举办网络专场招聘会；相关子公司定点投放230个招聘岗位，同时邀约上下游企业积极参与，共帮助2269人转移就业。

In 2021, we responded to the national call to actively promote employment. We tapped the employment demand deeply in organizing our tier I subsidiaries to release more than 800 employment posts suitable for university/college graduates, and took the lead in absorbing the university/college graduates. According to the requirements of the 11th special recruitment activity for university/college graduates from Tibet, Qinghai and Xinjiang conducted by central SOEs, 702 employment posts were provided for the special recruitment fair of Tibet, Qinghai and Xinjiang. Moreover, we actively implemented the requirements of employment assistance for rural revitalization and held online special recruitment fairs in Ning'er County, Luotian County and other pairing-assistance areas. In addition, our subsidiaries released 230 recruitment posts for designated areas, and invited upstream and downstream enterprises to actively participate in the recruitment, helping 2,269 people in total transfer employment.

薪酬福利 Salary and welfare



2021年，中国宝武立足国有资本投资公司定位，以增强员工动力活力、提升企业效益效率为中心，坚持“宏观调控、中观指导、微观搞活”的薪酬激励思路，坚持战略需求导向，紧扣改革任务要求，积极开展薪酬激励工作的创新实践，不断优化工资总额决定机制，创新薪酬激励方式，拓展中长期激励工具应用，构建与国有资本投资公司相匹配、与世界一流示范企业相适应的薪酬激励体系。

In 2021, based on the positioning of a state-owned capital investment company, and centering on enhancing the vitality and motivation of the employees and improving corporate benefit and efficiency, we insisted on the salary incentive ideas of "macro regulation, meso guidance and micro flexibility", and adhered to the orientation of strategic demands to hold the reform mission requirements. Moreover, we actively conducted the innovation and practice of salary incentives and constantly optimized the total salary determination mechanism. In addition, we innovated the salary incentive modes to expand the application of medium-term and long-term incentive tools and established a salary incentive system compatible with state-owned capital investment companies and world-class demonstration enterprises.

公司高度重视企业年金运作管理，督促受托人通过优化资产配置和加强投资监督等多种举措，严控投资风险，提升投资业绩；同时，持续优化年金业务办理流程 and 系统平台服务功能，为广大员工提供更加便捷化和人性化的企业年金服务。

We attached great importance to the operation and management of enterprise annuity and urged the trustee to strictly control investment risks and improve investment performance through optimizing asset allocation and strengthening investment supervision. Meanwhile, we continued to optimize the annuity business handling procedures and system platform service functions, providing a more convenient and humanized enterprise annuity service for our employees.



公司严格执行《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。为提升职工的感知度和幸福感，2021年推出了“公司日带薪休假单”，为公司职工增加1天带薪休假。

We strictly implemented the Regulations on Paid Annual Leave for Employees and other laws and regulations to effectively protect the normal rest and leave of employees. In order to improve the perception and happiness of employees, we launched the "Company Day Paid Leave Form" in 2021, providing employees with an extra day of paid leave.

民主管理 Democratic management



100%

集体合同覆盖率达

The coverage rate of collective contracts reached 100%

为贯彻落实习近平总书记关于全过程人民民主的重要论述，落实职工民主管理，中国宝武修订《职工民主管理基本制度》《职工董事、职工监事管理办法》《规范各级职代会制度工作意见》等文件，制定《中国宝武工会构建维护劳动领域政治安全长效机制实施方案》，扎实推进职工代表大会、厂务公开、集体协商等各项民主管理工作。2021年，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%。

To implement General Secretary Xi Jinping's important discussion on the people's democracy throughout the whole process and carry out the democratic management of employees, we revised the *Basic System for Democratic Management of Employees*, the *Management Measures for Employee Director and Employee Supervisor* and the *Opinions on Standardizing Employees Congress System at all Levels*, and formulated the *Implementation Plan of Long-term Mechanism by Labor Union of China Baowu for Maintaining the Political Security in Labor Field* to make solid progress in democratic management, such as workers and employees' congress, transparency in factory affairs, and collective negotiation. In 2021, all independent employers within the Company signed collective contracts through equal negotiation, and the coverage rate of collective contracts reached 100%.



2021年1月，中国宝武召开一届四次职代会，团结凝聚广大职工为实现中国宝武高质量发展建言献策、建功立业。

In January 2021, we held the fourth session of the 1st Employees Congress to unite our employees in offering advice and making contributions to the realization of the high-quality development of China Baowu.



- 2021年9月，中国宝武召开2021年厂务公开专题报告会，各级职代会代表对通报情况“满意”比例为94.62%。
In September 2021, we held a special report meeting on transparency in factory affairs for 2021, and 94.62% of the representatives of the employees' congress at all levels were "satisfied" with the report.

职业健康 Occupational health

为贯彻落实健康中国战略，增进广大职工健康福祉，公司成立健康宝武行动推进委员会，设立健康宝武行动专项资金，制定《健康宝武行动计划（2021-2025年）》，围绕身体和心理，提出“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，着力构建全方位全链条全周期的职工健康管理体系。

In order to implement the Healthy China strategy and improve the healthy well-being of employees, we have established a Healthy Baowu Action Promotion Committee, set up a special fund for Healthy Baowu Action, and formulated the *Healthy Baowu Action Plan (2021-2025)*. Focusing on physical and psychological health, we have proposed 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", and strived to build an all-round, whole chain and whole cycle employee health management system.



关爱女性员工 Care for female employees

巾帼心向党，绽放新时代。为宣传女职工在推动公司高质量发展中作出的突出贡献，激励广大女职工立足本职、爱岗敬业、追求卓越、争创一流。2021年3月，中国宝武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29名个人和18个集体获奖。

Devoting to the Party, Women are blooming in a new era. In order to publicize the outstanding contributions made by female employees in promoting the high-quality development of the Company, and encourage the female employees to base on their posts, love their jobs, pursue excellence and strive for first-class. In March 2021, the Female Employees Committee of China Baowu Labor Union conducted the selection and commendation activities of "Golden Rose" medals and certificates, awarding 29 individuals and 18 collectives.



- 宝钢包装欢度“三八”国际劳动妇女节。
Baosteel Packaging celebrated the International Working Women's Day on March 8.



- 宝钢股份策划打造“玫瑰园”活动。
Baosteel planned and organized the "Rose Garden" activity.

关心少数民族职工 Cares for ethnic minority employees



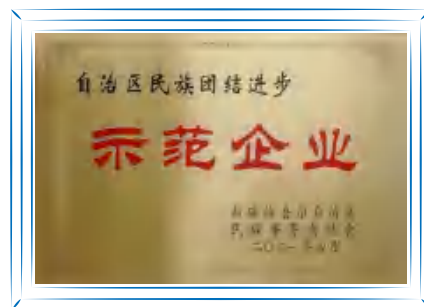
57626

人次
参与民族团结联谊活动

57,626 participants in the activities of "ethnic unity as a family"

八钢公司制度化常态化长效化开展“民族团结一家亲”和民族团结联谊活动。2021年，共计21769人次参与“民族团结一家亲”走访、交流活动，组织民族团结联谊活动5712次，57626人次参与。同时，八钢公司注重培养和选拔少数民族骨干和管理人员，优秀青年管理人才库“天山雄鹰”、中层管理者预备队伍“天山雪豹”在选拔、培养上均明确提出少数民族比例。

Bayi Iron & Steel conducted the "ethnic unity as a family" and ethnic unity fellowship activities in an institutionalized, normalized and long-term manner. In 2021, a total of 21,769 person-times participated in the visit and exchange activities of "ethnic unity as a family", and 5,712 ethnic unity fellowship activities were organized with 57,626 participants. Meanwhile, Bayi Iron & Steel paid attention to the training and selection of ethnic minority backbone and management personnel, for example, it proposed the ethnic minority proportion in the selection and training of the outstanding young management personnel pool "Tianshan Eagle" and middle-level manager reserve team "Tianshan Snow Leopard".



2021年4月，八钢公司炼铁厂荣获“自治区民族团结进步示范企业”称号。

In April 2021, Steel Mill of Bayi Iron & Steel won the title of "Autonomous Region Ethnic Unity and Progress Demonstration Enterprise".

太钢集团充分尊重少数民族职工的宗教信仰，在伊斯兰教传统节日“开斋节”当天下发通知，为信仰伊斯兰教的少数民族职工提供一天休假安排。

TISCO fully respects the religious beliefs of ethnic minority employees and issues notice on the traditional Islamic festival Lesser Bairam to provide a day off arrangement for the Muslim ethnic minority employees.



武钢集团开展“民族团结一家亲”活动。

WISCO launched the activity of "ethnic unity as a family".



宝武环科组织“浓情冬至 共话民族情”活动。

Baowu Environment and Resource Technology organized the "Deep Feeling in Winter Solstice to Present Ethnic Affection" activity.

助力员工发展

Support employee development

人才培养体系 Personnel cultivation system

中国宝武坚持人才引领发展战略，秉承“人人皆是人才、人人皆可成才”的人才培养理念，强化教育培训，建立经营管理、技术业务、技能操作、国际化人才、高潜人才等五支人才队伍培养体系；注重实践历练，搭建管理人员交流任职（见习）和员工跨单位交流实习平台；借助国家重点人才项目平台，遴选、推荐、培养各类优秀人才。

Insisting on the personnel-led development strategy and adhering to the personnel cultivation concept of "everyone is a talent and everyone can become a talent", we strengthened education and training to establish five personnel teams cultivation system, including operation and management, technical business, skill operation, international talent and high potential talent. Moreover, we paid attention to practical experience and built platforms for managers to exchange positions (internship) and for cross-unit employees to exchange and practice. In addition, with the help of the national key talent project platform, we screen, recommend and cultivate various outstanding personnel.

职业发展通道 Career promotion channel

中国宝武为员工提供钢铁及相关制造业、服务业、金融业、园区业等多种职业发展方向，延伸至包括IT、证券基金、互联网电商、不动产投资、国际贸易等多元化、多平台的广阔事业发展机会。

We provided our employees with various career development directions, such as steel and related manufacturing, service industries, financial industries and industrial parks, and further provided other diversified, multi-platform career development opportunities including IT, securities funds, Internet e-commerce, real estate investment and international trade.

公司为员工提供技术业务与管理序列的双通道发展机制。公司很早就为技术人才设立“首席师”制度，鼓励技术人员在专业道路上不断发展；实施核心人才培养工程，打造“三层三型”人才梯队（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），同时建立技术业务与管理序列的流动机制，保证员工“H”型的职业发展。

We provided our employees with a dual-channel development mechanism of technical business and management sequence, established a “Chief Engineer” system, and encouraged technical personnel to continue their development on the professional path. Moreover, we implemented core talent cultivation projects to create a “three-layer and three-type” system for talent (corporate strategic research-oriented bayou scientists, professional chief/experts of the subsidiaries, and leading technical staff at the grass-roots level), while establishing a flowing mechanism for technical business and management sequence to ensure the “H-shaped” career development for employees.

此外，公司还为员工提供更多自我实现的可能。员工可以从事援藏、援青、援滇的干部挂职工作，在不同的环境下砥砺成长；参与“博士生服务团”，赴企业担任重要岗位；赴政府机构挂职锻炼，或是岗位调动；远赴海外在国际组织中担任职务，开拓海外视野，在国际化舞台上历练成长。

In addition, we also provided employees with more possibilities for self-actualization. For example, our employees might engage in the temporary cadres of aid Tibet, Qinghai and Yunnan to help them grow up in different environments, might participate in “Service Group with Doctoral students” to take important positions in enterprises, might go to government agencies for temporary training or post transfer, and might go abroad to take positions in international organizations, expanding overseas horizons and experiencing and performing on the international stage.

员工培训体系 Employee training system

中国宝武积极推进员工教育培训工作科学化、制度化、规范化，制定《中国宝武科学家选拔聘用和管理实施意见（试行）》《中国宝武职业技能等级认定工作管理办法》等9个员工发展管理制度，加强专业工作指导，提升人才工作实效，培养造就高素质专业化人才队伍，支撑公司高质量发展。

We actively promoted scientization, institutionalization and standardization in employee education training. We formulated nine employee development management systems, including the *Implementation Opinions on Selection, Engagement and Management of China Baowu Scientists (Trial)* and the *Management Measures for Professional Skill Level Identification of China Baowu*, with the purpose of strengthening professional guidance, promoting personnel work efficiency, training high-quality professional talent team to support the high-quality development of the Company.



2.4 亿元

公司共投入职教费

We have invested RMB 240 million in vocational education

48%

同比增长

a year-on-year growth of 48%

2021年，公司开办全系列管理人员进阶班和族群班，选派管理者跨单位挂职锻炼和专业支撑；开展技术业务人员专题培训和产融、产研等跨业务复合型人才培养，绿色发展、智慧制造和专业化整合专项培训，新进大学生“三基赋能”行动；全面启动一线全员培训，开启“修学旅行”新模式。截至2021年底，公司共投入职教费2.4亿元，同比增长48%；全年人均119学时，同比增长17%。

In 2021, we held a whole series of advanced courses and ethnic courses for managers, and selected managers to attend cross-unit temporary training and professional support. Moreover, we conducted the special training for technical personnel, the cross-business interdisciplinary personnel training for the integration of industry and finance or industry and research, the special training for green development, intelligent manufacturing and professional integration, and the “three basic empowerments” campaign for newly recruited university/college students. In addition, we comprehensively launched the training for all front-line employees and opened the new mode of “travel for study”. As of the end of 2021, we have invested RMB 240 million in vocational education, with a year-on-year growth of 48%, and the annual average per capita was 119 class hours, with a year-on-year growth of 17%.

2021年7月16日，中国宝武列入国家首批产教融合型企业名单，深化产教融合、校企合作，形成“双元”育人特色。

On July 16, 2021, China Baowu was listed in the national first batch of enterprises integrating industry and education. We deepened the integration of industry and education as well as school-enterprise cooperation to form the “dual” educational characteristics.



2021年7月23日，为期5年、覆盖所有一线员工的“中国宝武一线员工全员培训”在上海正式启动。

On July 23, 2021, “China Baowu Front-line Employees Training” was officially launched in Shanghai, covering all front-line employees for five years.

落实安全生产

Ensure safety production

安全生产管理体系

Safety production management system

中国宝武坚持“生命至上”“违章就是犯罪”“隐患就是事故”理念，一贯高度重视安全工作。2021年1月4日，新年的第一个工作日，公司召开年度安全生产工作会，与所有子公司、职能及业务部门签订《2021年度安全生产与消防工作责任书》，明确年度安全生产工作职责和工作目标，下达安全生产控制指标，强化责任落实，全面建立安全履职清单。

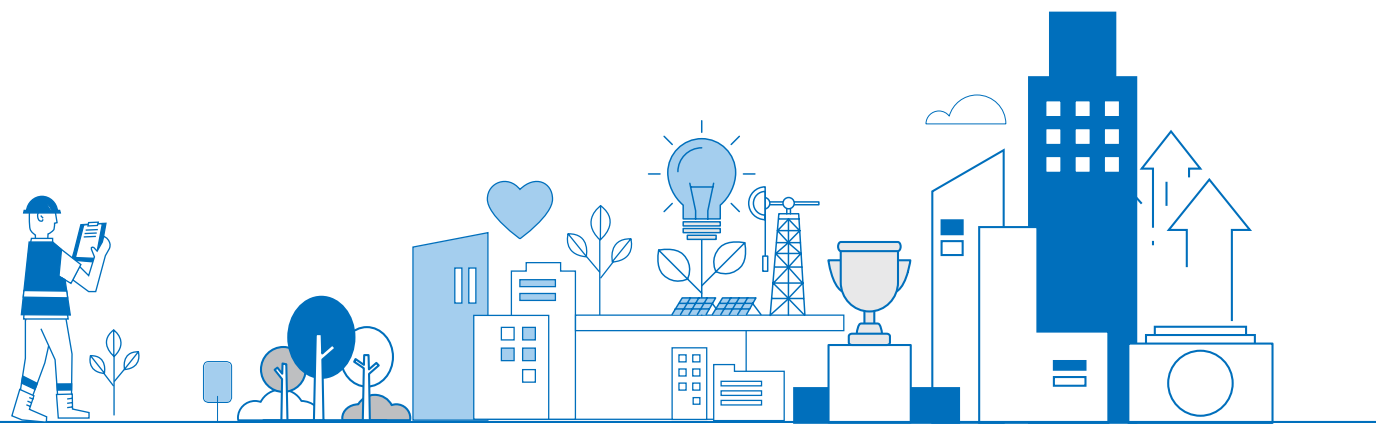
Insisting on the concept of “life first”, “violation is a crime” and “hidden danger is an accident”, we always attach great importance to safety production. On January 4, 2021, the first working day of the New Year, we held the annual safety production work meeting, and signed the 2021 Letter of Responsibilities for Safety Production and Fire Prevention with all subsidiaries, functions and business departments, defining the annual safety production work responsibilities and work targets, issuing safety production control indicators, strengthening the implementation of responsibilities, and establishing overall safety performance list.

安全应急管理机制

Safety emergency management mechanism

中国宝武秉承预防为主、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，规范突发事件应对活动，控制、减轻和消除突发事件引起的严重社会危害，保护员工和人民生命财产安全。2021年，公司组织员工积极参与应急管理部、司法部、全国总工会和全国普法办联合开展的“第三届全国应急管理普法知识竞赛”，深入学习《安全生产法》《突发事件应对法》《生产安全事故应急条例》等法律法规，增强法治观念，推进依法应急。

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, standardize emergency response activities, control, mitigate and eliminate serious social hazards caused by emergencies and protect the safety of employees and people's lives and property. In 2021, we have organized our employees to actively participate in the “3rd National Emergency Management Dissemination Knowledge Competition” jointly held by the Ministry of Emergency Management, the Ministry of Justice, the All-China Federation of Trade Union and the National Law Dissemination Office, and our employees have deeply learned the laws and regulations, including the *Production Safety Law*, the *Emergency Response Law* and the *Emergency Regulations for Production Safety Accidents*, enhancing their awareness of the rule of law and promoting the emergency response in accordance with the laws.



安全教育与培训

Safety education and training

2021年，中国宝武编制并组织实施全员分层分类安全教育培训实施方案，组织新任职班组长、安全生产责任者和管理者、建设工程项目和职业卫生等安全管理人员网络培训，共计培训18440人，通过考试18163人，合格率超过98%；创新优化现场员工培训方式，开发运用体感实训、VR（虚拟现实）事故体验感知训练等科技手段丰富安全培训，建成规范正向教育培训和创新逆向体验训练结合互补的方式方法，提升安全培训效果；开展新《安全生产法》宣贯培训，共计培训84720人，考试合格69624人。

In 2021, we prepared and organized the implementation of hierarchical and classified safety education and training program for all employees, and organized online training for safety management personnel, including newly-appointed job foremen, responsible persons and managers of safety production, construction projects and occupational health, in which, 18,440 people were trained in total, 18,163 people passed the examination, with a pass rate of more than 98%. Moreover, we innovated and optimized the on-site training methods for employees, and developed and utilized somatosensory training, VR (virtual reality) accident experience perception training and other scientific and technological means to enrich the safety training, as a result, we have built complementary ways and methods combining standardized forward education training and innovative reverse experience training to improve effects of safety training. In addition, we conducted the publicity, implementation and training of the *Safety Production Law*, in which, a total of 84,720 people were trained and 69,624 passed the examination.

隐患排查与专项整治

Hidden danger investigation and special rectification



开展钢铁企业安全生产执法检查重点事项专项督查工作，共发现重大事故隐患116项（含自查61项），截至2021年底，各单位已全部完成整改。

We launched a special supervision on key items of safety production enforcement inspection in steel enterprises, and a total of 116 major hidden danger of accidents were found (including 61 self-inspections). As of the end of 2021, all units have completed the rectification thereof.



开展消防安全专项整治，共计发现隐患问题5617项，截至2021年底已整改5552项，整改完成率98.8%，其余按计划整改中。

We conducted special rectification on fire prevention safety, and a total of 5,617 hidden dangers were found. As of the end of 2021, 5,552 items have been rectified, with 98.8% rectification completion rate, and the rest were under rectification as planned.



开展新进单位皮带机专项整治工作，全年共排查隐患数量7154项，已完成6934项，整改完成率96.9%，220项年内未整改项已制定整改措施并积极推进。

We launched a special rectification on belt conveyors of the newly-merged units, and a total of 7,154 hidden dangers were investigated in 2021, in which, 6,934 have been rectified, with 96.9% rectification completion rate, and the rectification measures for 220 unrectified items within 2021 have been formulated and under positive progress.



开展协力管理变革和检修施工安全专项行动，在全员参与、深度诊断、精准施策、全面整改上下功夫，全力遏制检修施工事故多发势头。

We launched a special action on joint management reform and maintenance construction safety, and made efforts to full participation, in-depth diagnosis, precise measures and comprehensive rectification to prevent the frequent occurrence trend of maintenance construction accidents.

营造幸福生活 Create a happy life

逐梦星辰大海，扬帆伟大征程。2021年12月23日，是中国宝武首个“公司日”。作为企业文化建设的重要载体，“公司日”以强化“同一个宝武”共识为鲜明主旨，不断夯实全体宝武人的向心力、凝聚力、战斗力，培育构筑起向着世界一流伟大企业进军的磅礴伟力。为了迎接首个“公司日”，中国宝武各单位以形式多样、精彩纷呈的活动在祖国各地、大江南北共同唱响“同一个宝武，同一个梦想”。

Pursue a grand goal and sail a great journey. December 23, 2021, was the first “Company Day” in China Baowu. As an important carrier of corporate culture construction, “Company Day” takes the strengthening of the consensus of “One Shared Baowu” as its distinct theme to constantly enhance the centripetal force, cohesion and fighting capacity of all Baowu people, and cultivates and builds a majestic force marching towards the world-class great enterprise. In order to welcome the first “Company Day”, various units of China Baowu sang “One Baowu, One Dream” together in diversified and wonderful activities across the country.



“ 集团公司设立‘公司日’，就是想给全体干部员工创造一个‘家’的氛围，营造更加温馨的气氛，进一步增强对公司的认同感、归属感、荣誉感、获得感。”

The establishment of ‘Company Day’ by the Group is to create a ‘home’ mood for all cadres and employees, to create a warmer atmosphere, and to further enhance the sense of identity, belonging, honor and gain of the Company.



——中国宝武党委书记、董事长 陈德荣
-- Chen Derong, Secretary of the Party Committee and Chairman of China Baowu

困难员工帮扶 Assistance for employees in difficulties

2021年，公司共开展各类帮困慰问111451人次，投入总金额6132.22万元。其中，日常帮困送温暖105244人次，帮困送温暖金额4505.11万元；助学帮困1826人次，帮困金额327.45万元；医疗帮困4381人次，帮困金额1299.66万元。

In 2021, we conducted various assistance and visits to 111,451 people with an investment of RMB 61,322,200 in total, in which, the daily assistance and support were provided to 105,244 people in the sum of RMB 45,051,100, the assistance and study support were given to 1,826 people in the sum of RMB 3,274,500, and the medical assistance was provided to 4,381 people in the sum of RMB 12,996,600.

平衡工作生活 Balance work and life

公司举办系列员工文体活动，增进交流、促进融合、推动发展，全面提升员工的参与感、获得感、认同感、幸福感。举办“庆国庆”游泳比赛、半马跑等各类文体赛事活动10项；结合职工对文体培训项目的需求和兴趣点，组织健身操、茶文化等职工文体协会6个，举办职工文体培训班9个，其中茶艺、太极拳、女职工素描、民族舞为首次开展的培训项目；组织18218名在沪职工观看第十届中国花卉博览会，促进职工身心健康。



18218 名

组织在沪职工观看第十届中国花卉博览会

18,218 employees in Shanghai were organized to visit the 10th China Flower Expo

We held a series of cultural and sports activities for employees to enhance communication, promote integration and boost development, comprehensively improving employees' sense of participation, gain, identity and happiness. We held 10 cultural and sports activities, including the “National Day Celebration” swimming competition and the half marathon. Moreover, according to the demands and interests on cultural and sports items of the employees, we organized 6 cultural and sports associations for employees, including fitness exercises and tea culture, and we also held 9 cultural and sports training courses for employees, in which, tea art, Tai Chi, female employee sketch and folk dance were the training courses launched for the first time. In addition, 18,218 employees in Shanghai were organized to visit the 10th China Flower Expo to promote their physical and psychological health.



中国宝武举办“庆中秋·迎国庆”职工游泳比赛。

China Baowu held the employee swimming competition to celebrate the Mid-Autumn Festival and welcome National Day.



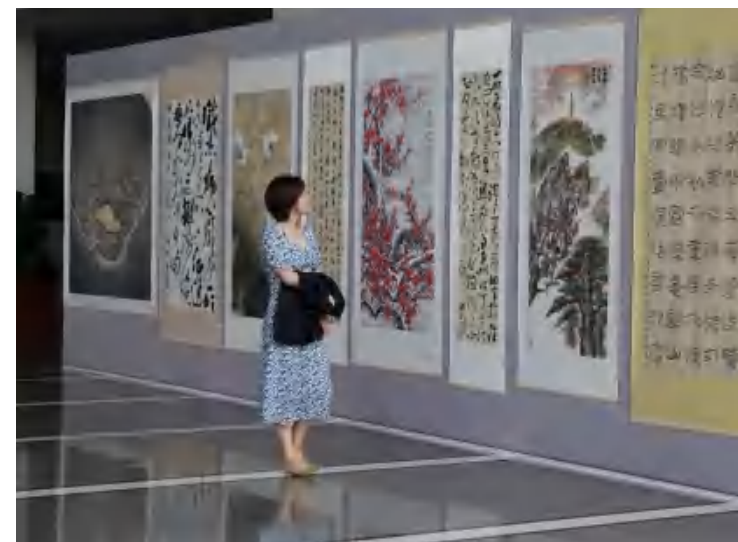
中国宝武举办“庆国庆”半马跑活动。
China Baowu held the “National Day Celebration” half marathon race.



重庆钢铁举办“铸梦”员工篮球比赛。
Chongqing Iron and Steel held a “Cast Dream” employee basketball game.



韶钢松山举办大型社交联谊活动。
Shaoguan Iron and Steel Songshan held large-scale social and fellowship activity.



马钢股份开展书画摄影展活动。
Masteel conducted the exhibitions of painting and calligraphy photography.



欧冶云商开展“揽月中秋”主题游园会。
Ouyeel conducted the garden party of “Watch Moon in Mid-Autumn Festival”.



生态圈的引领者

THE LEADER OF ECOSYSTEM

中国宝武作为骨干央企，担负着引领中国经济高质量发展的历史使命和打造“大国重器”“镇国之宝”的使命担当。面对百年未有之大变局，中国宝武以“共建产业生态圈推动人类文明进步”为使命，积极推进产业协同、行业重组、产城融合，与客户、供应商等生态圈伙伴协同共建蓬勃发展的产业生态圈，共创共享价值。

As a backbone central SOE, China Baowu undertakes the historical mission of leading the high-quality development of China's economy as well as the mission and responsibility of creating a "national pillar" and "national gem". Under the circumstance of undergoing the greatest changes in a century, China Baowu takes the mission of "co-build industrial ecosystem to promote human civilization progress" to actively promote industrial coordination, industrial restructuring and industry-city integration, and we collaborate with customers, suppliers and other ecosystem partners to build a booming industrial ecosystem and create shared value together.

“一基五元” 协同共进

Coordinated Development of "One Basis and Five Industries"

钢铁产业

Steel manufacturing industry

大力推进专业化、区域化、平台化公司建设，钢铁平台公司跨基地整合融合成效显著。宝钢股份继续保持行业第一地位不动摇；中南钢铁品牌运营和多基地协同优势凸显；太钢集团、马钢集团经营利润首次过百亿；八钢公司多项技术经济指标创历史最好水平。

We vigorously promoted corporate construction in a professional, regional and platform-based manner, and our steel platform companies have achieved remarkable results in cross-base integration. Baosteel continued to maintain the first position in the industry steadily, and the brand operation and multi-base synergy advantages of China South Steel were highlighted. In addition, the operating profits of TISCO and Magang Group have exceeded RMB 10 billion for the first time, and several technical and economic indicators of Bayi Iron & Steel have hit the best level in history.

新材料产业

New material industry

聚焦先进材料，镁、铝、钛、碳纤维等战略性产业取得新突破。其中，宝武碳业焦油加工规模全球第一；宝钢金属全球最大的镁基轻合金项目开工建设；宝钢包装两片罐销量连续六年领跑国内同行；宝武特冶镍基合金市占率国内第一。

Breakthroughs have been made in strategic industries such as magnesium, aluminium, titanium and carbon fiber by focusing on advanced materials, in which, the tar processing scale of Baowu Carbon has ranked the first in the world, the largest magnesium-based light-alloy project in the world of Baosteel Metal has started construction, the sales of two-pieced can of Baosteel Packaging have taken the leading position against the domestic counterparts for six consecutive years, and the market share of nickel-base alloy of Baowu Special Metallurgy has ranked the first in China.

智慧服务业

Intelligent service industry

积极推进“三跨融合”、智慧服务平台建设和业务覆盖，中国宝武工业互联网平台入选工信部十五家双跨平台；宝信软件“卡脖子”关键技术攻关取得突破，自主研发大型PLC产品。

We actively promoted the "Three-cross Integration" and the construction and business coverage of intelligent service platforms. China Baowu Industrial Internet Platform was selected by the Ministry of Industry and Information Technology as one of 15 dual-cross platforms, and breakthroughs were made by Baosight in "being hit in the throat" key technology to independently research and develop the large PLC products.

资源环境业

Resource and environment industry

大力推动新产业布局，加快大原料保障体系建设，推进矿产资源、环保及清洁能源业务整合以及金属资源循环利用。

We vigorously promoted the layout of new industries and accelerated the construction of the guarantee system for large raw materials. We also promoted the integration of mineral resources, environmental protection and clean energy businesses as well as the recovery and utilization of metal resources.

产业园区业

Industrial park industry

进一步聚焦存量土地盘活，提升项目建设和产业导入能力，制定现代产业园规划建设方案。宝地资产深化吴淞地块转型实施路径，一批重点项目顺利开工；武钢集团产业园区业转型发展明显提速。

We further focused on revitalizing the stock land to improve the capacity of project construction and industrial introduction and formulated the proposal for the planning and construction of modern industrial parks. For example, Baoland Properties deepened the transformation implementation path of Wusong plot, and several key projects commenced smoothly. In addition, the transformation and development of the WISCO industrial park industry accelerated significantly.

产业金融业

Industrial financial industry

积极服务主业发展、助力产业升级，金融业务布局结构显著优化，守住不发生系统风险底线。华宝投资下属欧冶金服入围国家区块链创新试点名单；华宝基金公募基金资产规模创历史新高。

We actively served the development of the main business to help with industrial upgrading, and significantly optimized the distribution and structure of financial services to ensure that there were no systemic risks. Ouyeel Finance under Hwabao Investment was selected into the national blockchain innovation pilot lists, and the assets scale of the publicly offered funds under Hwabao Fund reached a record high in history.

专业化整合蹄疾步稳

Professional integration is fast and steady

开展专业化整合是中国宝武实施从联合到整合再到融合、发挥规模效益和协同效益、支撑“一基五元”产业发展、加快实现战略发展目标的必然选择。中国宝武在公司总部成立整合办，统筹推进专业化整合。各专业平台公司根据“专业化整合、平台化运营、生态化协同、市场化发展”要求，结合自身战略定位，按照“一企一业、一业一企”加大内整外拓力度，加快培育专业化能力；大力推进重钢集团、昆钢公司、太钢集团多元业务专业化整合，成立22个整合项目组，开展行动学习，制定实施方案，编制整合百日计划，累计实施1227项整合任务和105个协同效益项目，产生协同效益12.68亿元；实施研发业务专业化整合，成立中央研究院太钢技术中心和不锈钢研发中心；加强文化融合，通过挂职交流、集中培训等手段，促进新进单元员工对中国宝武管理理念、文化、管理体系等的认知和认同。

Professional integration was the inevitable choice for China Baowu to implement from union to integration and then to fusion, to play the scale merit and synergistic benefits, to support the industrial development of “One Basis and Five Industries”, and to accelerate the realization of strategic development goals. The Integration Office was established in our Headquarters to coordinate and promote professional integration. According to the requirements of “professional integration, platform operation, ecological coordination and market-oriented development” and their strategic positioning, each professional platform company strengthened the internal integration and external expansion by “one enterprise for one industry, one business for one enterprise”, accelerating the cultivation of professional ability. Moreover, we vigorously promoted the professional integration of diversified businesses of Chongqing Iron and Steel, KISC and TISCO. We established 22 integration project teams to conduct action learning, formulate implementation proposals and prepare 100-day integration plans. We implemented a total of 1,227 integration tasks and 105 synergy benefit projects, generating synergy benefits of RMB 1.268 billion. Furthermore, we implemented the professional integration of R&D business and established the TISCO Technical Center and Stainless Steel R&D Center under Central Research Institute. In addition, we strengthened the cultural integration and promoted the perception and identity of employees in newly-merged units onto the management concept, culture and management system of China Baowu through temporary post exchanges and centralized training and other means.

行业兼并重组

Industrial mergers and reorganizations

兼并重组是中国宝武履行产业责任、承担产业使命，推动钢铁行业供给侧结构性改革的重要举措。2021年中国宝武按照双“弯弓搭箭”的产业布局战略,重点瞄准绿色能源资源丰富的西北地区开展并购寻源工作，旗下八钢公司顺利实现对新疆地区两家民营钢企的并购，打破兼并重组局限于国有钢企之间的僵局；与山东省人民政府签订筹划重组山钢集团的协议，进一步完善沿江沿海布局。公司以“同一个宝武、同一个文化”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、满意度提升，认同感增强。

The merger and reorganization is an important measure for China Baowu to fulfill its industrial responsibilities, undertake its industrial mission and promote the supply-side structural reform of the steel industry. In 2021, according to the industrial layout strategy of dual “bow and arrow”, we focused on Northwest China (which is rich in green energy resources) to seek the subject of merger and acquisition, and our Bayi Iron & Steel successfully achieved the merger and acquisition of two private steel enterprises in Xinjiang, breaking the deadlock of merger and reorganization confined to state-owned steel enterprises. Moreover, in July, we signed an agreement with the People's Government of Shandong Province on the planned reorganization of Shandong Iron & Steel, further improving the layout of riverside and coastal areas. In addition, with the goal of “One Baowu, One Culture”, 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 have been greatly improved, and employees' sense of gain, satisfaction and identity have been enhanced.

产城融合发展

Integrated development of industry and city

在各钢铁基地进行现代产业园建设可以节约利用土地，为钢铁提供更好的生存空间，是中国宝武创新性探索城市钢厂产城融合的有力尝试，也是践行厂区、园区、城区发展战略的重要举措。2021年，宝山、武汉、韶钢三个现代产业园均已完成园区整体策划方案、首发项目开工、首批入园企业签约、园区挂牌。此外，坚持“房子是用来住的、不是用来炒”的定位，充分利用存量土地和房屋资源，公司大力开发长租公寓，协助当地政府解决青年人才居住困难。截至2021年底，园区业中心长租公寓管理规模约7000套。

The construction of modern industrial parks in various steel bases can save the use of land and provide better living space for the steel industry, which is a powerful attempt of China Baowu to innovatively explore the integration of industry and city in urban steel mills, and also an important measure to practice the development strategy of factory, park and urban area. In 2021, as for Baoshan, Wuhan and Shaoguan Iron and Steel Songshan modern industrial parks, we have completed the overall park planning proposals, commenced the first batch of projects, signed contracts with the first batch of enterprises and launched them. In addition, we held the orientation of “housing is for living in, not for speculation”, so we made full use of the stock land and housing resources, for example, we vigorously developed long-term rental apartments to assist the local government in solving the housing difficulties of young personnel. As of the end of 2021, the management scale of long-term rental apartments in the industrial park has been about 7,000.



案例 | 宝武环科发挥专业优势，助力宝山区危废物质集中收集管理

CASE | Baowu Environment and Resource Technology played its professional advantages to assist centralized collection and management of hazardous waste materials in Baoshan District

金属加工、机械加工等工业生产通常会产生一定量的危险废物，一些科研院所和大学的实验室也会产生危险废物，且处置难度大、专业要求高，如果分散处置还要面对很高的成本。

Metal processing, mechanical processing and other industrial production usually generate a certain amount of hazardous waste, and such hazardous waste will also be generated in the laboratories of some scientific research institutes and universities. The disposal is difficult together with high professional requirements, and the dispersed disposal will further face a high cost.

宝武环科发挥自身危废资源综合利用专业优势，不以营利为目的，在宝山区建立上海市唯一一家区级危险废物管理小微平台“宝山区小微企业危险废物集中收集平台”。截至2021年底，该平台已实现对宝山区近90%产废10吨以下企业的危废专业化管理和服务，每年收集、管理、处置的危险废物达500多吨，有效解决困扰宝山区的危废处置难题。

Taking advantage of its professional advantages in the comprehensive utilization of hazardous waste resources, Baowu Environment and Resource Technology has established an unprofitable “Hazardous Waste Centralized Collection Platform for Small and Micro Enterprises in Baoshan District”, which is the only district-level small and micro platform of hazardous waste management in Shanghai. As of the end of 2021, the Platform has realized the professional management and services of hazardous waste for about 90% of enterprises in Baoshan District that generate less than 10 tons of waste, and it can collect, manage and dispose of more than 500 tons of hazardous waste every year, effectively solving the difficult problems of hazardous waste disposal in Baoshan District.



案例 | 互联宝地创新实践，助力中国宝武及杨浦区转型升级、城市更新

CASE | The innovative practice of BLink assists the transformation, upgrade and urban renewal of China Baowu and Yangpu District

互联宝地杨浦园区采用现代建筑与老工业厂房相融合的设计理念，为创新企业打造灵活的产业办公空间。项目一期已成功吸引一大批在线新经济领域知名企业入驻，并吸引福特中国、复星集团等世界500强企业落地。2022年1月，在杨浦区科委的支持指导下，园区一期D3栋与二期四栋写字楼成功认定杨浦区人工智能与大数据基地，将进一步聚焦打造人工智能产业聚集高地。

Yangpu Industrial Park of BLink has adopted the design concept of integrating modern buildings with old industrial factories to create flexible industrial office space for the innovative enterprises. Phase I of this Project has successfully attracted a large number of well-known enterprises in the field of the online new economy to settle in, and it also has attracted Ford China, Fosun Group and other Fortune Top 500 enterprises to settle in. In January 2022, under the support and guidance of the Science and Technology Commission of Yangpu District, the Building D3 of Phase I and four office buildings of Phase II of this Park were successfully identified as the Artificial Intelligence and Big Data Base of Yangpu District, which will further focus on building the artificial intelligence industry agglomeration highland.



● 互联宝地杨浦园
Yangpu Park of BLink

提供品质服务

Provide quality services

产品 / 服务质量管理

Product/service
quality management

质量是企业赖以生存的根本。中国宝武重视产品及服务质量管理，大力推动旗下各子公司建立完善的质量管理体系，让质量成为企业发展的“金钥匙”。

Quality is the basis for the survival of enterprises. We attach great importance to the quality management of products and services, and vigorously promote our subsidiaries to establish a sound quality management system, making quality become the “golden key” for corporate development.

宝钢股份以生产全过程的整体优化为目标，实现全流程质量把控的跨工序质量一贯管理技术，各生产基地全面通过ISO9001质量管理体系认证和IATF 16949汽车行业质量管理体系认证。

Baosteel takes the overall optimization of the whole production process as the goal to achieve the cross-procedure consistent quality management technology of the whole process quality control, and each of its production bases has passed the certification of ISO9001 quality management system and the certification of IATF 16949 automotive industry quality management system.

宝武资源立足高品质要求，发布矿产品质量标准体系，及时掌握、跟踪境内矿山生产过程中产品质量波动情况，开展月度生产效果评价，形成境内矿山产品质量闭环管控模式。

Based on the requirements of high quality, Baowu Resources issued the mineral product quality standard system. It timely grasped and tracked the product quality fluctuation in the production process of domestic mines, and conducted monthly production effect evaluation, forming a closed-loop management and control mode product quality of domestic mines.

太钢集团建立质量管理体系，编制质量管理手册，围绕生产、营销、研发、检验、采购、人力资源等关键过程制定32个质量管理体系制度办法。

TISCO established a quality management system, prepared a quality management manual, and formulated and established 32 quality management systems and measures around the key processes, such as production, marketing, R&D, inspection, procurement and human resources.

八钢公司严格按照ISO9001质量管理体系的要求来保证产品的内在质量和品牌形象，多次被评为“全国质量管理先进单位”和“全国实施用户满意工程先进单位”。

Bayi Iron & Steel ensured the internal quality and brand image of its products in strict accordance with the requirements of the ISO9001 quality management system, and it has been repeatedly awarded as the “National Advanced Unit in Quality Management” and the “National Advanced Unit in Implementing Customer Satisfaction Engineering”.

保障客户权益 Protect rights and interests of customers

客户是企业生存和发展的动力源泉，是企业的重要资源。中国宝武在积极努力为客户创造价值的同时，遵循客户至上服务理念，全面保障客户权益。

Customer is the power source for the survival and development of enterprises, and also an important resource for enterprises. While actively striving to create value for customers, we follow the service concept of customer first to fully protect the rights and interests of customers.

华宝证券制定《金融营销宣传行为管理办法》，设置检测岗位，检测金融营销宣传行为，及时发现涉嫌违规行为。

Hwabao Securities formulated the *Management Measures for Financial Marketing and Publicity Conduct* and set up detection posts to detect financial marketing and publicity conduct to detect suspected violations in time.

宝地资产建立主动售后服务体系，开展大客户深度访谈，积极回应客户投诉。

Baoland Properties established an active after-sales service system to conduct in-depth interviews with key customers, and actively respond to customer complaints.

宝武资源应用“多组织经营管理系统”，新客户各项信息需在业务发生前先完整录入系统，并设置系统查看权限，确保客户信息安全得到有效保障。

Baowu Resource applied the "multi-organization operation and management system". All information of the new customer should be entered into the system completely before the business occurs, and the system access authority should be set to ensure that the customer information security is effectively protected.

宝信软件客服中心本着“品质在我手中、客户在我心中”的服务宗旨，为客户提供7*24小时的客户一站式报修服务，并对事件全生命周期进行流程跟踪。

Baosight Customer Service Centre held the service tenet of "quality in my hands, customers in my heart", provided customers with a 7*24 one-stop request for repair service, and tracked the process of the whole life cycle of the event.

引导供应商发展 Guide the development of suppliers

中国宝武秉承诚信经营、公平竞争和公平贸易原则，落实集中采购、公开采购和阳光采购，完善供应商管理相关制度，在各系统内规范执行；及时建立供应商评价系统，推进管理信息化；开展供应商年度评价，发布年度合格供应商清单；实施供应商信息线下线上核对，确保管理效果；强化供应商社会责任管理，采购和使用环保原材料、负责任标签商品，着力建设绿色供应链和负责任供应链。

Adhering to the principles of integrity management, fair competition and fair trade, we have implemented centralized procurement, open procurement and sunshine procurement, and improved the relevant supplier management systems to standardize the implementation in each system. Moreover, we have established supplier evaluation system in time to promote IT-based management and conducted an annual evaluation of suppliers to issue the annual list of qualified suppliers. Furthermore, we have implemented supplier information offline and online verification to ensure the management effect, and strengthened the management of suppliers' social responsibility. In addition, we have procured and used environment-friendly raw materials and responsibly labeled goods and strived to build green and responsible supply chains.



2021年10月26日，中国宝武举行首届供应商大会暨绿色智慧供应链论坛。论坛旨在与钢铁生态圈供应链合作伙伴分享前沿技术和经验，启迪思想、涤荡智慧，共享供应链发展成果，共探供应链数字化生态之道。

On October 26, 2021, China Baowu held the 1st Supplier Conference & Green and Intelligent Supply Chain Forum. The purpose of this Forum was to share cutting-edge technologies and experiences with supply chain partners in the iron & steel ecosystem, enlighten their thoughts and wisdom, share the development achievements of the supply chain, and explore the path of digital supply chain ecology.



- 2021年10月26日，中国宝武全力打造的工业品供应链生态“欧贝生态平台”完成全新升级，正式推出的2.0版欧贝平台将构建“全场景、全品类、全流程、全链路、全数据、全透明”的六全平台，全面实现商流、物流、资金流、信息流的“四流耦合”。
- On October 26, 2021, the industrial products supply chain “OBEI Ecologic Platform” created by China Baowu was fully upgraded, and the officially launched version 2.0 OBEI Platform will build six full platforms, including “full scene, full category, full process, full link, full data and full transparency”, completely realizing the “four flow coupling” of business flow, material flow, cash flow, information flow.



148亿元

本地设备资材采购金额达

The procurement amount of local equipment and materials has reached RMB 14.8 billion

47%

采购比例为

accounting for 47% procurement proportion

宝钢股份通过合作采购，不断赋能当地企业以及各类中小型企业，逐步形成产业集群效应，带动地方社区经济建设与发展。

2021年，宝山基地、梅钢公司、湛江钢铁、武钢有限四基地本地设备资材采购金额达148亿元，采购比例为47%；积极支持中小企业发展，定期跟踪各基地中小企业设备资材采购的实绩。

Baosteel constantly empowered local enterprises and various small and medium-sized enterprises via cooperative procurement to gradually form an industrial cluster effect and drive the economic construction and development of local communities. In 2021, the procurement amount of local equipment and materials for Baoshan Base, Meishan Iron and Steel, Zhanjiang Iron & Steel and WISCO has reached RMB 14.8 billion, accounting for 47% procurement proportion. We actively supported the development of small and medium-sized enterprises and regularly tracked the actual performance of equipment and materials procurement from small and medium-sized enterprises in each base.

太钢集团将社会责任理念全面导入采购全过程，建立供应商履行社会责任评价与监督管理体系，开展供应商社会责任审查，组织供应商在线培训，打造高质量供应链。

TISCO introduced the concept of social responsibility into the whole process of procurement and established an evaluation and supervision management system for supplier's fulfillment of social responsibility. It conducted a review on supplier social responsibility, and organized supplier online training to build a high-quality supply chain.

宝武资源制订《供方管理办法》，建立科学的供应商开发、监督、评估、管理的工作体系，与质量、道德、竞争力和可持续性标准一致的供应商保持长期合作，持续优化供应商队伍。

Baowu Resources formulated the *Management Measures for Suppliers* to establish a scientific system for supplier development, supervision, evaluation and management, and maintained long-term cooperation with suppliers that meet the criteria of quality, ethics, competitiveness and sustainability to constantly optimize the supplier teams.

欧冶云商积极落实中国宝武双碳工作总体安排，发挥产业互联网平台助力生态圈协同降碳作用，探索推进绿色供应链体系建设，为钢铁行业绿色发展注入生机。

Ouyeel actively implemented the overall arrangement of China Baowu on “Dual-Carbon” issues, and gave play to the role of the industrial Internet platform to facilitate the coordinated carbon reduction effect of the ecosystem. In addition, it explored and promoted the construction of green supply chain system, and injected vitality into the green development of the steel industry.

宝钢工程宝华招标不断优化统一招标业务平台建设，努力提升招标规范化能力，为助力钢铁生态圈高质量发展贡献力量。2021年，《阳光、协同、智慧、共享的统一招标业务平台构建管理》项目获上海市企业管理现代化创新成果二等奖。

Baohua Tendering under Baosteel Engineering constantly optimized the construction of a unified tendering business platform and strived to improve the tendering standardization ability to contribute to the high-quality development of the iron & steel ecosphere. In 2021, the project “Management on Construction of Sunshine, Synergy, Intelligence and Sharing Unified Tendering Business Platform” has won the second prize in the Shanghai Enterprise Management Modernization Innovation Achievement.

注：宝钢股份宝山基地、梅钢公司、湛江钢铁、武钢有限采购注册分别在上海市、广东省、江苏省和湖北省的供应商界定为本地企业；参照《中小企业划型标准规定》（工信部联企业〔2011〕300号），采用注册资金≤1000万元人民币的标准界定为中小企业供应商。

Note: If Baoshan Base of Baosteel, Meishan Iron and Steel, Zhanjiang Iron and Steel and WISCO procure from the suppliers respectively registered in Shanghai, Guangdong, Jiangsu and Hubei, these suppliers can be defined as local enterprises referring to the Regulations on Classification Standards for Small and Medium-sized Enterprises (LQY No.300 (2011) of the Ministry of Industry and Information Technology, the supplier with a registered capital less than RMB 10 million is defined as a small and medium-sized enterprise.



家国情怀的担当

ASSUME THE RESPONSIBILITIES OF A PATRIOTIC CENTRAL ENTERPRISE

企业是社会的细胞，社会是孕育企业成长的母体。中国宝武热心公益慈善事业，通过规范开展对外捐赠、运作企业基金会、打造系列品牌公益项目、组织志愿者活动，与社会保持良好的沟通与互动机制，真诚回报社会，做充满家国情怀的企业公民。

Enterprises are the cells of society, and society is the matrix that nurtures the growth of enterprises. China Baowu is actively involved in charity and philanthropy. We made external donations in a standard way, ran corporate foundations, built a series of brand public welfare projects, and organized volunteer activities. Through such meaningful activities, we could maintain a good communication and interaction mechanism with the society, give back to the society, and strive to be patriotic corporate citizens.

对外捐赠 Donations

2021年中国宝武全年对外捐赠共计39667万元，公司总部及下属子公司13家共实施150个对外捐赠项目，各项目均在预算获批额度内严格管理、规范实施。其中防汛救灾专项11010万元，宝钢教育基金专项5000万元，援青援藏、扶贫帮困19883万元，其他帮扶类项目1764万元，其他公益慈善、助学和改善社区环境等2010万元。

In 2021, China Baowu has donated a total of RMB 396.67 million, and our Headquarters and 13 subsidiaries have implemented 150 external donation projects, all of which were strictly managed and properly implemented within the approved budget, including RMB 110.1 million for flood control and disaster relief, RMB 50 million for Baosteel Education Fund, RMB 19.883 million for aid Qinghai and Tibet and poverty alleviation, RMB 17.64 million for other assistance projects, and RMB 20.1 million for other public welfare, charity, education assistance and community environment improvement.

企业基金会 Corporate Foundations

宝钢教育基金会是中国宝武支持教育事业、回报社会的一个重要平台，于2005年5月17日获民政部批准成立，旨在“奖掖优秀人才，力行尊师重教，推动产学合作，支持教育发展”。2021年，宝钢教育基金公益支出1102.52万元，96所高校的496名学生、270名教师获得宝钢教育奖。

Baosteel Education Foundation is an important platform for China Baowu to support education and return to society. Approved by the Ministry of Civil Affairs, Baosteel Education Foundation was established on May 17, 2005, with the aim of “rewarding outstanding talents, respecting teachers and valuing education, promoting industry-university cooperation and supporting education development”. In 2021, 496 students and 270 teachers from 96 colleges and universities won the Baosteel Education Award with public welfare expenditure in the amount of RMB 11,025,200.



- 扫描二维码观看《丹心赤诚三十载》宝钢教育奖三十年回顾宣传片。
Scan the QR code to watch the *Loyalty and Sincerity for 30 Years* -for review of 30 Years of Baosteel Education Award



- 2021年7月，宝钢教育基金会召开第三届理事会第三次全体会议。
In July 2021, Baosteel Education Foundation held the third plenary meeting of the 3rd Council Meeting.

社会公益 Social public welfare

“落其实思其树，饮其流怀其源”。中国宝武坚持服务国家建设和民族复兴，在应对自然灾害、事故灾难、公共卫生和社会安全等重大突发公共事件中发挥“顶梁柱”作用。同时，秉承“奉献、友爱、互助、进步”的志愿服务精神，鼓励和支持员工参与志愿服务活动。截至2021年底，公司下属各单位共成立青年志愿者组织169个，青年志愿者人数8319人。2021年，共组织志愿服务活动1489场，参与人次达9353人次，涉及乡村振兴、扶贫济困、公益环保等各类志愿服务活动。

“When eating fruits, one should think of the fruit trees; when drinking water, one should think of the source of the water”. We insist on serving national construction and rejuvenation and play a “pillar” role in responding to major public emergencies such as natural disasters, accidents and disasters, public health and social security. Meanwhile, adhering to the volunteer service spirit of “dedication, friendship, cooperation and progress”, we encouraged and supported our employees to participate in volunteer service activities. As of the end of 2021, 169 youth volunteer organizations have been established in our subordinate units, with 8,319 young volunteers. In 2021, we have organized 1,489 volunteer service activities involving rural revitalization, poverty alleviation, public welfare and environmental protection, with 9,353 participants.

- 马钢股份冷轧总厂职工王军捐献造血干细胞，谱写“再造生命”佳话。

Wang Jun, an employee of the Cold Rolling General Plant of Masteel, donated hematopoietic stem cells, writing a story of “regenerating life”.





- 欧冶云商打造钢铁生态圈专属“欧冶字库”并公开发布免费试用版。
Ouyeel created an exclusive “Ouyeel Font Library” for the iron & steel ecosphere and publicly released the free trial version.



- 太钢总医院开展“名医社区送健康”爱心义诊活动。
TISCO General Hospital conducted the free clinical treatment of “Famous Doctors Send Health to the Community”.



- 武钢资源矿山救护中队驰援河南救援抢险。
Mine Rescue Squadron of WISCO Resources rushed to rescue Henan.



- 宝武环科开展“庆百年 送书香”为社区送书办实事活动。
Baowu Environment and Resource Technology conducted “Send Books to Celebrate the 100th Anniversary” to do practical things for the community by sending books.



- 武汉耐材志愿者在下沉社区奥山滨江开展“学雷锋”活动。
Volunteers from Wuhan Refractory Materials conducted the activity of “Learning from Lei Feng” in Aoshan Binjiang, a sunken community.



- 中南钢铁青松志愿团队开展“情满中秋 携爱共享”扶残助残慰问活动。
The Qingsong Volunteer team of China South Steel conducted the “Full Mid-Autumn Festival with Love and Sharing” support and assistance activities for the disabled.



- 宝武水务鄂州分公司与贵园社区开展“共建公益花园”义务劳动活动。
Ezhou Branch of Baowu Water together with the Guiyuan Community conducted the voluntary labor activities of “Co-build Public Welfare Flower Nursery”.



国际化的新征程

THE NEW MISSION OF BECOMING INTERNATIONAL

中国宝武致力于成为全球钢铁及先进材料业引领者和具有全球竞争力的世界一流企业，国际化是必由之路，也是坚定不移推进的战略方向。在海外投资建设、生产经营特别是参与“一带一路”建设中，公司持续加强海外履责，聚焦经济价值、社会价值、环境价值的创造，重视海外社会责任管理和沟通，为建设持久和平、普遍安全、共同繁荣、开放包容、清洁美丽的世界作出应有的贡献。

China Baowu aims to become a leader in the global steel and advanced materials industry and a top-notch enterprise with global competitiveness. Becoming an international enterprise is an inevitable choice for us, and we will unswervingly press ahead towards this strategic direction. In overseas investment, construction, production and operation, especially in the “Belt and Road” construction, we continue to strengthen the fulfillment of responsibilities overseas, focus on creating economic, social and environmental value, and emphasize the management and communication in fulfilling social responsibilities overseas, to make due contributions to building an open, inclusive, clean and beautiful world with lasting peace, universal security and common prosperity.

创造价值 Create value



● 中钢国际工程总承包建设的首批大型钢结构抵玻仪式
Ceremony for the arrival of the first batch of large steel structures at Bolivia, in which, Sinosteel International Engineering served as the General Contractor

2021年11月，中钢国际工程总承包建设的玻利维亚穆通综合钢厂项目在苏亚雷斯港举行“首批大型钢结构抵玻仪式”。玻利维亚总统阿尔塞表示，打造玻利维亚穆通综合钢厂是满足人民热切愿望、实现国家工业化和现代化的美好梦想。

In November 2021, the “Ceremony for the arrival of the first batch of large steel structure at Bolivia” was held in Suarez port for Bolivia Mutong Comprehensive Steel Mill project constructed by the general contractor of Sinosteel International Engineering. Bolivian President Luis Arce said that building Bolivia Mutong Comprehensive Steel Mill was a beautiful dream to meet the ardent aspirations of the people and realize the country's industrialization and modernization.



● 马钢瓦顿工厂
MG-Valdunes factory

2021年，马钢集团6家境外全资子公司缴纳各项税费6900万元。其中，马钢瓦顿是法国当地较大的制造型企业，在瓦朗谢纳和敦刻尔克两处工厂共有雇员367人。

In 2021, the 6 wholly-owned overseas subsidiaries of Magang Group have paid various taxes and fees of RMB 69 million. Among them, MG-Valdunes is the largest local manufacturing enterprise in France, with a total of 367 employees in its two factories in Valenciennes and Dunkirk.

宝钢印度有限公司2021年创造工业产值4911万美元，实际缴纳境外税费357万美元，招聘当地员工72人，本土化雇佣率达到95%。宝钢印尼加工中心全年工业总产值达到4900万美元，本土化雇佣率为91%。2021年，两家公司合计缴纳各类税收659万美元。

In 2021, Baosteel India Co., Ltd. has created an industrial output value of USD 49.11 million, actually paid overseas taxes and fees of USD 3.57 million, recruited 72 local employees, and the localization employment rate has reached 95%. Baosteel Indonesia Processing Center has created an annual industrial output value of USD 49 million, and the localization employment rate has reached 91%. In 2021, these two companies have paid various taxes of USD 6.59 million in total.

宝武资源在印尼投资现代镍业镍矿矿山，促进印尼肯达里当地的劳动力就业，并且每年保证稳定及持续的当地赋税；在澳大利亚、利比里亚等矿产项目所在地，通过宝瑞吉项目、邦矿项目等为当地提供直接工作岗位，创造就业机会。

Baowu Resources invested in a modern nickel mine in Indonesia, promoting local employment in Kendari, Indonesia, and providing a stable and consistent local tax every year. In Australia, Liberia and other mining project sites, the Bao-Hi Ranges project and Bang Mine project have provided direct jobs to local people and offered employment opportunities.

宝钢包装越南宝钢制罐为越南当地提供超过400个工作岗位，并为地方税收贡献超千万美元。

Vietnam Can under Baosteel Packaging has provided over 400 jobs to local people, and contributed over USD 10 million to local tax revenue.



400个

为越南当地提供工作岗位超过

Provided over 400 jobs to local people in Vietnam

社会交融

Social interaction

- 2021年12月，超强台风“奥德特”过境菲律宾中南部地区，导致菲律宾326人死亡、58人失踪、661人受伤。中钢集团紧急联系采购大米、罐头等基本生活物资，保障当地居民的基本生活，帮助当地进行灾后重建。

In December 2021, the super typhoon Odette passed through the south-central Philippines, resulting in 326 people dead, 58 missing and 661 injured. Sinosteel urgently arranged the procurement of rice, canned goods and other necessities to ensure the basic livelihood of residents and help the local reconstruction after the disaster.

- 宝武资源下属利比里亚邦矿项目以中资企业商会名义向利国政府捐赠抗疫资金4000美元，向邦矿所在地邦镇政府捐赠防护服、大米、口罩、洗手液等用于当地防疫工作，每月向邦镇社区清扫队提供清洁工具或资金，定期利用公司的机械设备修复邦镇社区的道路，得到矿山周边民众、社区及当地政府的好评和认可。

Bang Mine project in Liberia under Baowu Resources donated COVID-19 prevention funds for USD 4,000 to the Liberian government in the name of the Chamber of Commerce of China-invested Enterprises and donated protective clothing, rice, masks, hand sanitizer, etc. to the government of Bang Town where the Bang Mine is located. Moreover, they monthly provided the community cleaning team of Bang Town with cleaning tools or funds, and regularly repaired the community roads of Bang Town with their machinery and equipment, receiving praise and recognition from the people, communities and local government around the Bang Mine.

- 宝钢包装越南宝钢制罐严格执行各项防疫措施，在当地政府和工业园区多次严格巡检、突击检查中受到肯定，防疫实践被当地电视台重点宣传报道，防控措施还被当地政府作为其他企业学习的样板。同时，为所在地政府募集价值2万美元以上的医疗物资，得到当地政府的肯定。

Vietnam Can under Baosteel Packaging strictly implemented the COVID-19 preventive measures and gained praise during strict tour inspection and surprise inspection conducted by the local government and Industrial Park. Their COVID-19 preventive practice was vigorously publicized and reported by a local TV stations, and the local government took their preventive measures as a model for other enterprises to learn from. Meanwhile, they collected medical supplies in the amount of more than USD 20,000 for the local government, receiving recognition from the local government.

守护生态

Protect the ecosystem

中钢国际玻利维亚绿色低碳短流程综合钢厂EPC项目在工艺流程设计中，采用墨西哥HYL直接还原竖炉，利用天然气裂解产生的氢气和一氧化碳进行还原。与传统高炉工艺相比，该项工艺在减少50%-60%的二氧化碳排放的同时也更加节能，实现低碳生产。

In the process design of green low-carbon short process comprehensive steel mill EPC project of Sinosteel International Bolivia, Mexican HYL was carried out for a direct reduction in a shaft furnace to reduce hydrogen and carbon monoxide produced by natural gas cracking. Compared with the traditional blast furnace process, this process not only can reduce carbon dioxide emissions by 50% - 60% but also save energy and realize low-carbon production.



60%

比实体冶炼项目减碳

Reducing carbon emissions by 60% compared with the physical smelting project

太钢集团、淡水河谷和鑫海科技携手建设印尼镍铁项目，项目使用天然气发电站为冶炼厂供电，比实体冶炼项目减碳60%。该项目综合了高效节能的RKEF冶炼技术和绿色低碳的燃气发电技术，成为镍铁行业绿色生产的标杆项目，实现成就各方、造福当地的共赢发展。

TISCO, Vale and Xinhai Technology jointly built a nickel-iron project in Indonesia, which uses natural gas power stations to power the smelter, reducing carbon emissions by 60% compared with the physical smelting project. Integrating the high-efficiency and energy-saving RKEF smelting technology and the green and low-carbon gas power generation technology, this Project becomes a benchmark project of green production in the nickel-iron industry, realizing win-win development for all parties and benefiting the locals.



社会责任管理

Social Responsibility Management



责任组织

RESPONSIBILITY ORGANIZATION

组织体系是推进社会责任工作的制度保障，中国宝武建立完整的责任组织体系，明确社会责任工作的方向，推进各项社会责任工作有序、高效开展。

The organizational system is the institutional guarantee for promoting social responsibility work. China Baowu establishes a complete responsibility organizational system, defining the direction of social responsibility work, and promoting the orderly and efficient development of various social responsibility work.

责任治理

Responsibility governance

公司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，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。

We have established a Social Responsibility Committee to coordinate and lead social responsibility work, and conduct review and decision-making on major issues, forming a top-down social responsibility management organizational mechanism with clear division. The director of the Social Responsibility Committee is the principal leader of the Company, 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 the Company focuses on respectively. Meanwhile, the Company guides its subordinate units to set up leading groups for social responsibility work by reference, defining the centralized management department of social responsibility work, and determining the personnel for social responsibility work to effectively promote the development of their social responsibility work.



责任理念

Responsibility concept

中国宝武秉持“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“员工、社会、生态圈”三个优先选项。

China 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 three priority options of “employees, society and ecosystem”.



责任规划

Responsibility planning

中国宝武将包括社会责任工作在内的“加强文化品牌创新”作为公司“十四五”战略规划中的重要战略举措；同步编制《“十四五”文化品牌规划》，把“企业文化建设工程”列入“十四五”时期的十四大战略任务。同时，鼓励各单位制定社会责任中长期规划或年度计划，用文化力、责任力统筹兼顾政府、投资者、员工、客户、合作伙伴、社区和环境等利益相关方，共同打造可持续的责任生态。

We took “strengthening cultural brand innovation” (including social responsibility work) as an important strategic measure in our “14th Five-year Plan” strategic planning. We simultaneously compiled the “14th Five-Year Plan” Cultural Brand Planning to list the “corporate culture construction project” as one of the 14 strategic tasks during the 14th Five-year Plan period. Meanwhile, we encouraged all units to formulate medium-term and long-term planning or annual plans for social responsibility by using cultural and responsibility capacity to coordinate the stakeholders (such as government, investors, employees, customers, partners, communities and environment) to jointly build a sustainable responsibility ecosystem.

责任制度

Responsibility system

中国宝武制订《社会责任工作管理办法》，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，指导各部门各单位将社会责任管理更好地融入企业运营管理的各个方面，助力实现经济、社会、环境的综合价值最大化。

We formulated the *Management Measures for Social Responsibility Work*, including ten modules of organizational system, responsibility planning, issue management, capacity building, communication management, report management, evaluation and commendation and fund guarantee, which is detailed with high operability and can guide our departments and units to further incorporate the social responsibility management into all aspects of the corporate operation management, helping maximize the overall value of the economy, society and environment.



责任融合

RESPONSIBILITY INTEGRATION

社会责任从理论到实践需要将责任理念、责任规划融入到企业日常运营全过程，中国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——提升）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。

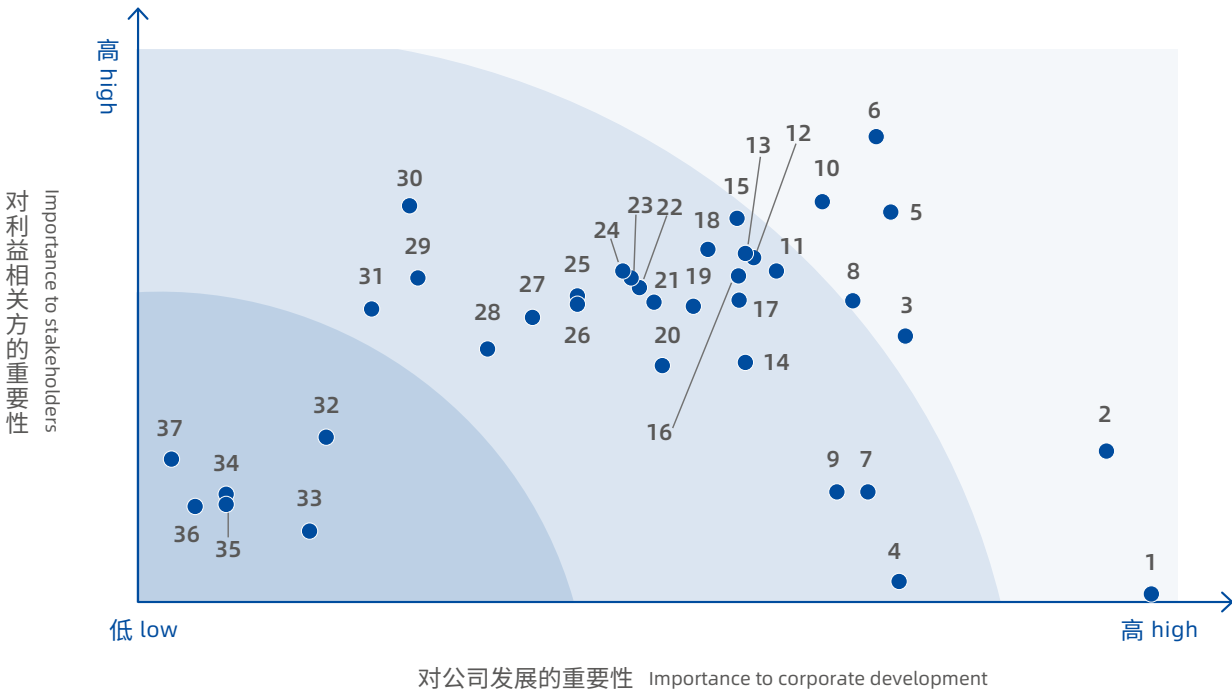
From theory to practice, social responsibility needs to integrate the responsibility concept and responsibility planning into the whole process of the daily operation of the enterprises. We attached great importance to the integration work, and implemented the four tasks of responsibility issue, responsibility process, responsibility performance and responsibility capacity to form a complete PDCA (Plan - Do - Check - Action) cycle, promoting the integration of social responsibility into corporate development strategy and business activities, and building an influential and sustainable responsibility brand.

责任议题

Responsibility issues

中国宝武的社会责任核心议题涵盖基本情况、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、乡村振兴等8个领域，形成完整的社会责任指标体系。在此基础上，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 eight fields of basic information, integrity management, innovation-driven development, green development, caring for employees, contribution to society, ecosystem co-building and rural revitalization, forming a complete social responsibility indicator system. On this basis, we have constantly conducted investigation activities on material issues for many years, and through the study of industrial policy trends, analysis of reporting criteria at home and abroad, benchmarking of outstanding reports in the same industry, and investigation of internal and external stakeholders, we optimized and upgraded the material issues that need to be focused on, to further respond to the concerns of stakeholders.



- 1.薪酬福利
Salary and welfare

2.安全及权益保护
Safety and protection of rights and interests

3.优化公司治理
Optimizing corporate governance

4.员工录用与职业发展
Employee recruitment and career development

5.经济绩效
Economic performance

6.技术创新
Technical innovation

7.员工沟通
Employee communication

8.公司概况
Company profile

9.员工构成
Staff structure

10.智慧制造
Intelligent manufacturing

11.引领行业高质量发展
Leading high-quality development of the industry

12.管理创新
Management innovation
- 13.节能减排技术及应用
Energy-saving and emission reduction technology and application

14.党风廉政建设与反腐败
Party conduct and government integrity and anti-corruption

15.诚信与合规经营
Integrity and compliance management

16.绿色工艺与环境友好产品
Green technology and environment-friendly products

17.环境绩效
Environmental performance

18.服务“制造强国”
Serving the “manufacturing power”

19.资源再生与利用
Resource regeneration and utilization

20.与城市共融共生
Integration and co-existence with the city

21.环境管理体系建设
Environmental management system construction

22.“双碳”工作进展及成效
Progress and effect of “Dual-Carbon” work

23.推进产业协同发展
Promoting coordinated industrial development

24.风险管理体系
Risk management system
- 25.碳中和行动方案
Carbon neutral action plan

26.与生态圈伙伴共创共享价值
Creating and sharing value with ecosystem partners

27.社会责任管理体系
Social responsibility management system

28.应对气候变化
Tackling climate change

29.产品生命周期研究及应用
Research on the product life cycle and its application

30.商业模式创新
Business model innovation

31.负责任采购管理
Responsible procurement management

32.应对自然灾害
Coping with natural disasters

33.志愿服务活动
Volunteer activities

34.助力乡村振兴
Facilitating rural revitalization

35.公益慈善捐赠
Public welfare and charitable donations

36.社区关系维护
Community relations

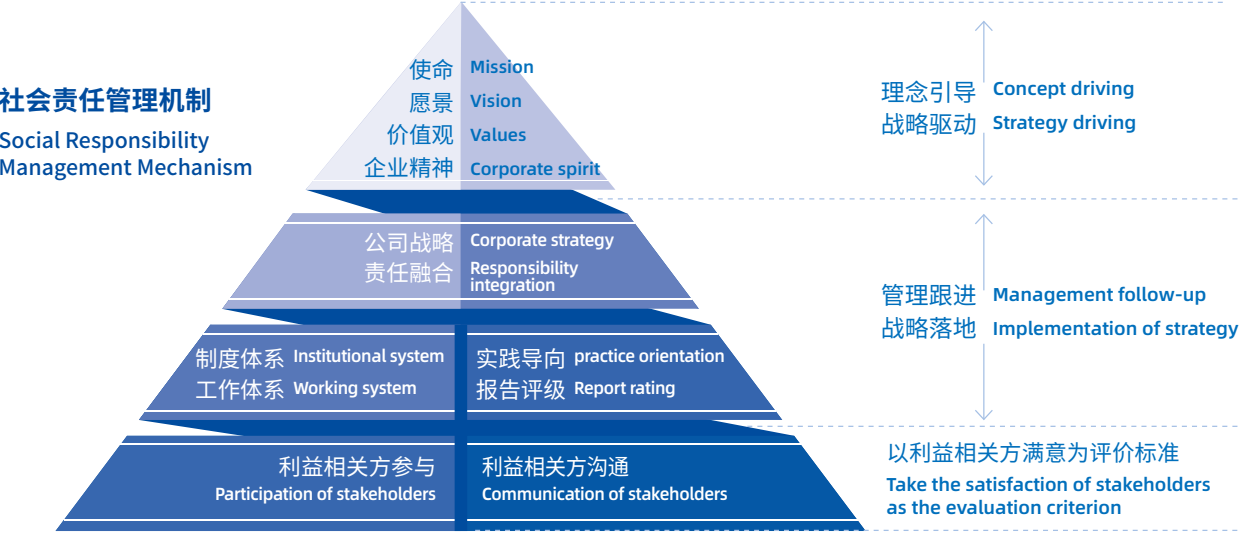
37.促进民族团结
Promoting ethnic unity

责任流程

Responsibility process

中国宝武坚持“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。

We insist on “promoting management, improvement and enhancement via report”, and the social responsibility report is taken as the starting point to embed the specific requirements of responsibility issues into the work process. Moreover, we optimize the working mode of key posts to promote social responsibility performance and realize the deep integration between corporate strategy and social responsibility to eventually win the trust and support of the stakeholders.



责任绩效

Responsibility performance

中国宝武通过在不同条线、不同专业、不同层面，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。例如，安全、环保是企业的生命线，公司对各类隐患严肃问责、重大风险事故一票否决；搭建覆盖公司和下属各单位的绿色城市钢厂评价指标体系、智慧制造“四个一律”指数、员工“三有”指数等，形成多维度、全方面的社会责任绩效评价考核体系。同时，公司通过劳动竞赛、荣誉激励等方式，突出责任绩效的正向激励作用，树立标杆人物和优秀项目，推动社会责任整体工作水平的提升。公司计划从2022年开始，设立中国宝武社会责任奖，表彰在年度工作中表现优异的集体和个人；并将社会责任优秀案例评选从两年一次调整为每年一次。

We truly integrated social responsibility into corporate management by setting up assessment contents and indicators related to social responsibility in different lines, different majors and different levels. For example, safety and environmental protection are the lifeblood of an enterprise, so the Company took responsibility for all kinds of hidden dangers seriously, and major risk accidents would be vetoed with one vote. Moreover, we set up an evaluation indicator system for green urban steel mills, a “four uniform” index for intelligent manufacturing, and a “three haves” index for the employees, which cover China Baowu and our subordinate units, forming a multi-dimensional and all-round social responsibility performance evaluation and assessment system. Meanwhile, we highlighted the positive incentive effect of responsibility performance through labor competition and honor incentives etc., setting up benchmarking figures and outstanding projects to promote the improvement of the overall level of social responsibility work. For instance, we intend to establish the China Baowu Social Responsibility Award since 2022, awarding the collective and individual with outstanding performance in their annual social responsibility work, and evaluation and selection of social responsibility excellent cases will be adjusted from biennial to annual.

表 2021 年中国宝武社会责任标杆案例

Table Benchmark Cases in Performing the Corporate Social Responsibility of China Baowu in 2021

单位 Company	案例 Case
宝钢股份、太钢集团 Baosteel and TISCO	高端钢铁绿色精品助力国家重点水电工程 Green and high-end steel products boost the key national hydropower projects
宝钢股份 Baosteel	打造钢铁工业全面数字化转型新标杆 Build a new benchmark for comprehensive digital transformation in the steel industry
宝武特冶 Baowu Special Metallurgy	超长高温合金管材助推中国航天远征星辰 Ultra-long high-temperature alloy pipes boost China's aerospace course to a higher level
八钢公司 Bayi Iron & Steel	破高炉低碳发展瓶颈 领全球绿色冶金前沿 Break the bottleneck in the low-carbon development of blast furnaces and lead the global green metallurgy
宝武智维 Baowu Equipment Intelligent Technology	培育智能运维服务能力 助推设备管理数字化升级 Foster intelligent operation and maintenance service capabilities to boost the digital upgrading of equipment management
宝武碳业 Baowu Carbon	探索“隔周三休”模式 积极践行“三有”生活 Explore the mode of “one day off in the first week and three days off in the second week” and positively practice the “Three Haves” life
马钢集团 Magang Group	引领民用建筑绿色发展 全球首发高性能重型热轧H型钢 The world's first high-performance heavy hot-rolled H-shaped steel leads the green development of civil buildings
欧冶工业品 Ouyeel Industrial Products	创建低碳智慧平台新生态，引领工业品产业链提质增效 Create a new ecosystem of low-carbon and smart platforms and lead to improve the quality and efficiency of the industrial chain of industrial products
武钢集团、宝信软件 WISCO and Baosight	发挥产业生态圈合力，为乡村振兴插上“数智”的翅膀 Give full play to the synergy of the industrial ecosystem to make rural revitalization digital and intelligent
华宝投资 Hwabao Investment	助数字人民币落地提速 Speed up the implementation of e-CNY

表 2021 年中国宝武社会责任优秀案例

Table Excellent Cases in Performing the Corporate Social Responsibility of China Baowu in 2021

单位 Company	案例 Case
宝武碳业 Baowu Carbon	“碳”究未来，铸就超大型航天复合材料壳体 Explore the future with “carbon” to cast the ultra-large aerospace composite shell
宝钢金属 Baosteel Metal	钢铁反哺农业 践行乡村振兴 Support agriculture with steel and implement rural revitalization
太钢集团 TISCO	高性能碳纤维助力北京冬奥会，实现国产雪车“零突破” High-performance carbon fiber boosts the Beijing Winter Olympics and makes a new breakthrough in domestic bobsleighs
宝武资源 Baowu Resources	功勋采场的生态蝶变，绿色发展的矿山样板 A fantastic change in the ecology of the Meritorious Stope, a mine model of green development
中南钢铁 China South Steel	打造绿色低碳硬核 铺展生态钢厂画卷 Build a green, low-carbon and ecological steel mill
宝武环科 Baowu Environment and Resource Technology	土壤修复技术让“受伤”土地焕发生机 Soil remediation technology brings “injured” land back to life
宝钢工程 Baosteel Engineering	“宝数云”赋能：实现工程建设全生命周期价值最大化 “Baoshu Cloud” maximizes the full life-cycle value of engineering construction
马钢集团 Magang Group	新一代精品客车车轮助力“复兴号”驰骋世界屋脊 The new generation of high-end passenger car wheels helps the “Fuxing” running through the roof of the world
宝武重工、宝钢工程 Baowu Heavy Industry and Baosteel Engineering	建设智能磨辊间 打造行业新标杆 Build a new benchmark in the industry through the construction of an intelligent grinding roll workshop
欧冶云商 Ouyeel	科技赋能促发展，架起银企融资对接“桥梁” Promote development with science and technology and build a financing “bridge” between banks and enterprises

责任能力 Responsibility capacity

卓越的社会责任表现需要一支拥有核心能力的队伍，中国宝武每年组织开展社会责任专题培训，跟踪最新动态变化，聚焦工作薄弱环节，以问题为导向，有针对性地邀请社会责任业界专家开展培训，提升社会责任工作团队能力。同时，公司积极参加外部社会责任论坛和活动，如中国社会责任百人论坛“分享责任公开课”培训和“分享责任中国行”优秀企业调研活动等，学习优秀经验，提升社会责任工作能力。

A team with core capacity is required for outstanding social responsibility performance. We organize and carry out special training on social responsibility every year to track the latest dynamic changes, and focus on the weak links. Moreover, based on the problem orientation, the experts in the social responsibility industry are specially invited to conduct training to improve the capacity of the social responsibility work teams. Meanwhile, we actively participated in external social responsibility forums and activities, such as the “Sharing Responsibility Open Class” training of the China Social Responsibility 100 Forum and the “Sharing Responsibility around China” research activity on outstanding enterprises, and learned about their outstanding experiences to improve our capacity of social responsibility work.

案例 | 做社会责任的表率！中国宝武举行社会责任和 ESG 专项培训

CASE | Set an example for social responsibility! China Baowu held special training on social responsibility and ESG

为系统总结和回顾2021年中国宝武社会责任工作重点和进展状况，助力中国宝武和下属单位健全社会责任管理体系，提升履责意识，强化履责能力，2022年1月24日，中国宝武组织社会责任和ESG专项培训，聚焦ESG和海外社会责任等前沿议题，邀请来自国务院国资委、中国社科院、在沪央企的社会责任业界专家进行授课和分享。

In order to systematically summarize and review the priorities and progress of China Baowu in social responsibility work in 2021, help China Baowu and its subordinate units improve the social responsibility management system, enhance the awareness of responsibility performance and strengthen its capacity, on January 24, 2022, China Baowu organized the special training on social responsibility and ESG, focusing on ESG, social responsibility and other overseas cutting-edge issues, and the experts in social responsibility industry from the State-owned Assets Supervision and Administration Commission of the State Council, the Chinese Academy of Social Sciences and the central SOEs in Shanghai were invited to give lectures and share the experience.



● 彭华岗秘书长作开班致辞。
Secretary-General Peng Huagang delivered an opening speech.



● 培训现场学员认真记录。
Trainees carefully took notes on the training site.

“中国宝武是中央企业履行社会责任的排头兵，近年来，通过健全社会责任管理体系，引导下属企业发布社会责任报告，打造社会责任亮点项目等举措，扎实推进全集团上下坚定履行社会责任。

China Baowu is the pioneer for central SOEs to fulfill their social responsibility. In recent years, after improving the social responsibility management system, guiding its subordinate enterprises to release social responsibility reports and creating social responsibility highlight projects, China Baowu has steadily promoted the firm fulfillment of social responsibility throughout the Group.

”



——国务院国资委党委委员、秘书长 彭华岗

-- Peng Huagang, Member and Secretary-General of the Party Committee of the State-owned Assets Supervision and Administration Commission of the State Council



责任沟通

RESPONSIBILITY COMMUNICATION

中国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。

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

责任报告

Responsibility report

社会责任报告是最重要的责任沟通媒介，中国宝武建立健全“1+N+M”报告体系及常态化发布机制，“1”是指中国宝武年度社会责任报告，“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。公司要求下属各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。

Social responsibility report is the most important responsibility communication medium. China 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 China Baowu, and “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 Company required all subordinate listed companies to present highlights and find shortcomings by compiling and releasing social responsibility reports or ESG reports.

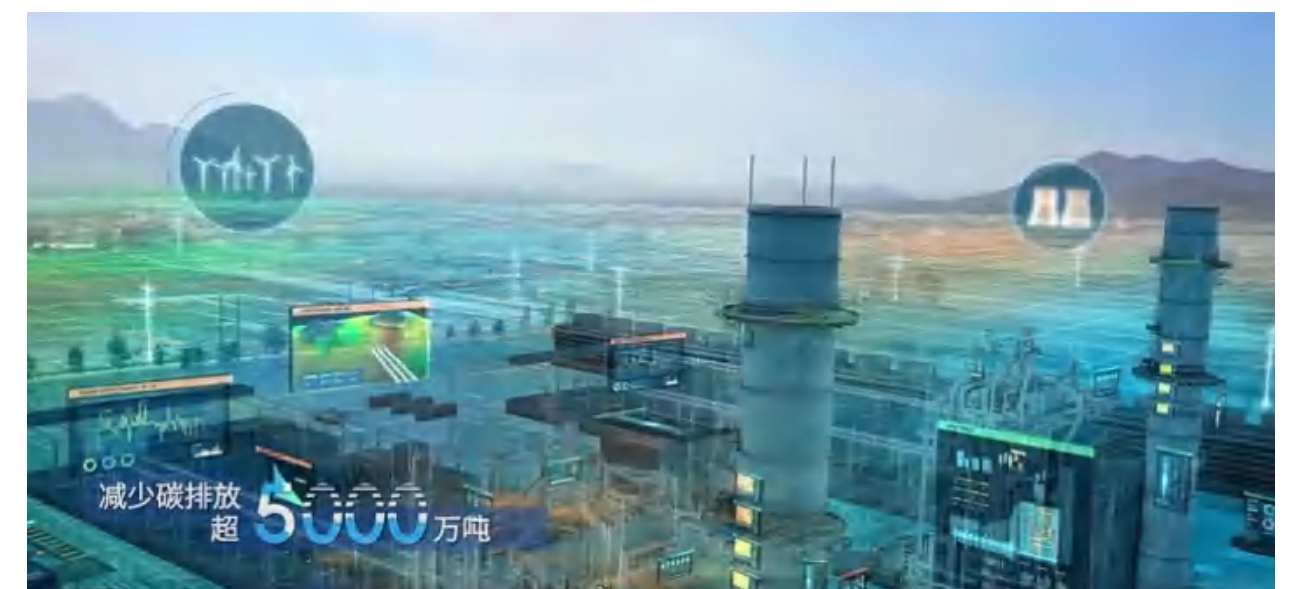


- 2021年8月16日，中国宝武举办社会责任报告集中发布活动，同时发布公司与下属11家单位的社会责任报告。
On August 16, 2021, China Baowu held a centralized release of social responsibility reports and released the social responsibility reports of the Company and its 11 subordinate units at the same time.

利益相关方参与 Participation of stakeholders

中国宝武构建了有效的利益相关方沟通机制，识别和回应利益相关方诉求，实现企业发展与利益相关方满意的双赢。公司在官网、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，通过举办公司开放日等活动邀请利益相关方到工厂参观，签署世界钢铁协会《可持续发展宪章》，支持联合国全球契约十项原则，有效传播公司责任理念及履责动态，增进利益相关方对公司的理解和支持。在与利益相关方的沟通过程中，公司注重创新思路，用真实客观、生动鲜活的视角和方式，传递不一样的、有情怀、敢担当、负责任的中国宝武。同时，公司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。

China Baowu has established an effective stakeholder communication mechanism to identify and respond to the demands of stakeholders, achieving a win-win situation between the corporate development and the satisfaction of stakeholders. The information and activities related to our corporate social responsibility work are disclosed on our official website, the official WeChat account and the mainstream media, and we held corporate Open Day activity to invite stakeholders to visit our factories. Moreover, we signed the Charter of Sustainable Development of the World Steel Association to support the ten principles of the United Nations Global Compact, and we effectively publicized the corporate responsibility concept and dynamics of responsibility performance to promote the understanding and support of stakeholders to the Company. Furthermore, during the communication with stakeholders, we paid attention to innovative ideas and deliver a different, thoughtful, courageous and responsible China Baowu with a real, objective, vivid and live perspective and way. In addition, we attached importance to the interaction with overseas stakeholders and used the Internet and overseas social platforms to strengthen the dissemination of our social responsibility work overseas.



- 宣传片《原来钢铁是绿色的》（扫码观看）
Video "It Turns out that Steel is Green" (scan QR code to watch)

责任荣誉

Honors on Responsibility

● 《中国宝武2020年社会责任报告》荣获“五星佳级”最高评价。

China Baowu Steel Group Corporation Limited Social Responsibility Report 2020 won the highest evaluation of “five-star”.



● 中国宝武荣获中国社科院《企业社会责任蓝皮书（2021）》钢铁行业榜单第1位、国有企业100强榜单第9位、中国企业300强总榜单第11位。

China Baowu ranked 1st in the List of the Steel Industry, 9th in the Top 100 List of SOEs, and 11th in the Top 300 List of Chinese Enterprises in the *Blue Book of Corporate Social Responsibility (2021)* issued by the Chinese Academy of Social Sciences.

● 中国宝武成为中国首批十家ESG示范企业。

China Baowu was listed among the First 10 ESG (Environmental, Social and Governance) Demonstration Enterprises in China.

● 中国宝武荣获2021中国社会责任百人论坛“责任金牛奖”之责任企业奖。

China Baowu won the Responsible Enterprise Award of the “Responsible Golden Bull Awards” at the China Social Responsibility 100 Forum 2021.

● 中国宝武荣获“2021金蜜蜂企业社会责任·中国榜”最高奖“领袖型企业”奖。

China Baowu won the highest award “Leading Enterprise” of the “2021 GoldenBee CSR China Honor Roll”.

● 宝钢股份、马钢股份、太钢不锈入围国务院国资委课题“央企ESG·先锋50指数”。

Baosteel, Masteel and TISCO Stainless Steel were shortlisted in the topic of “Central Enterprise ESG · Pioneer 50 Index” by the State-owned Assets Supervision and Administration Commission of the State Council.

● 中国宝武优秀案例《亿吨宝武，倾力打造“国之重器”和“镇国之宝”》入选国务院国资委课题《中央企业社会责任蓝皮书（2021）》“主业履责”篇。

China Baowu’s excellent case titled *100-million-ton Baowu Strives to Build a “National Pillar” and a “National Gem”* was selected into the “Responsibility Performance in Main Business” chapter of the *Research Report on Corporate Social Responsibility of Central Enterprises (2021)* issued by the State-owned Assets Supervision and Administration Commission of the State Council.

● 中国宝武海外履责优秀案例入选国务院国资委课题《中央企业海外社会责任蓝皮书（2021）》。

China Baowu’s overseas excellent cases on responsibility performance were selected into the *Research Report on Overseas Social Responsibility of Central Enterprises (2021)* issued by the State-owned Assets Supervision and Administration Commission of the State Council.

● 中国宝武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》。

China Baowu’s three excellent cases were selected into the *ESG Blue Book of Central-Controlled Listed Companies* issued by the State-owned Assets Supervision and Administration Commission of the State Council.

● 中国宝武“ESG管理与实践”案例入选中国社科院《环境、社会及治理（ESG）基础教材》。

China Baowu’s case titled “ESG Management and Practice” was selected into the *Basic Textbook of Environmental, Social, and Governance (ESG)* issued by the Chinese Academy of Social Sciences.

● 中国宝武《数智化转型，让钢铁生产更安全高效》作为第一案例入选《金蜜蜂·2021责任竞争力案例集》。

China Baowu’s case titled *Digital and Intelligent Transformation Makes Steel Production Safer and More Efficient* was selected into the *2021 GoldenBee Responsible Competitiveness Best Practices* as the first case.

● 华宝基金位列《中国ESG投资蓝皮书》基金公司ESG评价前十，就职于华宝基金的胡洁位列基金经理ESG评级第一名。

Hwabao WP Fund ranked among the top 10 in the ESG evaluation of fund companies in the *Research Report on ESG Investment of China*, and Hu Jie, who was employed in Hwabao WP Fund, ranked 1st in the ESG rating of fund managers.

未来展望

Prospect

凡属过往，皆为序章。在世纪疫情冲击下，我国经济发展正面临需求收缩、供给冲击、预期转弱三重压力，百年变局加速演进，外部环境更趋复杂严峻和不确定。立足新发展阶段，贯彻新发展理念，构建新发展格局，我们将更加坚定“宝武人的雄心壮志远不止于钢铁，眼界和格局远远超越钢铁”的战略选择，定位于“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”，立志“成为全球钢铁及先进材料业引领者”，真正成为一家国家需要、行业尊重、家国情怀、使命担当的世界一流伟大企业。立足稳字当头，跑出稳中求进“加速度”，我们将心怀大局，强化科技创新，成为高科技企业的优秀典范；深化联合重组，巩固壮大根基；强化能力优势延伸拓展，加快从钢铁到综合材料解决方案的转型；加大国际化拓展力度，扛起推动经济全球化可持续发展的责任。

又踏层峰望眼开。我们将以更加高远的定位、更加积极的态度、更加务实的举措，坚守初心使命、厚植责任情怀，踔厉奋发，笃行致远，以优异的成绩迎接党的二十大胜利召开！

Experience prologues the unfolding of the future. Under the impact of the COVID-19 pandemic, China's economic development is facing the triple pressure of demand contraction, supply shock, and weakening expectations. The profound changes unseen in a century are accelerating, while the external environment is facing greater complexity, grimness and uncertainties. Based on the new development stage, we will implement new development philosophy and build a new development paradigm. We will be firmer in our strategic choice that "Baowu people's ambitions, horizons and vision go far beyond iron and steel". We are positioned as a "high-tech enterprise that provides comprehensive solutions for steel and advanced materials as well as services for the industrial ecosystem". We are determined to "become a global leader in the steel and advanced materials industry", and a great world-class enterprise needed by our nation, respected in the industry, and that practices patriotism and social responsibilities. Following the general principle of pursuing progress while ensuring stability, we will base our actions upon the overall situation, strengthen scientific and technological innovation, and become an excellent model for high-tech enterprises. We will deepen the combination and reorganization to consolidate the foundation. We will expand our capability strengths to speed up the transformation from a mere steel producer to an integrated material solution provider. We will also intensify efforts to expand the international market and take on the responsibility of boosting economic globalization and sustainable development.

"To see a thousand miles, one should ascend a higher mountain." We will stay true to our original aspirations, bravely take on responsibilities, and keep forging ahead with a loftier position, a more positive attitude, and more pragmatic measures, to celebrate the successful holding of the 20th Party Congress with excellent results!



附录Appendix

关键绩效

KEY PERFORMANCE

指标Indicators	单位Units	2019	2020	2021
营业总收入 Total revenue	亿元 RMB 100 million	5,522.06	6,737.39	9,722.58
营业总成本 Total operating cost	亿元 RMB 100 million	5,437.34	6,532.03	9,091.05
利润总额 Total profits	亿元 RMB 100 million	345.30	455.43	602.24
资产总额 Total assets	亿元 RMB 100 million	8,621.94	10,140.71	11,170.84
所有者权益 Owner's equity	亿元 RMB 100 million	4,181.32	4,812.90	5,423.30
资产负债率 Debt-to-asset ratio	%	51.50	52.5	51.45
纳税总额 Total tax	亿元 RMB 100 million	267.54	265.35	443.52
钢产量 Steel output	万吨 10,000 tons	9,546	11,529	11,994
董事会召开会议次数 Number of board meetings	次 Time	9	16	17
董事会讨论审议事项数 Number of matters discussed and deliberated by the Board of Directors	项 Item	57	59	70
财务收支审计 Audit of financial revenue and expenditure	项 Item	8	9	12
经济责任审计 Audit of economic responsibility	项 Item	120	120	151
产权变动净资产审计 Net asset audit of property right alteration	项 Item	40	125	187
投资项目竣工决算审计 Final account audit of the completed investment project	项 Item	18	8	28
投资项目审计评价 Audit and evaluation of investment project	项 Item	38	25	47
投资项目造价审计 Cost audit of the investment project	项 Item	15	15	16
管理审计 Management audit	项 Item	136	186	189

指标Indicators	单位Units	2019	2020	2021
其他审计 Number of other audits	项 Item	44	32	52
投资项目造价送审项数 Number of engineering cost audits	项 Item	458	637	1,231
净核减工程款 Net reduction of project funds	亿元 RMB 100 million	7.92	10.93	7.94
研发投入金额 Amount of R&D investment	亿元 RMB 100 million	145.4	186.9	316
研发投入比例 The proportion of R&D investment	%	2.6	2.8	3.2
申请受理专利数 Number of patents applied	件 Pcs	3,061	3,779	4,395
专利授权数 Number of patents granted	件 Pcs	1,489	1,789	2,445
新产品销售率 Sales of new products	%	12	12	11
科研项目经济效益 Economic benefits of research projects	亿元 RMB 100 million	28	36.7	46
技术贸易合同额 Amount of technology trade contract	万元 RMB 10,000	2,276.5	6,425	3,762
技术贸易数 Number of technology trade	个 Pcs	19	61	57
产品合格率 ¹ Product qualification ratio ¹	%	—	—	99.16
客户投诉解决率 ² Customer complaint resolution rate ²	%	87.6	96	97.52
国内用户满意度 ³ Domestic user satisfaction ³	分 Scores	92.56	92.63	92.19
经济合同履约率 Economic contract performance rate	%	100	100	100
节能环保投入 Investment in energy conservation and environmental protection	亿元 RMB 100 million	70.98	143.55	111.49
万元产值综合耗能（可比价） Comprehensive energy consumption per RMB 10,000 of output value (comparable price)	吨标准煤 Ton of standard coal	1.44	1.49	1.18
万元产值综合能耗下降率 ⁴ The reduction rate of comprehensive energy consumption per RMB 10,000 of output value ⁴	%	1.65	3.43	22.2
吨钢综合能耗 Comprehensive energy consumption per ton of steel	千克标准煤 Kg of standard coal	583	574	564
吨钢综合能耗下降率 ⁴ The reduction rate of comprehensive energy consumption per ton of steel ⁴	%	0.5	1.54	1.65
二氧化硫排放量 Sulfur dioxide emissions	吨 Ton	23,667	20,697	23,079
二氧化硫排放下降率 ⁴ The reduction rate of sulfur dioxide emissions ⁴	%	20.8	12.5	20.8

指标Indicators	单位Units	2019	2020	2021
氮氧化物排放量 NOx emissions	吨 Ton	55,881	49,802	53,840
氮氧化物排放下降率 ⁴ The reduction rate of NOx emissions ⁴	%	12.5	10.9	24
化学需氧量排放量 COD emissions	吨 Ton	1,504	1,396	1,994
化学需氧量排放下降率 ⁴ The reduction rate of COD emissions ⁴	%	26.7	7.2	7.8
年度新鲜水用水量 Fresh water consumption per year	吨 Ton	24,512.59	24,067.23	31,174.21
吨钢耗新水量 Fresh water consumption per ton of steel	万吨 10,000 tons	3.33	3.24	2.55
吨钢耗新水量下降率 ⁴ The reduction rate of freshwater consumption per ton of steel ⁴	%	3.44	2.76	21.3
中水循环使用量 ⁵ Utilization of recycled water ⁵	万吨 10,000 tons	442,659.08	462,670.38	424,310.78
副产资源利用率（工业固废综合利用率） Utilization of byproducts (comprehensive utilization of industrial solid waste)	%	99.41	99.73	99.15
返生产利用率 Return-to-production utilization	%	26.29	28.24	26.17
社会大宗废弃物利用量（协同处置城市危险废物） Utilization of social bulk waste (with disposal of urban hazardous waste)	吨 Ton	10,713	14,093	18,740
清洁能源使用量（绿色电力消纳量） Consumption of clean energy (consumption of green power)	亿度 100 million KWH	—	—	19.9
清洁能源比重（绿色电力占比） The proportion of clean energy (proportion of green power)	%	—	—	0.5
吨钢二氧化碳排放量下降率 ⁶ The reduction rate of carbon dioxide emissions per ton of steel ⁶	%	—	1.25	0.63
绿色产业销售收入 Revenue from the green industry	亿元 RMB 100 million	250.09	524.47	1,138.3
获得ISO14001体系认证证书的供应商数量 ⁷ Number of suppliers with ISO14001 system certification ⁷	家 NOS	5,694	5,091	10,225
BETTER（优良）型绿色产品销量 Sales of BETTER products	万吨 10,000 tons	816.82	858.18	999.83
BEST（尖端）型绿色产品销量 Sales of BEST products	万吨 10,000 tons	224.34	269.49	386.89
BETTER（优良）型+BEST（尖端）型绿色产品销售量 Sales of BETTER + BEST green products	万吨 10,000 tons	1,041.16	1,127.67	1,386.72

指标Indicators	单位Units	2019	2020	2021
资材备件绿色采购金额 Amount of green procurement for materials and spare parts	亿元 RMB 100 million	6.2	24.6	26.3
资材备件绿色采购比例 The proportion of green procurement for materials and spare parts	%	9.6	50.4	65.8
向中小企业采购设备资材金额 Amount of equipment and materials purchased from SMEs	亿元 RMB 100 million	22	17	15
向中小企业采购设备资材占比 The proportion of equipment and materials purchased from SMEs	%	43	53	60
总的本地设备资材采购占比 The proportion of equipment and materials purchased from the local	%	49	36	63
总的本地设备资材采购金额 Amount of equipment and materials purchased from the local	亿元 RMB 100 million	98	114	228
报告期内审查供应商数量 Number of suppliers reviewed during the reporting period	个 NOS	39	4	51
防汛救灾专项 Special fund for flood control and disaster relief	万元 RMB 10,000	—	—	11,010
宝钢教育基金专项 ⁸ Baosteel education fund ⁸	万元 RMB 10,000	72	198	5,000
援青援藏、扶贫帮困 ⁹ Aid Qinghai, aid Tibet and poverty alleviation ⁹	万元 RMB 10,000	12,351	18,421.2	19,883
其他帮扶类项目 ¹⁰ Other assistance projects ¹⁰	万元 RMB 10,000	33.8	449	1,764
其他公益慈善、助学和改善社区环境等 ¹¹ Other public welfare, charity, education assistance and community environment improvement, etc. ¹¹	万元 RMB 10,000	950.7	1,263.45	2,010
文化体育事业捐赠 Donations to cultural and sports undertakings	万元 RMB 10,000	10,000	—	—
抗击疫情专项捐赠 Special donations to fight the COVID-19	万元 RMB 10,000	—	7,619.7	—
社会捐赠总额 Total social donations	万元 RMB 10,000	23,407.5	27,951.35	39,667
志愿者人数 Number of volunteers	人 Person	2,419	2,590	8,319
志愿服务活动 Volunteer activities	场 NOS	—	—	1,489
志愿服务活动参与人次 Participants in volunteer activities	人次 Person-time	8,486	5,272	9,353
志愿服务活动总时长 Total time of volunteer activities	小时 Hour	67,461	21,088	37,412
员工总数 Total number of employees	人 Person	195,434	227,007	222,595

指标Indicators	单位Units	2019	2020	2021
女性员工数量 Number of female employees	人 Person	33,856	39,150	36,518
新增员工人数 Number of new employees	人 Person	1,799	2,270	3,509
新增员工人数占员工总数比例 The proportion of new employees	%	0.9	1.0	1.58
员工辞职人数 Number of employees resigned	人 Person	2,170	1,487	2,290
员工流失率（员工辞职人数占员工总数比例） Employee turnover rate (Proportion of employees resigned)	%	1.1	0.66	1.03
管理岗位占比 The proportion of management posts	%	8.2	7.6	7.3
海外公司当地员工比例 The proportion of local employees in overseas companies	%	93.4	91.8	91.5
劳务派遣人员数量 Number of dispatch personnel	人 Person	6,684	14,237	11,484
劳动合同签订率 Signing rate of labor contract	%	100	100	100
社会保险覆盖率 Social insurance coverage	%	100	100	100
员工培训投入 Investment for employee training	万元 RMB 10,000	19,091.8	16,345.5	24,193.2
员工人均培训课时 Per capita training hours for employees	小时 Hour	83.8	101.6	120.2
员工人均培训投入 Per capita investment for employee training	元 RMB	1,160.5	857.5	1,304.5
独立用工单位集体劳动合同覆盖率 The coverage rate of collective labor contracts of independent employment units	%	100	100	100
员工救助受益总人次 Number of employee assistance beneficiaries	人次 Person-time	50,175	102,077	111,451
员工救助总投入金额 Amount invested in employee assistance	万元 RMB 10,000	5,000.84	6,653.32	6,132.22
帮困慰问金受助人次 Number of solatium recipients	人次 Person-time	43,419	92,953	105,244
帮困慰问金投入总额 Total amount invested in solatium	万元 RMB 10,000	3,488.36	4,312.14	4,505.11
员工助学金受助人次 Number of employee grant recipients	人次 Person-time	1,072	1,562	1,826
员工助学金投入总额 Total amount invested in employee grants	万元 RMB 10,000	179.24	321.2	327.45
员工医疗救助受助人次 Number of employees' medical assistance recipients	人次 Person-time	5,684	7,562	4,381
员工医疗救助投入总额 Total amount invested in employees' medical assistance	万元 RMB 10,000	1,333.25	2,019.97	1,299.66

指标Indicators	单位Units	2019	2020	2021
定点帮扶资金 Funds for designated assistance	万元 RMB 10,000	6,255	8,554.5	9,030
购买脱贫地区农产品 Procurement of agricultural products from poverty-stricken areas	万元 RMB 10,000	1,699.3	6,223.05	8,363.2
帮助销售脱贫地区农产品 Assistance in selling agricultural products from poverty-stricken areas	万元 RMB 10,000	4,305.8	8,278.26	5,739
安全生产总投入 Total investment in safety production	亿元 RMB 100 million	16.31	21.39	28.37
安全培训人次 ¹² Number of safety training ¹²	人次 Person-time	26,825	15,870	103,160
安全培训覆盖率 Safety training coverage	%	100	100	100
安全生产事故数 Number of safety production accidents	起 NOS	34	51	59
员工工伤事故伤害人数 Number of employees injured in work-related accidents	人 Person	34	53	61
员工工伤事故伤害频率 Injury frequency of work-related accidents	百万工时伤害数 Injuries in Million Man-hours	0.08	0.11	0.13
员工工伤事故伤害严重率 Injury severity rate	百万工时损工数 Injuries in Million Man-hours	28.35	42.87	94.92

注：1. 数据涵盖宝武碳业等 4 家子公司；2. 2019 年、2020 年为宝钢股份数据，2021 年涵盖宝钢股份等 11 家子公司；3. 2019 年、2020 年为宝钢股份数据，2021 年为宝钢股份等 10 家子公司；4. 2021 年起合并太钢数据，下降率均为同口径下降率；5. 数据涵盖宝钢金属等 4 家子公司；6. 2020 年与 2019 年碳排放量同比不含昆钢数据，2021 年与 2020 年同比含昆钢数据，其中，2021 年碳排放数据未经主管部门核查并考虑湛江钢铁三高炉投产引起的碳数据波动因素；7. 欧冶采购平台统计数据。2021 年欧冶工业品加快欧贝生态建设步伐，随着欧贝易购等平台产品陆续上线，业务量快速增长，平台注册用户数突破 20 万家；8. 2019 年、2020 年为向教育事业捐赠（助学）数据；9. 2019 年、2020 年为扶贫帮困、援建数据；10. 2019 年、2020 年为其他捐赠数据；11. 2019 年、2020 年为公益救济和公共福利事业捐赠数据；12. 2020 年受疫情影响，公司上半年度线下培训暂停，数据有所下降；2021 年数据包括线上线下培训人次。

Note: 1. Data covers 4 subsidiaries including Baowu Carbon; 2. Data in 2019 and 2020 is for Baosteel, while data in 2021 covers 11 subsidiaries including Baosteel; 3. Data in 2019 and 2020 is for Baosteel, while data in 2021 covers 10 subsidiaries including Baosteel; 4. Since 2021, data of TISCO has been merged, and the reduction rates are calculated according to the same standard; 5. Data covers 4 subsidiaries including Baosteel Metal;6. Data of carbon dioxide emissions in 2020 compared with 2019 excludes KISC, and data in 2021 compared with 2020 includes KISC, in which, data of carbon dioxide emissions in 2021 has not been verified by competent authorities and has taken the data fluctuation caused by the operation of No.3 blast furnace of Zhanjiang Iron & Steel into consideration; 7. Statistical data of Ouyeel Procurement Platform. In 2021, Ouyeel Industrial Products accelerated the pace of OBEI ecological construction. With the launch of platforms such as OBEI E-commerce, the business volume has grown rapidly, and the number of registered users on the platform has exceeded 200,000;8. Data in 2019 and 2020 covers the donation to education undertaking (financial aid to students); 9. Data in 2019 and 2020 covers the donation to poverty alleviation and aid in construction; 10. Data in 2019 and 2020 covers other donations; 11. Data in 2019 and 2020 covers the donation to public relief and public welfare; 12. Due to the COVID-19 in 2020, our offline training was suspended in the first half of the year, and the data decreased. Data in 2021 includes the person-time subject to online and offline training.

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评级报告

《中国宝武钢铁集团有限公司 2021 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”抽调专家组成评级小组，对《中国宝武钢铁集团有限公司2021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-CSR 4.0）》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. 评级专家委员会副主席、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工作组，统筹具体编制工作，党委宣传部、企业文化部副部长把控整体方向，企业文化处处长把控关键节点，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，功能价值定位明确；根据政策趋势、国际国内社会责任标准、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发布报告，并嵌入“中央企业社会责任报告集中发布”活动进行二次发布，将以电子版、印刷品、中英文版的形式呈现报告，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、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“诚信：发展之基 走好改革路”“创新：勇毅前行 释放驱动力”“绿色：知行合一 点亮生命色”“共享：休戚相关 奏响和谐曲”等角度系统披露了所在行业核心指标的 92.27%，具有卓越的完整性表现。

平衡性 (★★★★★)

《报告》披露了“重大风险事件”“员工流失率”“安全生产事故数”“员工工伤事故伤害人数”“员工工伤事故伤害严重率”等负面数据信息，并简述中央巡视反馈违纪问题的处置及整改情况，平衡性表现卓越。

可比性 (★★★★★)

《报告》披露了“利润总额”“纳税总额”“社会捐赠总额”“安全生产总投入”“万元产值综合耗能”“年度新鲜水用水量”等 110 个关键指标连续 3 年的对比数据，并通过“《财富》世界 500 强排名第 72 位”等进行横向比较，可比性表现卓越。

可读性 (★★★★★)

《报告》以“星辰大海 伟大征程”为主题，从诚信、创新、绿色、共享四个维度系统展现企业在关键议题上的履责理念、管理与实践，框架结构清晰；封面设计采用矢量风格，色调呼应企业品牌标识，篇章跨页选用契合章节主题的实景图大图，提升了报告的辨识度与感染力；以“延伸阅读”“名词解释”等专栏解读专业术语，嵌入二维码延展报告内容，引入利益相关方证言佐证履责成效，增强了报告的沟通效果，具有卓越的可读性表现。

创新性 (★★★★★)

《报告》设置“百年奋斗心向党 产业报国谱新章”“争做双碳引领者 实现绿色化发展”“鱼渔同授：精准对接施策 助力乡村振兴”，聚焦企业在加强党的建设、落实“双碳”战略、助力乡村振兴方面的责任行动与成效，彰显了中央企业的责任担当；发布绿色低碳发展报告等专项报告，并推动下属单位独立编发社会责任 /ESG 报告，形成了“1+N+M”的多形态、多层次报告体系；制定《中国宝武钢铁集团有限公司社会责任工作管理办法（2021 年版）》，完善社会责任工作的顶层设计，强化报告管理，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 2021 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。



中国企业社会责任报告
评级专家委员会
Chinese Expert Committee on CSR Report Rating

中国宝武社会责任报告获得一次五星级评价、
连续第二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，提升报告的完整性。

评级专家委员会副主席

邓同胜

评级小组组长

邓同胜

评级小组专家

出具时间：2022 年 6 月 20 日



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RATING REPORT

Rating Report of The 2021 Corporate Social Responsibility Report of China Baowu Steel Group

Entrusted by China Baowu Steel Group, the Chinese Expert Committee on CSR Report Rating selected experts to form a rating team to rate The 2021 Corporate Social Responsibility Report of China Baowu Steel Group (hereinafter referred to as “the Report”).

I. Rating Criteria

Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR 4.0) of the Chinese Academy of Social Sciences and China Corporate Social Responsibility Report Rating Standards (2020) of “Corporate Social Responsibility Report Rating Expert Committee of Chinese Enterprises”.

II. Rating Process

1. The rating team reviews and confirms the *Process Data Confirmation of Corporate Social Responsibility Report* submitted by the *Report* writing group and relevant supporting materials;
2. The rating team conducts evaluation on the preparation process and the content disclosed by the *Report*, and then drafts the rating report;
3. The Vice Chairman of the Rating Expert Committee, the leader of the rating team, and the experts of the rating team jointly sign the rating report.

III. Rating Results

Process (★★★★★)

The Propaganda Department of the Party Committee and the Corporate Culture Department of the Group has led the establishment of report preparation work group to coordinate the specific compilation work. The Deputy Minister of the Party Committee Propaganda Department and the Corporate Culture Department is responsible for controlling the overall direction, the Director of the Corporate Culture Department is responsible for controlling the key nodes, and the Chairman and General Manager are responsible for the final review of the Report; the Report, with definite function value position, is taken as an important tool for improving social responsibility management level, strengthening stakeholder communication and building corporate responsibility brand image; material issues are identified based on the policy trends, international and domestic social responsibility standards, industry benchmarking analysis, company development strategies and stakeholder surveys; it is planned to hold a special press conference to release the Report, and embed the “centralized release of the social responsibility report of central enterprises” for the second release. The Report is planned to be presented in electronic version, printed form, Chinese and English version, with excellent performance in process.

Materiality (★★★★★)

The *Report* systematically discloses the key industrial issues such as implementation of macro policy, product quality management, product innovation, occupational health management, safety production, R&D and application of environmental protection technology and equipment, energy conservation, development of circular economy, and environmental governance around the plant, with detailed and full description and excellent performance in materiality.

Integrity (★★★★★)

The main body of the *Report* systematically discloses 92.27% of the core indicators of the industry from the perspectives of “Integrity: Foundation of Development for Better Reform”, “Innovation: Press Ahead by Releasing Driving Force”, “Green: Knowledge-Action Unity for Brighter Color of Life”, “Sharing: Close Correlation for Louder Chorus of Harmony”, with excellent performance in integrity.

Balance (★★★★★)

The *Report* reveals negative data such as “major risk event”, “employee turnover rate”, “number of safety production accidents”, “number of employees injured by work-related accidents”, “injury frequency of work-related accidents” and briefly describe the handling and rectification of disciplinary violations reported by central inspection group, with excellent performance in balance.

Comparability (★★★★★)

The *Report* discloses the comparative data of 110 key indicators such as “total profits”, “total tax”, “total social donations”, “total investment in safety production”, “comprehensive energy consumption per RMB 10,000 yuan of output value” and “fresh water consumption per year” for three consecutive years, and makes a horizontal comparison on the data such as “ranking 72nd on the Fortune Global 500”, with excellent performance in comparability.

Readability (★★★★★)

The *Report* takes “Grand goal, Great Journey” as the theme and systematically expounds the company’s responsibility fulfillment concept, management and practice on key issues from four dimensions of integrity, innovation, green and sharing, with a clear framework structure; cover design adopts a vector style, the color tone echoes the corporate brand logo, and the chapter cross-page selects a real-life big picture that fits the chapter theme, which improves the identification and vividness of the Report; “Further reading” and “Terms interpretation” columns are established, and the QR code is embedded to extend the interpretation of the report content and the testimony of stakeholders is incorporated to prove the effectiveness of the responsibility performance, strengthening the communication effect of the Report, with excellent readability performance.

Innovation (★★★★★)

The *Report* sets up “Struggle to Reward the Party and the Country with Industry Achievements”, “Strive to be a Leader in Carbon Peaking and Carbon Neutrality for Green Development”, and “Implement Targeted Policies to Help with Rural Revitalization”, to focus on the responsible actions and achievements of enterprises in strengthening party building, implementing the “dual carbon” strategy, and helping rural revitalization, and demonstrating the responsibility of central enterprises; publishes special reports such as green and low-carbon development reports, and promotes subordinate units to independently compile and distribute social responsibility/ESG report, forming a multi-form and multi-level reporting system of “1+N+M”; formulating *Social Responsibility Management Measures of China Baowu Steel Group Corporation Limited (2021 edition)*, and improving the top-level design of social responsibility work and strengthening reporting management, with an excellent performance in innovation.

Overall Rating (★★★★★+)

According to the rating team’s assessment, *The 2021 Corporate Social Responsibility Report of China Baowu Steel Group* is of five-star plus rating in the process, materiality, integrity, balance, comparability, readability and innovation and is model of corporate social responsibility (CSR) report.



中国企业社会责任报告
评级专家委员会
Chinese Expert Committee on CSR Report Rating

The Social Responsibility Report of China Baowu Steel Group had been rated five stars once and was rated five-star plus for the second year in succession.

IV. Suggestions for Improvement

Enhance the disclosure of the core indicators of the industry and improve the integrity of the Report.

评级专家委员会副主席

Vice Chairman of China Expert
Committee on CSR Report Rating

评级小组组长

邓同胜

评级小组专家

出具时间：2022 年 6 月 20 日



Scan the QR code to view
the corporate rating files

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2021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：

Hello! Thank you for taking the time to read *China Baowu Steel Group Corporation Limited Social Responsibility Report (2021)*. 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:

联系地址：上海市浦东新区世博大道 1859 号宝武大厦
Contact Add: Baowu Tower, No. 1859, Shibo Avenue, Pudong New Area, Shanghai, P.R. China

邮 编: 200126
Postcode: 200126

电 话: 86-21-20658888
Tel: 0086-21-20658888

传 真: 86-21-20658899
Tel: 0086-21-20658899

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: _____

选择性问答：(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中国宝武对经济、社会、环境的重大影响程度： Please comment on the significant impact of China 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>
请您评价本报告对利益相关方关心问题进行的回应和披露： Please comment on the response and disclosure in this report to the concerns of stakeholders:	<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>
请您评价本报告披露信息、指标、数据的清晰度、准确性、完整性： Please comment on the clarity, accuracy, and completeness of information, indicators, and data disclosed in this 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>
请您评价本报告的可读性： Please comment on the readability of this 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>
请您对《中国宝武2021年社会责任报告》进行综合性评价： Please make a comprehensive evaluation of this 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>

开放性问题：

Open Questions:

您对中国宝武社会责任工作有哪些建议？
What suggestions do you have for China Baowu's work related to social responsibility work?

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: 

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: 