

2020

攀钢钒钛社会责任报告

Pangang Group Vanadium & Titanium Resources Co., Ltd.
Social Responsibility Report 2020



报告说明

本报告为攀钢集团钒钛资源股份有限公司（以下简称“攀钢钒钛”“公司”或“我们”）以年度报告形式发布的第十二份社会责任报告。报告披露了攀钢钒钛及下属公司2020年1月1日至12月31日的履责理念、实践与绩效，部分内容超出上述范围。

报告所涉及的财务数据符合国家颁布的《企业会计准则》和相关会计制度，并按照《中国内部审计准则》进行审计，真实反映企业财务指标、经营状况。报告中如无特殊说明，均以人民币为单位表示。报告经过企业内部审核，保证报告的真实、准确、完整。

报告编制主要依据国务院国有资产监督管理委员会《关于中央企业履行社会责任的指导意见》（国资发研究[2008]1号），中华人民共和国国家质量监督检验检疫总局、中国国家标准化管理委员会《社会责任报告编写指南》（GB/T 36000-2015），全球可持续发展标准委员会（GSSB）《可持续发展报告标准》（GRI Standards），国际标准化组织ISO 26000: 2010《社会责任指南》国际标准以及联合国2030年可持续发展目标（SDGs）。

本报告以印刷版和电子版两种形式发布，电子版可在攀钢钒钛网站 (<http://www.pgvt.cn>) 和巨潮资讯网 (<http://www.cninfo.com.cn>) 查阅。

About the Report

This is the 12th annual social responsibility report issued by Pangang Group Vanadium & Titanium Resources Co., Ltd (hereinafter referred to as “the Company” or “we”). The report discloses the responsibility concept, practice and performance of the Company and its subsidiaries from January 1 to December 31, 2020, with some contents beyond the above range.

The financial data included in the report conform to *Accounting Standards for Enterprises* and relevant accounting systems in China, and has been audited in accordance with *Internal Audit Standards of China*, thus reflecting the actual financial indicators and operational conditions of the Company. All the sums of money in the report are in the unit of CNY unless otherwise stipulated. The report has been internally audited, which ensures its authenticity, accuracy and completeness.

References: *Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities* issued by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, *Guidance on Social Responsibility Reporting(GB/T 36001-2015)* issued by Standardization Administration of the P.R.C. and General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C, *the Sustainability Reporting Standards (GRI Standards)* issued by the Global Sustainability Standards Board (GSSB), *ISO 26000:2010-Guidance on Social Responsibility* issued by International Organization for Standardization, and the United Nations 2030 Sustainable Development Goals (SDGs).

The report is issued in printed and electronic versions. For the electronic version, please visit our official website (<http://www.pgvt.cn>) and (<http://www.cninfo.com.cn>).



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董事长致辞

Address from the Chairman



尊敬的利益相关方：

2020年是极为不平凡的一年，攀钢钒钛全体员工勠力同心，沉着应对各种风险挑战，在抗击新冠肺炎疫情的同时，在提升生态环境治理、创新绿色发展、深化企业改革、安全平稳运营以及脱贫攻坚等方面也取得优良业绩，为公司可持续发展构建新格局。

Dear stakeholders:

2020 was an extremely eventful year. All our employees worked together to deal with various risks and challenges. While fighting against COVID-19 pandemic, we have also made great achievements in improving ecological environment, pursuing innovative and green development, deepening the enterprise reform, ensuring safe and stable operation as well as poverty alleviation, which helps to build a new pattern for the Company's sustainable development.

全力以赴展现新作为。面对突如其来的疫情和严峻复杂的市场环境，我们启动“4711”专项行动，迅速制定特殊时期生产经营工作方案，确保疫情防控和生产经营“双线作战”稳步推进。2020年，公司累计生产钒制品（以V₂O₅计）2.4万吨，钛白粉23.55万吨，钛渣20.58万吨，均创历史最好水平，实现年度营业收入105.79亿元、利润总额3.87亿元。

绿色创新实现新突破。我们推动智能化、数字化、信息化建设，打造了国内首条钒氮合金数字化生产线等一批智慧工厂。以绿色发展理念为引领，以科技创新为手段，推进资源高效循环利用，2020年，获得省部级科技奖项6项，投入1.4亿元实施15个综合治理环境提升项目，所有钒系统企业实现废水零排放，循环水利用率达到95.21%，厂区绿化面积17.61万平方米。

伙伴共赢迈上新台阶。我们携手伙伴共建钒钛产业链互利共赢的长期合作模式，真诚服务客户，加快新品研发，加强质量管控，获得客户认可。加大技术交流与合作力度，累计开展技术交流126次。开启空中课堂赋能员工，为员工提供安全健康的生产环境，加强员工关爱，和员工共成长。

脱贫攻坚取得新成效。我们投入976.02万元，在定点扶贫地区实施12个扶贫项目，建起大型养猪场，扩建小学运动场，建设村卫生室，全方位推进产业扶贫、民生扶贫、教育扶贫、医疗扶贫、消费扶贫，激发脱贫攻坚内生动力，做到脱贫摘帽“四不摘”，推进全面脱贫与乡村振兴战略有效衔接，让村民收获实实在在的幸福。

“十四五”规划的开局之年，我们将继续坚守初心，致力于实现钒钛产业高质量发展，为实现股东增值、企业增效、员工增收，为建设“国内一流、国际知名的钒钛新材料上市公司”而不懈奋斗，继续奏响创新发展、可持续发展的华美乐章！

攀钢钒钛董事长：谢俊勇

We go all out to make a difference. Faced with the sudden COVID-19 pandemic and the complex market environment, we launched the “4711” special action to quickly formulate production and operation work plans for the special period to ensure the steady progress of both pandemic response and our production and operation. In 2020, the Company has produced a total of 24,000 tons of vanadium products (in terms of V₂O₅), 235,500 tons of titanium dioxide, and 205,800 tons of titanium slag, all hitting the highest level in history with annual operating revenue of 10.579 billion yuan and a total profit of 387 million yuan.

New breakthroughs have been made in green innovation. We promote the development of intelligence, digitization, and informatization and have built a number of smart factories including the first digital vanadium-nitrogen alloy production line in China. Guided by the concept of green development, we leverage technological innovation to promote resource efficiency and recycling. In 2020, we won 6 provincial and ministerial-level tech awards and 140 million yuan was invested to implement 15 comprehensive environmental improvement projects. All vanadium-related subsidiaries achieved zero wastewater discharge, with a circulating water utilization rate of 95.21%, and the green area of the plant reached 176,100 square meters.

The win-win partnership has reached a new level. We work with partners to build a win-win long-term cooperation mode of vanadium and titanium industry chain. We have gained recognition from our customers by providing sincere services, speeding up R&D of new products, and strengthening quality control. In 2020, we promoted technical exchanges and cooperation, with 126 technical exchanges conducted in total. We launched online courses to empower employees. In addition, we offer a safe and healthy working environment for our employees and provide more care for them so as to improve together with them.

New accomplishments have been achieved in poverty alleviation. We have invested 9.7602 million yuan to implement 12 poverty alleviation projects in designated areas by building large pig farms, expanding sportsgrounds in primary schools and constructing village clinics. We make great efforts to reduce poverty by promoting industries, improving people's livelihood, boosting consumption and providing educational resources and medical care. We have stimulated people's internal drive for poverty alleviation and stick to the principle of not removing responsibility, policy, assistance and supervision while alleviating poverty. We promote the smooth transition of comprehensive poverty alleviation and the rural vitalization strategy, bringing real happiness to villagers.

In the first year of the 14th Five-Year Plan, we will continue to stick to our original aspiration and devote ourselves to the high-quality development of vanadium and titanium industry, making unremitting efforts to realize the added value for shareholders, improve enterprise efficiency, increase staff income, and to build a “domestic first-class and internationally famous listed company specialized in vanadium and titanium new materials”. We will keep working on innovative and sustainable development.

Xie Junyong, Chairman of Pangang Group Vanadium & Titanium Resources Co., Ltd.



关于我们 About Us



公司简介 Company profile

攀钢集团钒钛资源股份有限公司是世界主要的钒制品供应商，中国主要的钛原料供应商、重要的钛渣生产企业、硫酸法和氯化法钛白粉生产企业。攀钢钒钛成立于1993年3月27日，于1996年11月15日在深圳证券交易所上市（股票代码：000629），总部坐落在被誉为“钒钛之都”的四川省攀枝花市。

攀钢钒钛凭借得天独厚的资源优势和技术积累，探索出独具特色的钒钛磁铁矿资源综合利用道路，形成钒氮合金制备、钛白粉生产、钛渣冶炼等一批国际领先、拥有自主知识产权的专有技术。其中，钒氮合金生产技术获国家技术发明奖。2020年实现营业收入105.79亿元，利润总额3.87亿元，保持良好发展态势。

Pangang Group Vanadium & Titanium Resources Co., Ltd. is a major supplier of vanadium products in the world, a major supplier of titanium raw materials in China. It is also a key titanium slag manufacturer, and a titanium dioxide manufacturer by both sulfate process and chloride process. Established on March 27, 1993, the Company was listed on Shenzhen Stock Exchange on November 15, 1996 (Stock Code: 000629). It headquarters in Panzhihua City, Sichuan Province, which is known as the "city of vanadium and titanium".

With its special advantages in resources and accumulated technology, the Company has explored a unique way of comprehensively utilizing vanadium and titanium magnetite resources, and has developed a group of international leading know-hows with independent intellectual property rights, such as vanadium nitrogen alloy preparation, titanium dioxide production, titanium slag smelting, etc., among which vanadium nitrogen alloy production technology won the National Technological and Invention Award. In 2020, it reached an operating revenue of 10.579 billion yuan and a total profit of 387 million yuan, maintaining a good development trend.

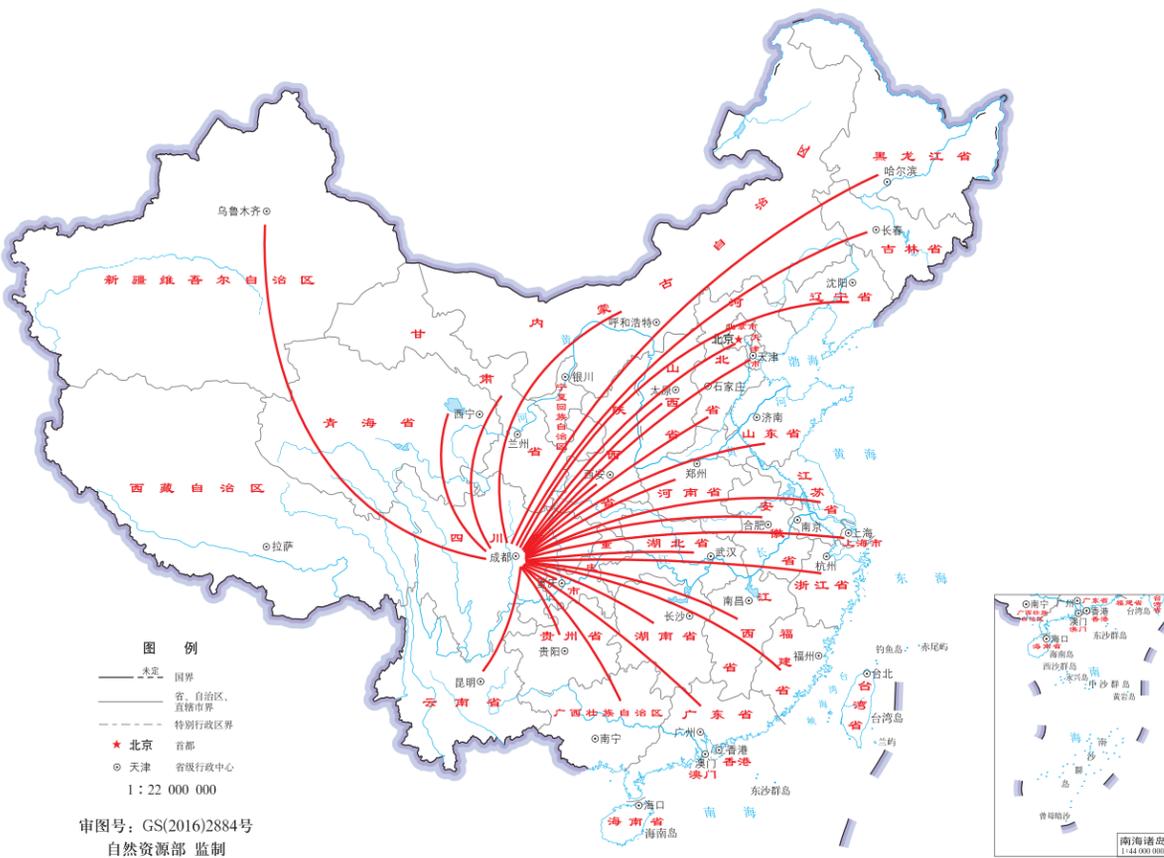
<p>发展战略 Development strategy</p>	<p>协同资源、做强基体、做大产业、绿色发展 Integrating resources, Consolidating foundations, Enlarging industries, Boosting green development</p>
<p>发展愿景 Development vision</p>	<p>建设国内一流、国际知名的钒钛新材料上市公司 To build a domestic first-class and internationally famous listed company specialized in vanadium and titanium new materials</p>
<p>发展目标 Development goal</p>	<p>打造国际最具影响力的钒产品供应商、国内最具竞争力的钛产品供应商 To become the most influential supplier of vanadium products in the world and the most competitive supplier of titanium products in China</p>



业务概况

攀钢钒钛加快以高端应用为主的钒钛新产品、新技术开发。钒产业技术世界领先，品种齐全，拥有五氧化二钒、高钒铁、三氧化二钒、钒氮合金、钒铝合金等系列产品；钛产业质量领先，品种齐全，拥有钛白粉、高钛渣等系列产品。公司具备年经营钛精矿100万吨和年产钒制品（以V₂O₅计）2.2万吨、钛白粉23.5万吨、钛渣22.5万吨的综合生产能力，生产的民用级钒铝合金已经实现百吨级批量销售，建成的600吨/年钒铝合金产线已通过质量管理体系认证。

公司产品广泛应用于钢铁工业、电子工业、有色金属、化工及涂料油墨等领域，出口美国、英国、加拿大、俄罗斯、意大利、阿联酋、菲律宾、阿尔及利亚、荷兰、韩国、日本、印度、墨西哥等国家，让攀钢钒钛产品惠及千家万户。

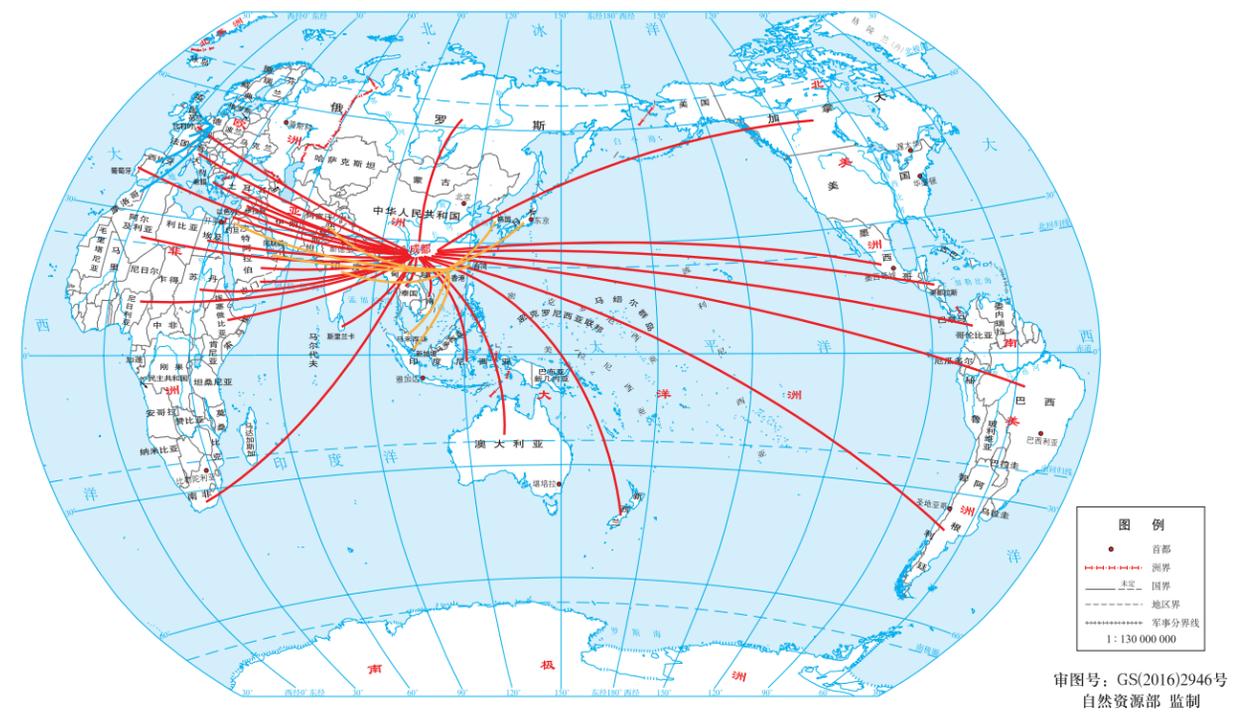


钒钛产品国内市场销售网络
 Sales network of vanadium and titanium products in domestic market

Business profile

The Company has accelerated the development of new products and technologies of vanadium and titanium for high-end applications. It is world leading in terms of vanadium technology, with a series of products such as V₂O₅, FeV80, V₂O₃, vanadium nitrogen alloy and vanadium aluminum alloy. It is also a leader in China in the field of titanium products quality, with a series of products such as titanium dioxide, high titanium slag. The Company has the annual production capacity of 1 million tons of titanium concentrate, 22000 tons of vanadium products (in V₂O₅), 235 thousand tons of titanium dioxide and 225 thousand tons of titanium slag. The civilian-grade vanadium-aluminum alloy has been sold in batches of 100 tons, and the 600 tons / year vanadium aluminum alloy production line has been certified by the Quality Management System.

Our products are widely used in steel industry, electronic industry, non-ferrous metals, chemical industry, coatings and inks. These products have brought benefits to countless households as they are exported to countries like the United States, the United Kingdom, Canada, Russia, Italy, the United Arab Emirates, the Philippines, Algeria, the Netherlands, South Korea, Japan, India and Mexico.



钒钛产品国际市场销售网络
 Sales network of vanadium and titanium products in global market

社会责任管理 CSR Management

实质性议题识别 Identification of material topics

攀钢钒钛通过行业背景分析、政策趋势分析等，在充分了解利益相关方期望与诉求的基础上，识别重要议题并绘制实质性议题矩阵，全面披露企业社会责任信息。

After the analysis of industry background and policy trend and the full understanding of the expectations and demands of stakeholders, we identify important issues and draw material topics matrix to fully disclose CSR information.



利益相关方管理 Stakeholder management

攀钢钒钛深化利益相关方沟通策略，深入了解和回应利益相关方的期望和诉求，促进各方参与，以实际行动为利益相关方创造价值，实现多方共赢。

We have improved our stakeholder communication strategy in response to the expectations and demands of stakeholders. We strive to engage all parties, create values for stakeholders in practical ways and achieve all-win results.

利益相关方沟通 Stakeholder communication

利益相关方 Stakeholders	期望与要求 Expectations and demands	沟通方式 Communication modes	我们的回应 Our responses
<p>政府 The government</p>	<ul style="list-style-type: none"> 依法纳税 促进就业 守法合规 Taxation according to law Job creation Legal compliance 	<ul style="list-style-type: none"> 高层会晤 交流会 信息报送 地企专职联络机构 High-level meeting Exchange meeting Information submission Full time liaison organization of local enterprises 	<ul style="list-style-type: none"> 主动纳税 增加就业岗位 依法合规治企 Active tax payment Job creation Law-based governance
<p>股东 Shareholders</p>	<ul style="list-style-type: none"> 提高企业盈利能力 提高投资项目回报率 提质增效 安全生产 Improving profitability Increasing the return rate of investment projects Quality and efficiency improvement Work safety 	<ul style="list-style-type: none"> 股东大会 信息披露 经营业绩考核 投资者沟通交流 Stockholders' meeting Information disclosure Business performance assessment Investor communication 	<ul style="list-style-type: none"> 保障股东权益 加强审计与风险管控 提高创新能力 信息化建设 加强安全生产管理 Protecting shareholders' rights and interests Strengthening audit and risk control Improving innovation ability Informatization Strengthening work safety management
<p>员工 Employees</p>	<ul style="list-style-type: none"> 薪酬福利保障 职业发展 人文关怀 安全与权利保护 沟通与民主管理 Compensation and benefit guarantee Career development Humanistic concern Safety and rights protection Communication and democratic management 	<ul style="list-style-type: none"> 职工代表大会 座谈会 网络沟通 合理化建议 信息公开 Workers' Congress Seminar Network communication Incentive suggestion Information disclosure 	<ul style="list-style-type: none"> 提供有竞争力的薪酬 开展职业教育培训 建立职业发展通道 关爱员工及家庭 提供防护设备设施与安全培训 Providing competitive compensation Carrying out vocational education and training Establishing career development channels Caring for employees and their families Providing protective equipment and safety training



利益相关方 Stakeholders	期望与要求 Expectations and demands	沟通方式 Communication modes	我们的回应 Our responses
 客户 Customers	<ul style="list-style-type: none"> 信守承诺 质高价优的产品和服务 个性化服务 信息保密 Honoring commitments Products and services with high quality and better price Personalized services Confidentiality of information 	<ul style="list-style-type: none"> 销售代表日常联络 展销会 客户大会 定期走访 征求意见 Daily contact with marketing representatives Exhibition Customer Conference Regular visits Soliciting opinions 	<ul style="list-style-type: none"> 关注客户需求 强化质量管理 提高服务能力 产品创新 加强与客户沟通交流 重视客户信息保护 Focusing on customer needs Strengthening quality management Improving service capability Product innovation Strengthening communication with customers Paying attention to customer information protection
 环境 The environment	<ul style="list-style-type: none"> 节约资源 污染防治 减少废弃物排放 应对气候变化 保护生态环境 Saving resources Pollution prevention Reducing waste discharge Tackling climate change Protecting the environment 	<ul style="list-style-type: none"> 环境管理 资源再生与利用 落实节能减排 加强生态建设 Environmental management Resource regeneration and utilization Energy conservation and emission reduction Strengthening efforts on ecological protection 	<ul style="list-style-type: none"> 开展能源和水资源管理 进行污染防治 提高废弃物利用率 创新绿色工艺及产品 推进厂区绿化 践行绿色办公 Energy and water resources management Pollution control Improving waste utilization rate Innovative green technologies and products Promoting plant greening Green office
 供应商 Suppliers	<ul style="list-style-type: none"> 诚实守信 政策稳定 公开、公平、公正 互利共赢 Integrity Policy stability Open, fair and just principle Win-win cooperation 	<ul style="list-style-type: none"> 现场考察 合同谈判 定期走访 招标会议 征求意见 Site visit Contract negotiation Regular visits Tender meeting Soliciting opinions 	<ul style="list-style-type: none"> 信守合同 平等协商 实施阳光采购 公开采购信息 合规采购 Honoring the contract Equal consultation Sunshine procurement Public procurement information Compliant procurement
 行业、协会组织 Industry associations	<ul style="list-style-type: none"> 公平竞争 行业发展与进步 Fair competition Industry progress 	<ul style="list-style-type: none"> 加入协会并担任职务 参与同行研讨、交流 Joining an association and holding a post Participating in peer discussion and exchange 	<ul style="list-style-type: none"> 参与标准制定等活动 参加展会、交流会 开展政企、校企等多方合作 Participating in standard formulation and other activities Attending exhibitions and exchange meetings Launching government-enterprise cooperation and university-enterprise cooperation
 社区、公众与媒体 Communities, the public and media	<ul style="list-style-type: none"> 支持社区发展 可持续发展 成为履行社会责任的模范 信息公开、透明 Supporting community development Sustainable development Being a CSR model Open and transparent information 	<ul style="list-style-type: none"> 社区共建 共同开发项目 定期交流 媒体沟通 Contributing to community development Joint development of projects Regular communication Media communication 	<ul style="list-style-type: none"> 投身社区建设 支持文化建设 参与公益志愿活动 及时发布企业相关信息 Engagement in community development Supporting cultural progress Participating in voluntary activities Releasing relevant information of the Company in time

参与协会 (按协会类别排序)

Associations involved (sorted by category)

协会名称 Association	会员等级 Membership level
中国上市公司协会 China Association for Public Companies	会员 Member
四川省上市公司协会 The List Company Association of Sichuan	会员 Member
国际钒技术委员会 Vanitec	副会长 Vice president
中国钢铁工业协会钒业分会 China Vanadium Association	轮值会长 Rotating president
四川省钒钛钢铁产业协会钒(钛)业分会 Vanadium (Titanium) Branch of Sichuan Vanadium Titanium Iron and Steel Industry Association	会长 President
攀枝花市钒钛产业协会 Panzhihua Association of Vanadium Titanium Industry	会长 President
中国涂料工业协会 China National Coatings Industry Association	常务理事 Executive member
中国涂料工业协会钛白粉行业分会 Titanium Dioxide Industry Branch of China Coatings Industry Association	常务副理事长 Vice executive director
钛白粉产业技术创新战略联盟 Strategic Alliance of Technology Innovation of Titanium Dioxide Industry	副理事长 Vice president
中国有色金属工业协会 China Non-Ferrous Metals Industry Association	常务理事 Executive member
中国有色金属工业协会钛锆铪分会 China Non-Ferrous Metals Industry Association Titanium Zirconium & Hafnium Branch	副会长 Vice president
《钛工业进展》理事会 Council of Titanium Industry Progress	副理事长 Vice president
四川国际商会 Sichuan Chamber of International Commerce	理事 Member
四川省质量监督协会 Sichuan Quality Supervision Association	副会长 Vice president
四川省危险化学品协会 Sichuan Hazardous Chemicals Association	会员 Member
重庆市安全生产协会 Chongqing Association of Work Safety	会员 Member
重庆市环境与生态监测协会 Chongqing Association for Environmental and Ecological Monitoring	会员 Member
重庆市名牌协会 Chongqing Brand Association	会员 Member
重庆市标准化协会 Chongqing Association for Standardization	会员 Member
重庆市高新技术企业协会 High-Tech Enterprises Association Of Chongqing City	会员 Member



可持续发展目标 The United Nations 2030 SDGs

攀钢钒钛积极参与国内外可持续发展事务，加快推进《联合国2030年可持续发展议程》，助力联合国2030可持续发展目标的实现。

The Company actively participates in sustainable development affairs at home and abroad, accelerates the implementation of the United Nations 2030 Agenda for Sustainable Development so as to facilitate the realization of UN 2030 SDGs.

目标 SDGs	行动进展 Process
<p>目标 1 在全世界消除一切形式的贫困 SDG1. End poverty in all its forms everywhere</p>	全年共投入 976.02 万元，实施 12 个扶贫项目，对口帮扶村全部实现脱贫“摘帽” A total of 9.7602 million yuan was invested in the whole year in 12 poverty alleviation projects and all villages were lift out of poverty.
<p>目标 2 消除饥饿，实现粮食安全，改善营养状况和促进可持续农业 SDG2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	修建大型养殖场，为当地村民持续增收致富、壮大村集体经济提供了强有力支撑 We built a large pig farm, which helps local villagers to increase their income and boost the rural collective economy.
<p>目标 3 确保健康的生活方式，促进各年龄段人群的福祉 SDG3. Ensure healthy lives and promote well-being for all at all ages</p>	投入资金援建卫生设施；实施环境改善项目；定期开展职业病危害因素检测与监测，实现员工职业健康检查率 100%、员工体检及健康档案覆盖率 100%、岗位尘毒合格率 100% Funds have been invested to build health facilities and several environmental improvement projects have been carried out. The detection and monitoring of occupational hazards are conducted on a regular base, with the occupational health examination for all employees, physical examination and health records for all employees, and all positions qualified for dust and poisonous gas control.
<p>目标 4 确保包容和公平的优质教育，让全民终身享有学习机会 SDG4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p>	为困难职工子女发放助学金；开展盘州六一儿童公益活动 We awarded grants to the children of workers in need and launched public benefit activities for children on June 1 in Panzhou.
<p>目标 5 实现性别平等，增强所有妇女和女童的权能 SDG5. Achieve gender equality and empower all women and girls</p>	遵守相关法律法规，恪守非歧视的用工政策，招录人员坚持“男女平等、民族平等”原则；关爱女性员工，维护女性特殊权益，保障女性员工身心健康 Sticking to laws and regulations, we abide by the non-discriminatory employment policy and follow the recruitment principle of "equality in gender and nationality"; we care for female employees, safeguard the special rights and interests of women and ensure both their physical and mental health.
<p>目标 6 为所有人提供水和环境卫生条件并对其进行可持续管理 SDG6. Ensure availability and sustainable management of water and sanitation for all</p>	开展固体废弃物处理，水环境治理等实践活动，升级节水工艺、节水装备，提升水资源利用率，降低新水消耗，循环水利用率达 95.21% We have carried out solid waste treatment and water environment management, and have upgraded water-saving technology and equipment to improve water utilization rate and reduce new water consumption, increasing the circulating water utilization rate up to 95.21%.
<p>目标 7 确保人人获得负担得起的、可靠和可持续的现代能源 SDG7. Ensuring access to affordable, reliable and sustainable modern energy for all</p>	全面清理高耗能设备，逐步采用新型节能电器设备，加强生产日常耗能设备监控，做好余热余能回收利用，全年节能 1850 吨标煤 We replace high energy consuming equipment with new energy-saving electrical equipment, strengthen the monitoring of energy consuming equipment in production, and pay attention to the recycling of waste heat and energy, which saved 1,850 tons of standard coal in the whole year.

目标 SDGs	行动进展 Process
<p>目标 8 促进持久、包容和可持续的经济增长，促进充分的生产性就业和人人获得体面工作 SDG8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	完成各类人才培训 30476 人次，开展劳动竞赛 20 项 We carried out talent trainings for 30,476 employees and 20 labor competitions.
<p>目标 9 建造具备抵御灾害能力的基础设施，促进具有包容性的可持续工业化，推动创新 SDG9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	实施科技创新、科技创业，完善科技管理机制，加大科研经费投入力度，推动工艺技术优化升级、新产品开发及产品品质提升 We implement innovation and entrepreneurship based on technology. We work hard to improve the technological management mechanism and increase the investment in scientific research, aiming to promote the optimizing and upgrading of process and technology as well as the development of new products, and the improvement of product quality.
<p>目标 10 减少国家内部和国家之间的不平等 SDG10. Reduce inequality within and among countries</p>	开展社区发展和公益项目，帮助社区实现可持续发展。2020 年援助境外客户口罩 2.47 万个 We launch community development and public welfare projects to help communities achieve the sustainable development. In 2020, we offered 24,700 masks for overseas customers.
<p>目标 11 建设包容、安全、有抵御灾害能力和可持续发展的城市和人类住区 SDG11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	援建贵州省盘州市响水镇米勒村卫生室，解决村民看病难看病远问题；扩建丹霞镇森林小学操场面积，解决学生上体育课“雨天一身泥，晴天一身土”的情况；帮助帮扶村困难群众进行危房改造，解决了困难群众的住房问题 The Mile village clinic constructed by us in Xiangshui, Panzhou City, Guizhou Province has made it easy for the villagers to see a doctor; the expanded playground of Danxia Forest Primary School offers students better environment for P.E. class; the reconstruction of dilapidated houses has solved the housing problem for poor people.
<p>目标 12 采用可持续的消费和生产模式 SDG12. Ensure sustainable consumption and production patterns</p>	大力开展大气污染综合治理，推动超低排放改造；加强质量过程管控，实现质量管理体系覆盖率 100% We carry out treatments of air pollution and promote the transformation to ultra-low emission; we strengthen quality process control, achieving 100% coverage of Quality Management System.
<p>目标 13 采取紧急行动应对气候变化及其影响 SDG13. Take urgent action to combat climate change and its impacts</p>	通过能源管理体系认证审核，全面清理高耗能设备，降低能耗 We passed the Energy Management System certification and replaced high energy-consuming equipment to reduce energy consumption.
<p>目标 15 保护、恢复和促进可持续利用陆地生态系统，可持续管理森林，防治荒漠化，制止和扭转土地退化，遏制生物多样性的丧失 SDG15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	开展现场综合治理环境提升项目 15 项，加强现场环境整治，厂区已绿化面积 17.61 万 m ² 15 environmental improvement projects have been launched, increasing the green area to 176,100m ² in the plant.
<p>目标 16 创建和平、包容的社会以促进可持续发展，让所有人都能诉诸司法，在各级建立有效、负责和包容的机构 SDG16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	维护员工参与企业民主决策、民主管理、民主监督的权利，深化厂务公开，规范职代会内容和程序，对员工反映的问题及时整改与反馈，鼓励员工为企业改革发展献计献策。收到员工合理化建议 7650 条，采纳实施 6388 条，采纳率 83.5% We protect employees' rights to participate in democratic decision-making, democratic management and democratic supervision of the Company. We keep disclosing factory affairs, standardize the contents and procedures of Workers Representative Congress, give feedbacks to problems reflected by employees, and encourage employees to make suggestions for the reform and development of the Company. We received 7,650 reasonable suggestions from employees, and adopted 6,388 of them, with a rate of 83.5%.



• 实施党建强企工程 —— 助推公司高质量发展

国有企业是中国特色社会主义的重要物质基础和政治基础，是党执政兴国的重要支柱和依靠力量。作为中央企业所属上市公司，攀钢钒钛坚持以习近平新时代中国特色社会主义思想为指导，牢牢把握新时代党的建设总要求，强化党建工作顶层设计，发挥政治优势，大力实施党建强企工程，把“红色基因”融入企业血液，助推公司高质量发展。

Boosting the High-Quality Development by Strengthening Party Building

State-owned enterprises are the important material and political foundation of socialism with Chinese characteristics as well as the key pillar and supporting force for governing and rejuvenating the country by the Party. As a listed company under a central SOE, the Company takes Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era as its guidance, strictly following the general requirements of Party building for the new era, strengthening the top-level design of Party building, giving full play of its political advantages and making great efforts to empower the Company through Party building and integrating the “red gene” into the Company to promote its high-quality development.



2020 年 In 2020

召开党委会

28次

28 Party committee meetings held

研究一般及重大事项

231项

231 Research on general and major issues

开展共产党员工程

32项

32 Party member projects launched

党委书记抓党建项目

13项

13 Party building programs led by Party committee secretary

开展关爱一线员工专项服务行动

20项

20 special actions of caring for front-line staff launched

明确任务，压实“责任清单”

Making clear tasks to ensure full implementation of “responsibility list”

明确各层级责任是工作顺利开展的首要前提。公司党委推行“工作清单制”，压紧压实党建责任。

Make clear responsibilities at all levels is the first prerequisite for smooth work. The Company's Party committee implements the “work list system” to strengthen the Party building responsibility.

“建单明责”，建立公司党委 + 党群工作部 + 基层党委（总支）+ 党支部 + 党员五级责任管理体系，明确工作重点。

“Establish the list to clarify responsibilities”. To make clear the focus, the Company sets up a five-level responsibility management system, consisting of the Company's Party committee, Party and mass Department, community-level Party committee (general branch), Party branch, and Party members.

“照单履责”，细化分解各党支部任务，实现党建工作清单化、项目化、责任化、节点化。

“Perform responsibilities according to the list”. Divide Party building tasks and responsibilities for each Party branch and include into lists and projects.

“按时督责”，每月召开党群工作专题会，通报月度党建工作任务清单执行情况完成效果，落实跑单脱单“问责”。

“Supervise responsibility on time”. Hold a special meeting on Party mass work every month to notify the progress and result of the monthly Party building task list. Behaviors that fail to perform the responsibility will be held accountable.

示范引领，打好打赢攻坚战

Setting an example to win the battles

充分发挥党员的先锋模范作用是打好攻坚战的关键所在。围绕打好生存保卫战和“4711”专项行动，针对生产经营的重点难点，成立党员突击队攻克生产瓶颈，开展“我为提质增效献一策”合理化建议活动，选树先进党员责任区、党员先锋岗，做到一名党员一面旗，一个支部一堡垒，以实际行动打好疫情防控、生存保卫、改革攻坚等战役，为公司高质量发展提供坚强的政治保障、组织保障。

Giving full play to the model role of Party members is the key to win the battle. The Company has set up a Party member team to tackle the bottleneck in production while fighting for survival and focusing on “4711” Special Action and the company's difficulties in production and operation. We carried out the activity of “My advice to improve quality and efficiency” and selected zones with excellent Party members and set up Vanguard post; We set a party member as a banner, a branch as a fortress, take practical actions to fight battles for pandemic prevention and control, for corporate survival and reform, providing a strong political and organizational guarantee for the Company's high-quality development.

共聚同心，释放党建新活力

Working together to unleash new vitality of Party building

提升组织力是党建工作的重中之重。公司党委以“强基、拓面、提质、创新”为要求，推动党建工作向“有效覆盖”转变。发挥党建共建优势集聚效应，参与15个党组织建设，协调解决问题50余项；创新探索“党建+”模式，打造“党建+A级示范作业区”“党建+销售提速”“党建+质量提升”等12个品牌，党建带工建和团建，释放党建工作活力。

Enhancing the power of Party branches is the top priority of Party building. Based on the requirements of “strengthening the foundation, expanding the scope, improving the quality and innovating”, the Company's Party committee promotes the transformation of Party building to “effective coverage” and participate in 15 Party organizations and coordinate and solve more than 50 problems; exploring the “Party building +” mode and creating 12 brands including “Party building + A-level demonstrative operation area”, “Party building + sales acceleration”, “Party building + quality improvement”. Party building can boosting the building of union and team, thus unleashing the vitality of Party building.



案例 Case

多途径构建党建共建平台

Various ways to form Party building platforms

组团式共建，构建“地企沟通型”党建共建。攀枝花钒厂党委与攀枝花市东区生态环境局党组签订“联创共建”协议书，开展共育党员、共听党课、共创先进、共享资源、共谋发展活动，以绿色发展成果体现党建工作成效。

区域化联建，构建“互助互促型”党建共建。研究中心党支部诚邀党建共建企业成都菲斯特专家团队来渝进行党建工作经验交流和钛白粉在塑料应用领域中的技术交流；钛冶炼厂党委与兴中钛业公司签署《2020年“党建联创共建”协议书》，进一步密切合作关系。

Formed by regional efforts, the Party building platform acts as a way for mutual assistance and promotion. The Party committee of Panzhihua Vanadium Products Factory and the Party group of Ecological Environment Bureau of East district, Panzhihua city signed the agreement of joint building. By carrying out activities of jointly educating Party members, attending Party lessons, striving for advanced groups, sharing resources and seeking development, they show the results of Party building through green development.

Formed by joint efforts, the Party building platform serves as a way of communication between enterprises and the local government. The Party branch of Research Center

invited the expert team of Fscreen in Chengdu, a member of the Party building alliance, to Chongqing for Party building experience exchange and technology exchange of titanium dioxide in the field of plastic application; the Party committee of Titanium Smelting Factory and Xingzhong Titanium Industry Co., Ltd. signed the 2020 Joint Party building Agreement to further strengthen their cooperation.



钛冶炼厂与兴中钛业公司签订党建联创共建协议书
Titanium Smelting Factory and Xingzhong Titanium Industry Co., Ltd. signed the 2020 Joint Party building Agreement



• 用责任筑牢抗疫防线 ——以担当强化生产运营

庚子之春，新冠肺炎疫情突然来袭。攀钢钒钛深入学习、贯彻习近平总书记关于打赢疫情防控的人民战争、总体战、阻击战的重要指示精神和党中央决策部署，确保国资委、省、市各项工作部署落地落地；以严细实的工作作风抓好疫情防控工作，全力以赴打好疫情防控阻击战，众志成城做到疫情防控有序、生产经营平稳。

Shouldering Responsibilities to Form Defense Lines Against the Pandemic and Enhance Production & Operation

The novel coronavirus pneumonia suddenly came at the start of 2020. The Company made a thorough study of the important instructions made by Xi Jinping on wining the people's all-out war against the virus and the decisions of the Central Committee of the Party, and ensured the implementation of all work plans from SASAC, the provincial and municipal governments. We do our best to fight the virus with strictness, carefulness, striving to guarantee stable production and operation.



责任故事
Feature

最美“守门人”——蒋茜英
The most conscientious "gatekeeper" -- Jiang Xiying

作为西南地区的大型企业，我们担当企业公民责任，2020年，发动党员为疫情防控捐款超过13万元。积极引导员工发扬不畏艰险、无私奉献的精神，发起志愿者援助倡议，组织志愿者参与社区排查和防控工作。

蒋茜英是攀枝花钒厂一名普通女工，也是攀枝花市东区志愿者协会会员、攀钢青年志愿者协会会员。在抗击新冠疫情的阻击战中，她在积极配合厂、作业区扎实做好各项防控工作的同时，主动放弃休息时间，自愿加入攀枝花东区攀北社区疫情防控志愿者队伍。

从1月下旬起，蒋茜英在疫情最肆虐的日子里，每一天都在兼职岗位上恪尽职守，用心做事。截至3月中旬，她累计询问、登记出入车辆、人数10000多次，义务测量体温15000余次，为社区楼栋张贴疫情宣传、预防资料700余份，为社区居民耐心解说防疫知识180余次……

寒风中的蒋茜英，把个人的安危放在一边，用爱心守护着居民的安全。正是每一个平凡而普通的逆行者，汇聚起磅礴力量，在英雄的攀枝花城谱写出可歌可泣的英雄篇章。

As a large enterprise in Southwest China, the Company act as a responsible corporate citizen to call on Party members to donate more than 130,000 yuan in total for pandemic prevention and control. In 2020, we guided our employees to carry forward the spirit of bravery and dedication, and launched volunteer initiatives, organizing volunteers to assist community-level screening and prevention.

Jiang Xiying is a female worker in Panzhihua Vanadium Products Factory, as well as a member of East District of Panzhihua City Volunteer Association and Pangang Young Volunteer Association. In the fight against COVID-19, she volunteered to give up her vacation time and to join the volunteer team of Panbei community' whilst cooperating with the factory and the operation area for the prevention and control of the pandemic.

Since late January when the pandemic was most raging, Jiang Xiying has devoted herself to her part-time position every day. By mid-March, she had inquired and registered more than 10,000 cars and people, measured body temperature more than 15,000 times, posted more than 700 copies of pandemic propaganda and prevention materials in community buildings, and explained knowledge of pandemic prevention for community residents for more than 180 times.

Jiang Xiying guarded residents with love while leaving her own safety behind. It is every ordinary hero, together with the overwhelming strength that won the final victory in the city of Panzhihua City.

快速响应，加强组织保障
Quick response enhances organizational guarantee

公司第一时间成立疫情防控工作指挥部，下设五个专业工作组，建立疫情日报告、网络舆情24小时监控等制度，形成高效有力机制，科学有序组织防控工作，第一时间传达国家与政府的疫情防控工作部署。

The Company set up the Pandemic Prevention and Control Command Center with five professional panels soon after the outbreak. We formulated the daily report system and 24-hour online public opinion monitoring system, ensuring that pandemic prevention and control was carried out in a scientific, efficient and orderly way and the arrangements of pandemic prevention and control of the state and government were delivered in time.

多措并举，确保防控到位
Multiple measures ensure effective prevention and control

公司全力协调疫情防控消杀物资，全力满足员工防疫防护需求。累计发放150余万元防疫物资，动态加强人员管控，规范做好场所消杀，常态化落实防控措施。开展疫情防控知识宣传，编印《新型冠状病毒感染的肺炎防控知识》小册子，编发《这些疫情警示案例你得知道》等系列宣传材料，并通过“企业文化直通车”等方式传播防疫知识，做到人人掌握疫情防控知识、人人科学防控疫情。

The Company made its utmost efforts to arrange pandemic prevention and control materials so as to meet employees' need. Materials worth more than 1.5 million yuan were distributed, personnel management and control were strengthened, disinfection in public places was strictly done to implement prevention and control measures regularly. We promoted pandemic prevention and control knowledges by compiling the booklet of *Knowledge of Prevention and Control of Pneumonia Caused by New Corona Virus*, and materials like *COVID-19 Cases You Should Know*. We also popularized pandemic prevention knowledge through *Corporate Culture Express* so that everyone can get the knowledge of pandemic prevention and control and practice in a scientific way.



双线作战，稳定生产运营 Two fronts stabilize production and operation

我们确保疫情防控和生产经营“双线作战”稳步推进。坚决实施生存保卫战“十项措施”、特殊时期“4711”专项行动；对氯化钛白厂实行“战时”管控；成立重庆钛业系统提升服务队；聚焦钛冶炼厂生产效率提升等成效显著。全年实现系统降本3.99亿元，超目标1.61亿元；钒产品实现了海外市场占有率、国内出口份额“双提升”，钛白粉出口比例同比增长6%；9项技经指标和16项质量指标以及钒产品、钛白粉、钛渣产量均创历史最好水平。

We ensure the steady progress of the two fronts, both pandemic prevention and control as well as production and operation. We thoroughly conducted the Ten Measures and “4711” Special Action. We implemented “wartime” management on C.P.TiO₂ Factory; a system-improving service team was formed for the Chongqing Titanium Industry Co., Ltd.; Titanium Smelting Factory successfully achieved higher production efficiency. The cost was systematically reduced by 399 million yuan last year, exceeding the target by 161 million yuan. The share of vanadium products improved both in overseas market and domestic export, and the export proportion of titanium dioxide increased by 6% year on year. 9 technical and economic indicators, 16 quality indicators, and the output of vanadium products, titanium dioxide and titanium slag all hit a record level in history.



员工查看电炉运行情况，分析讨论生产数据

The staff are checking the operation of the electric furnace, analyzing and discussing the production data



重庆钛业员工正在窑前压榨岗位卸料

The worker of Chongqing Titanium Industry Co., Ltd. is removing the material before the kiln



案例 Case

重庆钛业的雷神山

Chongqing Titanium Industry Co., Ltd.'s version of Leishenshan

面对疫情，重庆钛业全力做好各项准备工作。短短4天时间建成临时集中居住生活场所——“重庆钛业雷神山”，满足封闭式管理要求。

In the face of the epidemic situation, Chongqing Titanium Industry Co., Ltd. did its best to prepare for the work. It took only 4 days to build a temporary concentrated living area——Chongqing Titanium Industry Co., Ltd.'s version of Leishenshan, which meets the requirement of closed management.





• 守初心打好脱贫攻坚 ——担使命携手共奔小康

消除贫困是联合国2030年可持续发展目标之一，2020年是我国全面打赢脱贫攻坚战收官之年，攀钢钒钛把脱贫攻坚作为公司工作重点，加快定点扶贫项目推进工作。在贵州省盘州市丹霞镇、刘官街道、响水镇，以及四川省甘孜州稻城县、四川省凉山彝族自治州木里藏族自治县和盐源县，实施12个扶贫项目，高质量完成各项扶贫任务。

Fighting Against Poverty and Working Together to Achieve Moderate Prosperity

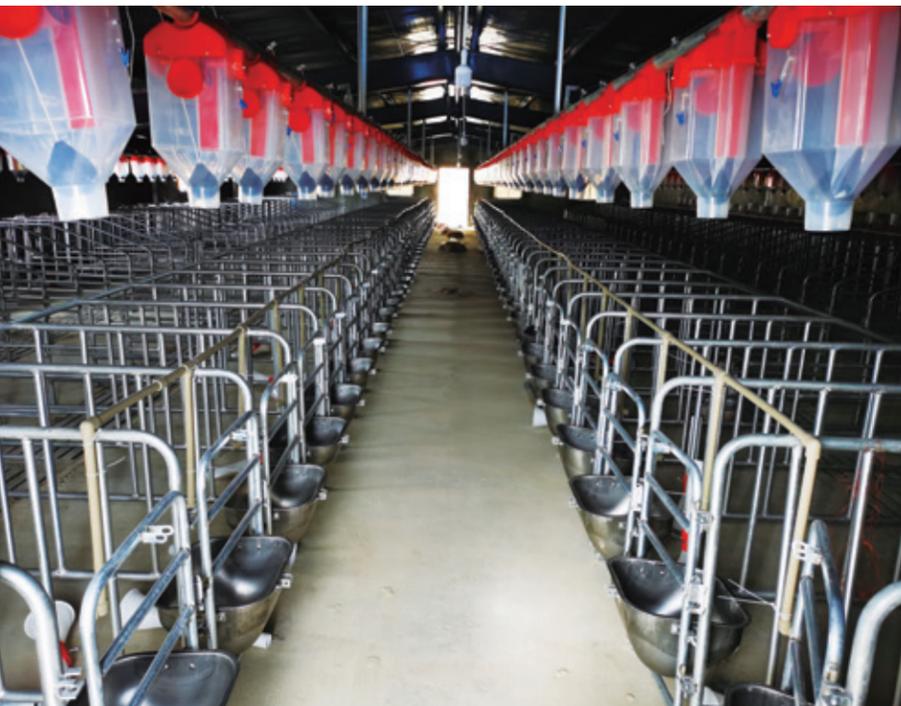
Ending poverty is one of the UN 2030 Sustainable Development Goals (SDGs), while 2020 is the final year for China to win the battle of poverty alleviation in all aspects. The Company took poverty alleviation as a focus, and speeded up the progress of poverty alleviation projects. 12 poverty alleviation projects were carried out and completed with high quality in Danxia Town, Liuguan Subdistrict, and Xiangshui Town, Panzhou, Guizhou Province, Daocheng County, Ganzi Prefecture, Sichuan Province, Muli Tibetan Autonomous County and Yanyuan County, Liangshan Yi Autonomous Prefecture, Sichuan Province.

责任故事
Feature

小村寨里建起大型养猪场
A large pig farm built in a small village

盘州市刘官街道淹五寨村是两级集团公司对口帮扶村，帮扶前村集体平均年收入不到5万元，一直靠“输血”过日子。修建大型养殖场，是攀钢钒钛帮助淹五寨村村民走出贫困、走上持续致富路的一大实践。攀钢钒钛出资援建养猪场项目，年可出栏猪崽2.4万头。与贵州省猪保姆公司签订为期10年的战略租赁协议，由该公司负责养猪场的运营管理。采用“龙头企业+合作社”协同发展及“政府引导、企业经营、农户受益”的三位一体发展模式，形成利益联结机制，村集体将迈入年收入“百万元”时代，为村民们带来实实在在的好处，为当地巩固脱贫成效、乡村振兴发展提供有力支撑。

The Company gave partner assistance to Yanwuzhai village in Liuguan Subdistrict, Panzhou. The average annual collective income of the village was less than 50,000 yuan, and it had been living on government subsidy before our assistance. The construction of large-scale livestock farm was a major practice of the Company to help the villagers out of poverty and to embark on the road to sustained prosperity. We invested in the construction of pig farm project, which can produce 24,000 piglets per year. We signed a 10-year strategic lease agreement with a professional pig breeding company, which is responsible for the operation and management of pig farms. We adopted the "leading enterprise + cooperative" collaborative development, and the trinity development mode of "government guidance, enterprise management and farmers benefit", the annual collective income of the village collective will enter the era of "one million yuan" and bring real benefits to the villagers. It will provide strong support for the local government to consolidate the effectiveness of poverty alleviation and Rural Revitalization and development.



养殖场喂料系统
Feeding system



建成后的养殖场
The pig farm



交付仪式
Delivery ceremony

助力脱贫攻坚
Contributing to poverty alleviation

攀钢钒钛针对帮扶项目开展技术培训，培养一批电工、焊工、维修工等实用技术人才和培养基层干部；援建丹霞镇森林小学运动场，进一步改善学校的教学和体育条件，保证学校教学活动的正常开展；优先采购贫困地区产品，支持定点帮扶地区产业发展。

The Company carried out technical training for supporting projects, including a group of technical talents such as electricians, welders, maintenance workers, and community-level officials. The sportsground of Danxia forest primary school was built to ensure and further improve the hardware for teaching and sports. Priority is given to purchasing products from poor areas, as a support for the industrial development of assisted areas.

热心公益事业
Supporting public welfare activities

公司积极参与社会公益，热心慈善事业，大力实施扶贫帮困项目，在重大自然灾害中全力开展救援，组织助学、助老、助残等社会救助活动及其他社会公益活动。

The Company participates in public welfare activities through implementing poverty alleviation projects, carrying out rescue in major natural disasters, and organizing assistances to students, the elderly and the disabled.



组织来自淹五寨、瞿家庄的 13 名小朋友到盘州红二六军团会议会址陈列馆参观

Organize 13 children from Yanwuzhai and Qujiazhuang to visit the exhibition hall of the 26th Red Army conference site in Panzhou

青年志愿者
238名
238 young volunteers

开展各级志愿服务活动
136人次
136 participants in volunteer activities at all level

带动当地发展
Driving local development

我们以赤子之心回报社会，秉承“休戚与共、合作共赢”的宗旨，在同等条件下优先与攀枝花市本地企业开展多形式合资合作，携手构建共生共赢产业链生态圈，提能增效助推产业发展，促进攀枝花市经济发展与进步。

持续助力打造“攀钢航母舰队”。我们积极融入“成渝地区双城经济圈”国家战略，紧紧抓住攀枝花市“两城”建设机遇，主动与相关单位互通信息，形成工作合力；设立专项工作组并针对项目“一项一议”，顺利推进“航母舰队”起航；加强与优秀供销及协作企业的深度合作；加快配套工程建设，满足生产需求。本地采购约4.8亿元，较2019年增长3.5%。

We give back to the society with our original aspirations. We give priority to joint investments and cooperation with local enterprises in Panzhihua City on equal conditions so as to form a win-win industrial chain and ecosystem through co-construction, in order to boost industrial development and promote economic development in Panzhihua City.

We make constant efforts to create the "Pangang development team". We integrate ourselves into the national strategy of Chengdu-Chongqing economic circle and seize opportunities to exchange information with relevant units so as to form a joint work force; we set up a special panel to carry out deliberation for each project. We strengthen in-depth cooperation with excellent supply and marketing partner enterprises and at the same time accelerate the construction of supporting projects to meet the production requirement. Local procurement reached around 480 million yuan, with an increase of 3.5% over 2019.

竞争在市场竞争 力在现场



• 瞄准综合利用 —— 聚焦技术创新

钒钛的应用前景广阔，极具发展潜力。攀钢钒钛紧抓机遇，坚持创新驱动发展，加大科技投入力度，坚持科技兴企，着力突破关键领域技术难题。开展关键技术攻关，加快推进科技成果转化，形成钒钛特色产业集群，培育钒钛磁铁矿综合利用全流程的竞争优势，提升品牌影响力和市场竞争力。积极贯彻“科学技术就是生产力”的思想理念，切实做好各种资源要素的分析、利用与整合工作，努力推动钒钛产业高质量发展，提高产业链整体效能。

Aiming at Comprehensive Utilization and Focusing on Technological Innovation

Vanadium and titanium have broad application prospects and great potentials. The Company seizes opportunities, adheres to innovation driven development, increase investment in science and technology, and make constant efforts to break through the technical problems in key fields. We carry out key technology research, accelerate the transformation of scientific and technological achievements to form a vanadium & titanium industry cluster, cultivate the competitive edge of whole-process comprehensive utilization of vanadium titanium magnetite, and enhance brand influence and market competitiveness. Based on the idea that “science and technology is productivity”, we work hard on the analysis, utilization and integration of various resource elements, strive to promote the high-quality development of vanadium and titanium industry, and improve the overall efficiency of the industrial chain.



责任故事
Feature

创新不止、勇攀科技高峰
Keep innovating and exploring technology

钛白粉是目前世界上性能最佳的白色颜料，也是一种重要的无机化工产品，全球钛白粉生产有硫酸法和氯化法两种工艺技术，其中氯化法钛白代表着钛白行业发展的方向，具有产品质量好、三废排放少、生产效率高优势，是国家积极倡导发展的产业。

攀钢钒钛抓住攀西战略资源创新开发试验区建设的机遇，专注攀枝花钛资源的高端化利用，自主攻克氯化法钛白关键核心技术，开发出的三代氧化反应器，解决了行业普遍面临的技术问题，具备了25天以上长周期稳定运行能力。

攀钢高炉渣是世界上独一无二的资源，其TiO₂含量高达21%~25%，具有很大的开发价值。我们全力推进高炉渣提钛等重大科研项目，首创的高炉渣高温碳化—低温氯化四氯化钛生产工艺技术实现了产业化生产，为氯化法钛白粉生产提供优质、稳定的原料，实现累计8个月达产。

Titanium dioxide is not only the best white pigment in the world, but also an important inorganic chemical product. There are two processes for titanium dioxide production in the world—sulfate process and chloride process, among which the latter represents the future direction of titanium dioxide industry. It is good in quality, discharges less waste while maintaining a high production efficiency, thus it is an industry advocated by the state.

Taking the opportunity of the construction of Panxi Pilot Zone of Innovation and Development of Strategic Resources, the Company focuses on the high-end utilization of titanium resource in Panzhihua. We independently obtained the key technology of titanium dioxide by chloride process, and the third-generation oxidation reactor we developed has solved the common technical problems in the industry, being able to operate stably for a long period of more than 25 days.

Blast furnace slag of Pangang is a unique resource in the world. Its TiO₂ content is as high as 21-25%, which is of great value for development. We have made every effort to promote major scientific research projects such as extracting titanium from blast furnace slag. Our original production technique of high-temperature carbonization—low-temperature chloride process of TiCl₄ has been used in mass production to provide high quality and stable raw materials for titanium dioxide production. Of chloride process, with its output reaching the target for 8 months in total.



攀钢集团钛业有限责任公司荣获“高新技术企业”证书
Pangang Group Titanium Industry Co., Ltd. was awarded as "High-Tech Enterprise"



钛白产品应用研究中心团队入选“2020年重庆英才·创新创业示范团队”
Titanium Dioxide Manufacturing and Application Research Center selected as "Chongqing Talent Innovation and entrepreneurship demonstration team in 2020"

夯实创新基础
Consolidating the foundation of innovation

攀钢钒钛坚定实施科技创新、坚持科技创业。2020年重大关键工艺技术实现新突破，低温氯化实现长周期连续稳定运行；低钙焙烧-碳酸化浸出-碱性沉钒全流程工艺贯通，钠、铵、水可实现循环利用，实现源头固废减量；成功开发出高端钒铝合金及99.0%、99.5%级高纯氧化钒及相关成套产业化技术，新产品研发实现新进展；开发出耐高温钛白R-249、塑料专用氯化钛白CR-340等高档专用钛白新产品，并批量投放市场，得到客户认同，形成连续、稳定销售。与洋紫荆油墨有限公司共同组建了油墨用钛白产品开发联合实验室、与中海油常州涂料化工研究院有限公司共同组建了涂料用钛白产品开发联合实验室，为用户提供更加优质的产品与服务。

2020年，公司研发投入3.8亿元，占营业收入3.59%。公司全资子公司攀钢集团钛业有限责任公司第五次被成功认定为国家高新技术企业，目前公司有三家下属公司为国家高新技术企业。获得省部级科技奖项6项，中国金桥奖1项；合作修定国际标准1项；新增授权专利74项，专有技术2项。

为实现打造成为全球最具影响力的钒产品供应商、钛资源综合利用领军企业愿景，公司围绕“绿色、高效、高值、智能”构建了第三代技术体系实施方案，力争到2030年，钒资源利用率达到60%，非钢领域钒产品应用占比达到8%，钛资源利用率达到55%，以实现持续引领。

The Company works on innovation and entrepreneurship through technology. In 2020, new breakthroughs were made in key technologies; Low-temperature chloride process has been put into long-term nonstop and stable operation, the whole process of low calcium roasting-carbonation leaching-alkaline precipitation of vanadium has been completed, thus sodium, ammonium and water can be recycled to reduce wastes from the source; We have developed high-end vanadium aluminum alloy, 99.0% and 99.5% high-pure vanadium oxide and related sets of industrialized technologies. New progress has been made in new product R&D, including high-end special titanium dioxide products such as heat-resistant titanium dioxide R-249 and chlorinated titanium dioxide CR-340 for plastics use. Having been put into the market in large numbers, these new products have continuous and stable sales since they are recognized by customers. The Company has established the joint laboratory for the development of titanium dioxide products for inks with Bauhinia Ink Co., Ltd., and the joint laboratory for the development of titanium dioxide products for coatings together with CNOOC Changzhou Paint & Coatings Industry Research Institute Co., Ltd., to provide clients with better products and services.

By the end of 2020, the Company has invested 380 million yuan in R&D, accounting for 3.59% of the operating revenue. Pangang Group Titanium Industry Co., Ltd., a wholly-owned subsidiary of the Company, has been recognized as a national high-tech enterprise for the fifth time. The Company owns three subsidiaries as national high-tech enterprises. We have won 6 provincial and ministerial-level tech awards, 1 China Golden Bridge Award; we revised 1 international standard through cooperation and own 74 new authorized patents and 2 proprietary technologies.

In order to become the world's most influential supplier of vanadium products and a leading company in comprehensive utilization of titanium resources, the Company has built the implementation scheme of the third-generation technology system based on the ideas of "green, efficient, high value and intelligent". To maintain as the leading role in the field, we aim to achieve 60% utilization rate of vanadium resources, 8% application rate of vanadium products in non-steel field and 55% utilization rate of titanium resources by 2030.



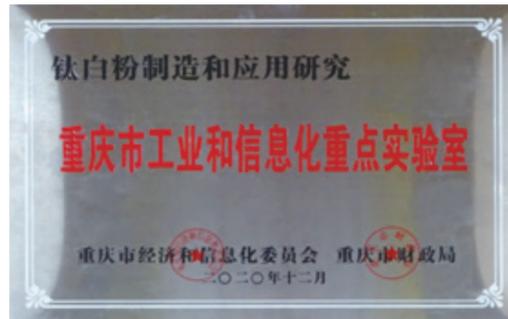
案例 Case

获评省级重点实验室

Awarded as provincial key laboratory

2020年，攀钢钒钛研究中心实验室被评为“钛白粉制造和应用研究重庆市工业和信息化重点实验室”，围绕重庆市工业和信息化领域发展战略目标，开展前沿技术、应用基础研究和重大关键技术、产业共性技术的创新性研究，促进公司高质量发展。

In 2020, the laboratory of Pangang Vanadium & Titanium Research Center was awarded as “Chongqing Key Laboratory of Industrialization and Informatization for Titanium Dioxide Manufacturing and Application Research”. Focusing on the strategic goals of Chongqing’s industrialization and informatization, it has carried out innovative researches on major cutting-edge technologies, basic application, key techniques, and industrial generic technologies so as to promote the high-quality development of the Company.



攀钢钒钛研究中心实验室被评为“钛白粉制造和应用研究 重庆市工业和信息化重点实验室”

The laboratory of Pangang Vanadium & Titanium Research Center was awarded as “Chongqing Key Laboratory of Industrialization and Informatization for Titanium Dioxide Manufacturing and Application Research”



配制产品化验试剂
Preparation of product test reagent

激发创新活力
Stimulating innovation vitality

创新工作室是员工由个体向团队型集成升级，形成攻坚合力，持续进行创新创效的平台。攀钢钒钛以深化员工创新工作室创建为依托，组织召开创新工作室工作推进会，命名并授牌“王泽贵冶炼创新工作室”“蒋贤均青年创新工作室”等10个首批“创新工作室”；成立4个首批“创新工作室联盟”；发布58个创新项目，激发全员创新创效活力。

我们还利用现有创新资源和载体，打造跨界协同创新生态系统，促进科技成果双向转移转化，引领钒钛新材料产业转型升级向中高端发展，提升我国钒钛新材料产业的国际地位和话语权，支撑攀西战略资源创新开发试验区高质量发展。

Innovation Studio is a platform where staff upgrade from individuals to teams forming a joint force for innovation and effect creation. Based on the idea of boosting the development of staff Innovation Studio, the Company held the Innovation Studio promotion meeting to stimulate staffs’ innovation vitality by naming and awarding 10 Innovation Studios including “Wang Zegui Smelting Innovation Studio” and “Jiang Xianjun Youth Innovation



公司党委书记、工会主席李晓宇为首批“创新工作室”授牌
Li Xiaoyu, Party Secretary of the Company, Labor Union Chairman, publiced the first batch of “Innovation Studio” licensing

Studio”, establishing 4 Innovation Studio Alliances and releasing 58 innovation projects.

We also make use of our existing innovation resources and carriers to build a crossover collaborative innovation ecosystem and promote the commercialization and mutual transformation of scientific and technological achievements in the fields of military and civilian. We lead the transformation and upgrading of vanadium and titanium new material industry to be mid-and high-end, thereby enhancing the global status and voice of China in this industry, and supporting the high-quality development of Panxi Pilot Zone of Innovation and Development of Strategic Resources.



创新工作室授牌会议
the Innovation Studio promotion meeting

钒钛资源股份有限公司管控中心



• 促进“两化融合” —— 打造智慧工厂

攀钢钒钛制定产业发展规划和“两化融合”推进规划，推动“数字化与网络化”“一键生产”“远程集控”等智能产线建设，开发生产工艺控制模型，完善信息化管理系统，提高设备作业率和劳动生产率；运用工业互联网、大数据、云计算、人工智能等技术，推动生产、采购、销售、研发、物流、服务、管理等一体化信息体系建设，打造智慧工厂。

Promoting the “Integration of Informatization and Industrialization” for Smart Factories

We have formulated an industrial development plan and promotion plan for the integration of informatization and industrialization, and pushed forward the construction of smart production lines such as the “digitalization and networking”, “one-key production”, “remote and centralized control”. Also, we develop the control model of manufacturing technique, improve information management system, and enhance the equipment operation rate and labor productivity. Through applying technologies such as industrial Internet, big data, cloud computing, and artificial intelligence, we facilitate the construction of information system integrating production, procurement, sales, research and development, logistics, service, and management, so as to develop into a smart factory.



责任故事
Feature

打造国内首条钒氮合金数字化生产线
Building China's first digital production line of vanadium nitrogen alloy

攀枝花钒厂从装备智能化、作业自动化、环境清洁化等方面着手，推进“钒氮合金两化融合示范线”的建设。该示范线融合信息、制造、控制、通信、人工智能和5G等先进技术，率先在国内钒制造领域实现智慧物流传输、生产物料自主运转、产品自动包装、全线集中远控和物流连续自动等功能。

Embarking on intelligence equipment, operation automation, and clean environmental, Panzhihua Vanadium Products Factory is driving the construction of the "Demonstration Line for Vanadium and Nitrogen Alloy Integrating Informatization and Industrialization". The line integrates many advanced technologies including information, manufacturing, control, communication, AI and 5G, and is the first plant in China's vanadium manufacturing field that has achieved intelligent logistics transmission, autonomous operation of manufacturing supplies, automatic packaging of products, centralized remote control of the entire line and continuous automatic logistics.



我们的员工在集成控制室中就能清晰地掌握现场生产过程的重要控制参数变化和物料转运情况，明显提升作业效能，现场作业环境也得到极大改善。

Without leaving integrated control room, workers can clearly grasp variations of important control parameters in the on-site production process and transfers of materials. This has significantly promoted operation efficiency and greatly improved the on-site operation environment.

——钒氮合金作业区白班副作业长 赵基树

Zhao Jishu, Deputy Operation Manager in Day Shift, Vanadium Nitrogen Alloy Operation Area



攀枝花钒厂钒氮合金产线

Vanadium-nitrogen alloy production line of Panzhihua Vanadium Products Factory



案例 Case

重庆钛业打造“两化融合”示范线

Chongqing Titanium Industry Co., Ltd. builds the demonstration line integrating informatization and industrialization

2020年，重庆钛业实施主产线基础自动化升级改造项目，对主产线现有自动化控制系统进行集成升级，新增、改造自动化检测仪表、泵阀、DCS控制系统及视频监控系統，实现主产线设备远程集中操作与运行状态监控、生产工艺及质量数据实时检测。项目建成投运后，关键工序基础自动化和工艺过程控制将得到健全完善，人工干预减少，全流程实现稳定操作与控制，形成“集中操作+巡检维护保养”与“工艺工程师监控+异常处置”的生产管控模式，为产品质量稳定提升奠定坚实基础，提高设备作业率和劳动生产率。

In 2020, by carrying out the basic automation upgrade project on the basic main production line, Pangang Group Chongqing Titanium Industry Co., Ltd. upgrades the main production line of the existing automatic control system, by adding new automatic detection instruments, pumps and valves, DCS control system and video monitoring system, or improving the existing ones. Thereby, the company could operate the equipment on main production lines remotely, and monitor operation status, production process and quality data in a real-time way. As the project put into operation, the basic automation and process control of key processes are further improved, less manual intervention is needed, and the stable operation and control are realized throughout the process. In this way, the company has formed a production control model featured with "centralized operation + inspection and maintenance" and "monitoring by process engineer + troubleshooting". This has laid a solid foundation for stable improvement of product quality, higher equipment operation rate and higher labor productivity.



攀枝花钒厂员工学习 AGV 叉车操作

The staff of Panzhihua Vanadium Products Factory are learning AGV forklift operation

环保宣传活动

保护生态 宣传绿色

主办单位：攀钢钒钛
承办单位：攀钢钒钛



• 保护绿水青山 ——共谋绿色未来

面对新时代生态文明建设的新理念、新要求、新目标和新部署，攀钢钒钛强化生态环境硬约束和超低排放改造，推进资源高效循环利用，持续提升绿色发展能力，为企业可持续发展提供保障。

Protecting the Ecology to Build a Green Future Together

To meet the new ideas, new requirements, new goals and new arrangements of ecological civilization construction in new era, the Company has reinforced the management of ecology and environment and the transformation of ultra-low emissions, promoted the efficient recycling of resources, kept upgrading the green development capacity, in order to guarantee its sustainable development.

责任故事
Feature

钛石膏资源化综合利用
Comprehensive utilization of titanium gypsum

钛石膏是生产硫酸法钛白粉时，为处理酸性废水而产生的以二水石膏为主要成分的废渣。以往采用渣场堆存方式处理，占用大量土地且消耗巨额堆场建设维护费，不利于环境可持续发展。

为发展循环经济、实现钛石膏资源综合利用，重庆钛业于2020年投入3146万元，开展钛石膏资源综合利用建设项目。该项目针对硫酸法钛白粉生产特点，建设钛石膏烘干装置，将废水中和产生的钛石膏烘干至可作为原料用于水泥缓凝剂，实现固废资源再利用。项目实施后每年可减少约42万吨固体废物堆存，助力“无废城市”建设。

Titanium gypsum, a waste slag with gypsum dihydrate as the main component, is the by-product of the treatment of acidic wastewater in the production of titanium dioxide by the sulphuric acid process. In the past, it was disposed of by means of dumps, which took up a lot of land and consumed a large amount of money for the construction and maintenance of the dumps, not conducive to environmentally sustainable development.

Seeking to develop circular economy and realize comprehensive utilization of titanium gypsum resources, Pangang Group Chongqing Vanadium & Titanium Technology Co., Ltd. invested 31.46 million yuan for the comprehensive utilization of titanium gypsum resources construction project in 2020. In response to the characteristics of titanium dioxide production by sulphuric acid process, the project constructs the drying plant for titanium gypsum, whereby the titanium gypsum generated from wastewater neutralization is dried until it can be used as raw material for cement retarder, thus realizing the reuse of solid waste resources. About 420,000 tons of solid waste can be reduced each year upon the implementation of the project, thereby contributing to the construction of a “waste-free city”.



美丽的重庆钛业厂貌
Beautiful appearance of Chongqing Titanium Industry Factory

环保资金投入约

1.4 亿元

About 140 million yuan is invested in environmental protection

完成节能指标

0.61 tce/万元

0.61 tce/10,000 yuan energy saving target is completed

环境污染事件为

0

0 environmental pollution incident

安全环保教育培训 覆盖

3352 人次

3,352 safety and environmental protection education and training (person-time)

加强环境管理
Strengthening environmental management

攀钢钒钛通过QES三标体系（质量管理体系、环境管理体系、职业健康安全管理体系）审核认证，攀枝花钒厂、东方钛业、钛冶炼厂评为“环保诚信企业”，重庆钛业评为“环保良好企业”。完善环境管理体系，形成横到边、纵到底的环保管理网络，对主要环保指标、重点环保项目进行责任考核，层层分解落实目标责任；建立健全环保督查机制，落实风险责任；制定环境监测方案，严格按照要求定期开展监测并向社会公开；编制突发环境事件应急预案和现场处置方案，定期组织演练并实施修改。

The Company has been certified by the QES system (Quality Management System, Environmental Management System, and Occupational Health and Safety Management System). Panzhihua Vanadium Products Factory, Panzhihua Dongfang Titanium Industry Co., Ltd. and Titanium Smelting Factory were awarded as Credible Enterprise for Environmental Protection, and Chongqing Titanium Industry Co., Ltd. was awarded as Excellent Enterprise for Environmental Protection. We further refine the environmental management system, forming an environmental protection management network across the board and to the bottom, assess the responsibility for major environmental protection indicators and key environmental protection projects, and divide and materialize the responsibilities at every level. We have established a sound mechanism for supervision and inspection of environmental protection and have put in place risk responsibilities. A monitoring program for the environment is in place and the monitoring is strictly required to be carried out regularly and disclosed to the public. Also, we have prepared emergency response plans and on-site disposal plans for environmental emergencies, periodically held drills and revised plans.



北海铁合金绿化
Virescence of Beihai Special Ferroalloy Co., Ltd.

应对气候变化 Addressing climate change

公司开展节能减排工作，制定五年规划，应对气候变化国家战略，为我国如期实现碳达峰承诺贡献力量。公司加强能源设备管理，及时进行技术改造和更新、装备提升、优化生产组织和动力系统，提高能源利用率，层层核定各项能源消耗定额。

We work on energy conservation and emission reduction, formulate the five-year plan, in order to cope with the national strategy of climate change, and help China to peak its CO₂ emissions on schedule. Accordingly, we have strengthened the management of energy equipment, upgraded technology and equipment, optimized the production organization and power system in a timely manner, improved energy utilization, and approved various energy consumption quotas at different levels.

万元产值温室气体排放量 (吨 / 万元) Greenhouse gas emission of 10 thousand yuan output value(ton/10,000 yuan)		
2018 年 Year 2018	2019 年 Year 2019	2020 年 Year 2020
1.189	1.176	1.285

公司顺利通过 能源管理体系认证审核

Obtain the Energy Management System Certification

全年节能

1850 吨标煤

1,850 tons of standard coal is saved throughout the year

推进清洁生产 Promoting clean production

公司开展大气污染综合治理，推动超低排放改造，重点实施攀枝花钒厂烟气(汽)治理和重庆钛业锅炉超低排放改造等项目。开展废水治理及回收利用工作，实施攀枝花钒厂废水处理系统升级改造、厂区雨污分流完善、生活污水回用系统改造等项目。推行节水工艺、节水装备，不断提升水资源利用率，降低新水消耗。

We carry out comprehensive treatment of air pollution, push forward the transformation of ultra-low emission, with emphasis on projects such as the treatment of flue gas (steam) of Panzhihua Vanadium Products Factory and boilers transformation of ultra-low emission in Chongqing Titanium Industry Co., Ltd.. We also work on the wastewater treatment and recycling, and perform several projects such as upgrading the wastewater treatment system of the Panzhihua Vanadium Products Factory, optimizing the diversion of rainwater and sewage in the factory, and renovating the reuse system of domestic wastewater. By introducing water-saving technology and equipment, we continuously improve water utilization rate and reduce the consumption of water.



煤气回收项目
Gas Recovery Project

循环水利用率达到

95.21 %

Circulating water utilization rate up to **95.21**%

厂区已绿化面积

17.61 万m²

176,100 m² of factory area has been greened



东方钛业绿化
Greening of Dongfang Titanium Industry Co., Ltd.

所有钒系统企业实现
废水零排放

Zero waste water discharge from all vanadium-related enterprises

各项排放总量指标均**达标**，
无超标情况

All emission targets are met

钛冶炼厂通过**四川省清洁生产审核**，氯化钛白厂通过**攀枝花市清洁生产审核**，北海铁合金通过**北海市“健康企业”评审**。

Titanium Smelting Factory is accepted by Sichuan Province, while Titanium Smelting Factory is accepted by Panzhihua City and Pangang Group Beihai Special Ferroalloy Co., Ltd. is certified as a "Clean Enterprise" by Beihai City.

废副资源综合利用 Comprehensive utilization of waste and by-product resources

公司开展硫酸钠资源化综合利用技术攻关，提升装备适配性；建成硫酸钠制备碳酸氢钠中试平台，开展硫酸钠制备碳酸氢钠和硫酸铵中试研究，通过技术可行性专家评估；开展低温氯化精制尾渣资源化利用攻关，为后期月产尾渣全部处理回收利用能力提供支撑；开展废水污泥综合利用，从中回收的钒资源返回氧化钒生产线使用，将铬资源生产成合格的氧化铬产品。

We start the technical research on the comprehensive utilization of sodium sulfate resources and improve the adaptability of the equipment; build a pilot platform for the preparation of sodium bicarbonate from sodium sulfate and initiate pilot-scale research on the preparation of sodium bicarbonate and ammonium sulfate from sodium sulfate. Their technical feasibility have been evaluated by experts. We have carried out research on the resource utilization of low-temperature chloride process refining tailings, to support the processing and recycling of all monthly produced tailings in the later stage. In addition, we conduct comprehensive utilization of wastewater sludge, from which the recovered vanadium resources are used again in the vanadium oxide production line, and the recycled chrome resources are manufactured into qualified chromium oxide products.



携手合力共赢 ——创造共享新机遇

共促合作共赢，共享发展机遇，共创美好未来。攀钢钒钛携手伙伴共建钒钛产业链互利共赢的长期合作模式，共商为创造人类美好生活提供更优钒钛新材料的解决方案，共谱新时代钒钛新材料发展的崭新篇章，为推动世界钒钛产业高质量发展助力添彩。

Creating and Sharing New Opportunities by Win-Win Cooperation

Together we promote win-win cooperation, share development opportunities and jointly create a better future. We build a mutually beneficial and win-win long-term cooperation model for the vanadium and titanium industry chain together with our partners, and discuss solutions to better vanadium and titanium new materials for the better life of mankind. We will write a new chapter for the development of vanadium and titanium new materials in the new era, and contribute to the high-quality development of the global vanadium and titanium industry.



责任故事
Feature

承托起稳稳的幸福
Supporting the happiness

钒被称为“现代工业的味精”，只需在钢中加入万分之一的钒，就能让钢的韧性、强度大增，增加耐磨性及耐腐蚀性，既耐高温又抗奇寒。

钒在钢中主要应用在400MPa以上高强度钢筋、抗震钢筋等建筑钢筋，涵盖建筑、造船、海洋工程、管线、桥梁、汽车等行业使用的板、带、型钢等高强度结构钢，非调质钢、无缝管、合金结构钢等中碳结构钢，钢轨、线棒材、轴承钢等热轧高碳钢，工具钢、模具钢、高速钢、不锈钢、耐热钢等特殊钢，以及耐磨铸钢及铸铁等领域。

这小小的钒元素正在攀钢钢轨中做出不凡的贡献，助力我国轨道交通的高速发展。攀钢钢轨作为国内唯一获得“国家出口免检”证书的顶级钢轨，已远销全球30多个国家和地区。

Vanadium is known as the MSG of modern industry. It only takes a tiny bit of vanadium to make the steel more resilient, stronger, more wear-resistant and corrosion-resistant, as well as heat-resistant and cold-resistant.

In steel, vanadium is mainly used in the construction reinforcement bars such as high strength rebar and aseismic rebar above 400MPa. It covers the high strength structural steel such as steel plates, strips and sections used in construction, shipbuilding, marine engineering, pipelines, bridges and automobiles; the medium carbon structural steel in non-quenched steel, seamless pipes and alloy constructional steel; the hot rolled high-carbon steel such as rails, wire rods and bearing steel; some special steel such as the tool steel, die steel, high-speed steel, stainless steel, heat-resistant steel and other special steel, as well as wear-resistant cast steel and cast iron.

Vanadium is making extraordinary contribution to Pangang railway steel and support the rapid development of rolling stock in China. As the only top railway steel in China certified as the “National Inspection-Free Products”, Pangang railway steel has been exported to more than 30 countries and regions around the world.

提供优质产品
Providing high quality products

攀钢钒钛和中国主要钢铁公司均有深度合作。为了给客户提供优质产品，公司做到质量管理体系覆盖率100%，并通过认证机构组织的年度监督审核及重点客户组织的第二方审核；加强质量过程管控，确定工序及成品稳质目标，形成产品稳质评价体系。强化工艺纪律检查，尤其是质量关键控制点的管理，确保工艺过程稳定受控。公司主要质量管控指标16项，目标完成率100%，优化率达100%，重点管控指标改善明显。

2020年，攀钢钒钛质量计量检测中心实验室管理体系通过中国合格评定国家认可委员会（简称CNAS）认可，标志着我们在钒和钛产品化学检测领域的检测能力获得国际国内权威认可。

攀钢钒钛将质量管理全面融入生产经营活动中，持续开展技术攻关、质量控制、降本增效等质量项目，加强质量宣传教育，树立员工质量管理意识，提升员工质量管理能力。

We have cooperated profoundly with all major steel companies in China. For the purpose of supplying high quality products, our company has achieved 100% coverage of Quality Management System, and passed the annual supervision audit organized by certification bodies and the second party audit organized by key customers; we have strengthened the monitoring and control of quality process, fixed process, and targeted at stable fine quality, and thereby establishing an evaluation system for product quality. We enforce the inspection of process discipline, especially the key points of quality control, ensuring that the process is stable and under control. Of the 19 main quality control indicators set by the Company, 100% of the target completion rate and 94.74% of the optimization rate have been achieved, and the key control indicators have been improved significantly.

In 2020, the Quality Management System of Pangang Vanadium & Titanium Metrology and Testing Center Laboratory is approved by the China National Accreditation Service for Conformity Assessment (CNAS), signifying that our testing capability in the field of chemical testing of vanadium and titanium products has been recognized by international and domestic authorities.

With quality management fully integrated into production and operation activities, the Company consistently carries out quality projects such as technical research, quality control, cost reduction and efficiency improvement, strengthens quality publicity and education, raises staff awareness of quality management and improves their quality management capabilities.



中国合格评定国家认可委员会
实验室认可证书
Laboratory accreditation certificate from China National Accreditation Service for Conformity Assessment (CNAS)





提升服务品质 Improving service quality

加强客户沟通 Strengthen exchanges with customers

积极开展客户走访交流工作，积极掌握客户需求，收集客户投诉、抱怨等信息，并及时反馈至相关单位进行改进。受疫情影响，上半年客户服务主要通过电话、邮件、QQ、微信等方式进行。

We actively visit and communicate with customers, grasp their needs, collect their complaints, and timely send feedback to relevant department for improvement. Affected by the COVID-19, customer service in the first half of 2020 is mainly conducted by telephone, email, QQ, WeChat and other means.

满足客户需求 Meet customer needs

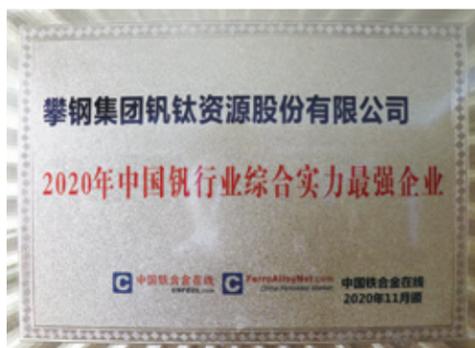
以客户为中心，满足客户对产品质量、品种、规格、标准的要求，追求客户最大程度的满意。2020 年，公司获评中国铁合金在线中国钒铁优质供应商、中国钒氮合金优质供应商和中国钒行业综合实力最强企业。

With customers at the core, we strive to meet their requirements for product quality, varieties, specifications and standards, for the utmost customer satisfaction. In 2020, the company won the high-quality supplier of ferrovanadium in China, high-quality supplier of vanadium nitrogen alloy in China and the most powerful comprehensive enterprise in China vanadium industry rated by Ferro Alloy Net.

客户信息保护 Protect customer information

加强和规范企业秘密管理，保护客户信息，保障企业和客户利益不受侵害。2020 年，未发生客户保密信息泄露。

We reinforce and standardize the management of corporate secrets, strictly protect customer information, and safeguard the interests of enterprises and customers from infringement. In 2020, there was no leakage of customer confidential information.



获评中国铁合金在线中国钒行业综合实力最强企业
Rated as the most powerful comprehensive enterprise in China's vanadium industry by FerroAlloyNet



钛白粉经销商大会
Titanium dioxide dealers conference



案例 Case

再小的订单、再特殊的要求，我们都能满足

We can fulfill even the smallest orders and satisfy the most demanding requirements

攀枝花钒厂根据市场和客户需求生产多种钒精细化工产品。为推广钒在非钢领域的应用，满足客户的特殊要求，钒冶金首席工程师王永钢带领首席工程师团队和作业区相关人员多次对现场工艺和设备进行改进，找到最佳方案。为保质保量、按期交货，钒合金班组的两名班长每天提前两小时到岗组织倒运物料，钒铝合金产线负责人和员工一起加班分选，出色完成交货任务。

Based on market and customer demand, Panzhihua Vanadium Products Factory has a wide range of vanadium fine chemical products. To promote the application of vanadium in non-steel fields and to meet the special requirements of customers, Wang Yonggang, the chief engineer of Vanadium nitrogen alloy, and his team and Operating personnel have repeatedly improved the process and equipment on-site. For quality and quantity assurance and on-time delivery, the two shift leaders of the vanadium alloy team are on duty two hours in advance every day, arranging for the transport of materials. The head of the vanadium and aluminum alloy production line and the



钒冶金首席工程师王永钢（左）和首席团队成员张宣武在查看设备运行状况

Vanadium metallurgy chief engineer Wang Yonggang (the left one) and chief team member Zhang Xuanwu are checking the operation of the equipment

staff work together in overtime for sorting the materials to complete the delivery tasks.



钒系列产品
Vanadium series products



打造可持续供应链 Building a sustainable supply chain

攀钢钒钛制定并依据《供应商管理办法》，加强供应商管理；大力推行阳光采购，营造公平公正的采购竞争环境；建立全生命周期管理体系，持续开展责任采购，提升竞争力，推动产业链上下游履行社会责任。

公司要求供应商具有合法的生产经营资质，具备国家和公司要求必须取得的质量、安全、环保等资格，商业信誉良好、无违法记录，并实施动态管理。

The Company has formulated the *Supplier Management Measures* and strengthened the management of suppliers accordingly. We have vigorously promoted sunshine procurement to create a fair and just procurement competition. In addition, we have established a whole life cycle management system and conducted sustain responsible procurement to enhance competitiveness and the social responsibility engagement from upstream and downstream enterprises of the industrial chain.

Our suppliers need to be legally-qualified producers and operators with good business reputations, zero illegal records, and certifications in quality, safety, environmental protection and other aspects as required by the state and the Company. In addition, we implement dynamic management on our suppliers.

2020 年公司供应商分布 (单位: 家) Distribution of company suppliers in 2020 (unit: The number of suppliers)							
四川省 Sichuan Province	江苏省 Jiangsu Province	重庆市 Chongqing	山东省 Shandong Province	河北省 Hebei Province	辽宁省 Liaoning Province	河南省 Henan Province	浙江省 Zhejiang Province
382	62	59	33	31	30	25	23
上海市 Shanghai	云南省 Yunnan Province	湖南省 Hunan Province	湖北省 Hubei Province	安徽省 Anhui Province	广东省 Guangdong Province	广西壮族自治区 Guangxi Zhuang Autonomous Region	北京市 Beijing
22	14	12	11	9	9	9	8

推动行业进步 Facilitating industry progress

攀钢钒钛加大对外技术交流与合作力度，与大学院校、科研院所及企业用户等就钒钛新技术、新产品及产品应用技术等开展技术交流，深化应用技术研究 and 推广，更好地构建产业生态。2020年，累计开展技术交流百余次。

我们与中科院过程所、北京科技大学、钢铁研究总院合作开展多个研发项目，促进钒产业绿色发展及钒在钢中应用。与重庆大学、常州涂料研究所合作开展钛白粉清洁生产技术及产品应用技术研究，部分成果已应用于生产。

2020年攀枝花举行以“钛时代助力双循环，高标准引领新发展”为主题的中国·攀西钒钛论坛，攀西钒钛资源世界第一，我们已形成了从钛原料到钛制品完整产业链，是国内的钛矿供应基地和全球最大的钒钛制品生产基地，是名副其实的钒钛之都。

Pangang Vanadium & Titanium has increased its efforts in external technical exchanges and cooperations, and engaged in technical exchanges with universities and colleges, research institutes and corporate users on new vanadium and titanium technologies, new products and product application technologies. We strive for further research and promotion of the applied technologies and better construction of the industrial ecology. In 2020, more than 100 technical exchanges were conducted.

We have cooperated with the Institute of Process Engineering of Chinese Academy of Sciences, University of Science and Technology Beijing, and Central Iron & Steel Research Institute on several R&D projects for the green development of vanadium industry and the application of vanadium in steel. Working with Chongqing University and Changzhou Coating Research Institute, we have researched on clean production technology and product application technology of titanium dioxide, with some results already put into production.

In 2020, the China-Panxi Vanadium and Titanium Forum is held in Panzhihua with the theme of “Titanium Boosting Dual Circulation, High Standard Leading New Development”.



六方联合签约仪式
The six-party joint signing ceremony

Panzhihua and Xichang are top of the world in titanium resources. A complete industry chain has been formed from titanium raw materials to titanium products. This is the domestic titanium ore supply base and the world's largest production base of vanadium and titanium products, making it the veritable capital of vanadium and titanium.



案例 Case

组建钒应用技术推广中心

Forming Vanadium Application Technology Promotion Center

2020年，攀钢钒钛与河钢集团承钢公司、四川德胜集团钒钛有限公司、承德建龙特殊钢有限公司、川威集团成钒钒钛科技有限公司等五家钒生产企业与钢铁研究总院共同组建钒应用技术推广中心，旨在深化钒在钢铁和非钢领域的基础研究、品种开发和应用推广，引领和带动钢铁及相关产品品质升级，促进钒的消费和产业健康发展。

In 2020, the five vanadium producing enterprises, including Pangang Group Vanadium & Titanium Resources Co., Ltd., HBIS Group Chengsteel Company, Sichuan Desheng Group Vanadium and Titanium Co., Ltd., Chengde Jianlong Special Steel Co., Ltd., Chengyu Vanadium and Titanium Technology Co., Ltd of Sichuan-based steelmaker Tranvic Group, jointly set up the Vanadium Application Technology Promotion Center. The purpose is to deepen the basic research, variety development and application promotion of vanadium in steel and non-steel fields, to lead and drive the quality upgrade of



钒应用技术推广中心成立
Vanadium Application Technology Promotion Center was established

steel and related products, and to promote the consumption of vanadium and the sound development of the industry.



• 赋能成长平台 —— 打造幸福职场

攀钢钒钛通过保障员工权益、确保安全生产、守护员工幸福等举措，以实际行动不断增强员工的获得感、幸福感和安全感。我们开展“导师带徒助跑”计划，升阶式分层次导师带徒，分析培养对象个人特质及多维能力，有针对性的制定培养计划，促进优秀青年员工技术提升。

Empowering Growth Platforms for a Happy Workplace

By taking practical actions such as protecting the rights and interests of employees, ensuring work safety, guarding the happiness of employees, the Company has continuously enhanced the sense of fulfillment, happiness, and security of employees. We carry out the graded “mentor-apprentice” plan step-by-step, analyze the personal characteristics and multi-dimensional ability of the training target, develop a targeted training plan to promote the technical improvement of outstanding young employees.

责任故事
Feature

超越自我，扬“钒”前行的劳动模范
A model worker exceeding himself and moving forward in vanadium production

汪超，冶金工程硕士，高级工程师，现任攀枝花钒厂生产技术室主任工程师，四川省第八届劳动模范，发表钒技术论文10篇，承担国家重点项目子课题，申请国家发明专利9项，授权5项。

始于初心，源于热爱。2006年从冶金专业毕业后，汪超来到攀钢，踏实钻研，顺利完成大学毕业生到钒化工研究和生产者角色转变。他一步一个脚印，成长为副作业长，再到主任工程师。“攀枝花钒厂是我国第一大钒厂，经老一辈钒事业开拓者的努力，取得了丰硕成果，能加入热爱的钒产业是自己的幸运。”

忠于坚守，逐梦前行。随着生态环境保护理念的深入人心，汪超开始固废资源化攻坚之路，先后参与钒渣提钒新工艺、硫酸钠资源化利用、废水污泥综合利用等项目研究，并担任国家重点项目“固废资源化”重点专项子课题负责人，推动钒产业绿色清洁化生产进程。

乐于传授，培养人才。2019年，攀枝花钒厂成立汪超劳模创新工作室，带领团队成员研究新技术、开发新工艺。汪超说：“公司非常注重人才培养，我很幸运有人引领我，我也会将这种精神传承下去，帮助更多的青年成长。”

Wang Chao holds a master's degree in metallurgical engineering and is a senior engineer. He is currently the director engineer of the production technology office of Panzhihua Vanadium Products Factory. He is also awarded as the 8th Model Worker of Sichuan Province and has published 10 papers on vanadium technology, undertaken sub-projects of national key projects, applied for 9 national invention patents and has been granted 5 of them.

Driven by original aspiration and profound passion. Wang Chao came to the factory in 2006 after graduation. He has successfully changed his role from university graduate to vanadium chemical researcher and producer. Step by



step, he grew into the deputy operation director, and then to the chief engineer. "Panzhihua Vanadium Products Factory is China's largest vanadium plant. The efforts of the older generation of vanadium pioneers have achieved fruitful results, and it is my fortune to join the vanadium industry I love so much."

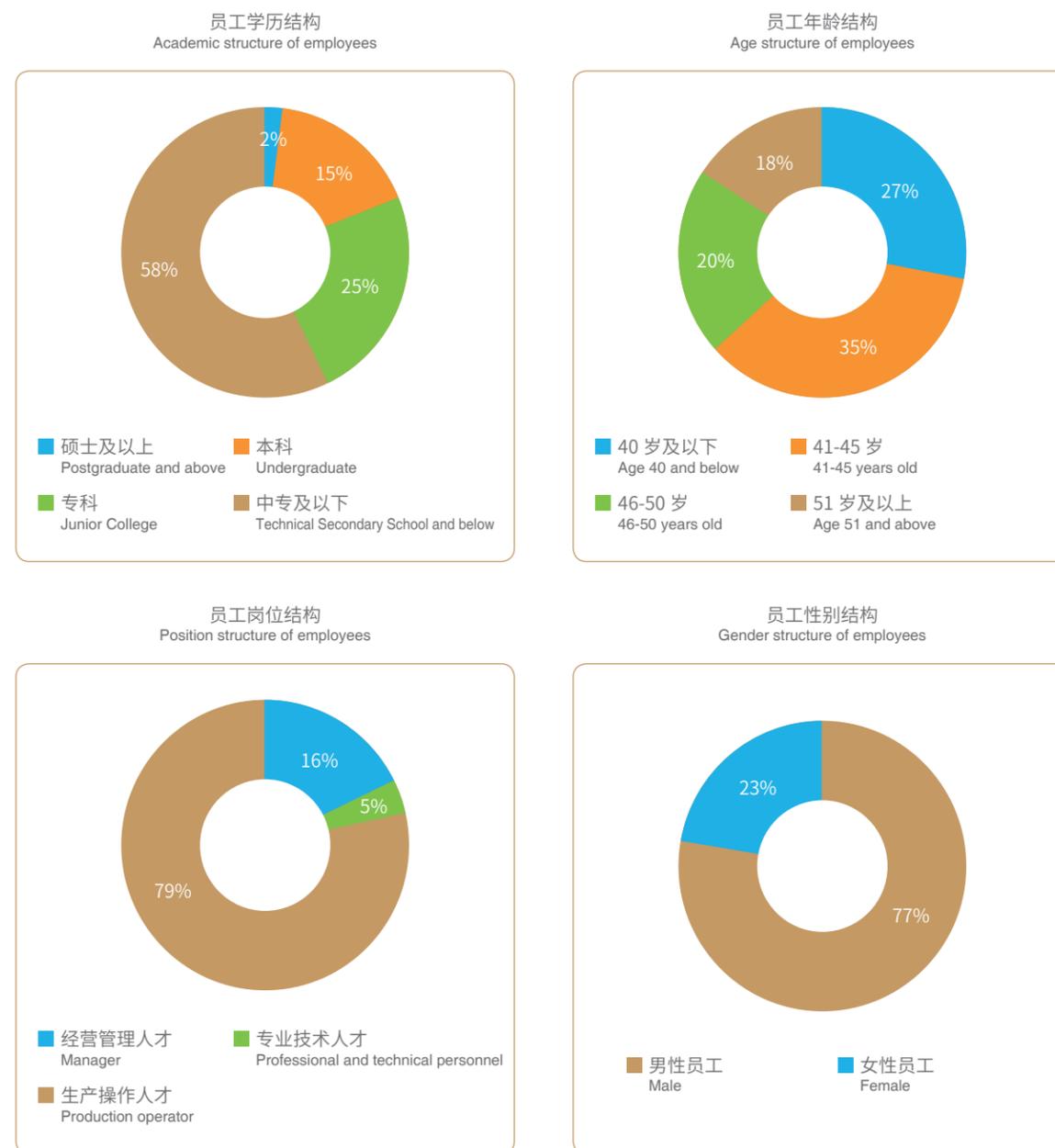
Loyalty and perseverance, marching forward with dreams. As the concept of ecological environmental protection is deeply rooted in people's hearts, Wang Chao starts the resourcing of solid waste. He has participated in such projects as the new technique of vanadium slag extraction, the resource utilization of sodium sulfate, and the comprehensive utilization of wastewater sludge, etc. He is also the sub-project leader of the national key project "Resourcing of Solid Waste", pushing forward the green and clean production process of the vanadium industry.

Willing to teach and cultivate talents. In 2019, the factory established the Wang Chao Model Worker Innovation Studio where team members research new technologies and develop new processes. Wang Chao said, "The Company places great emphasis on talent cultivation. I am lucky to be guided, and I will pass on this spirit to help more young people grow."

关爱员工成长
Caring for employees growth

攀钢钒钛遵守相关法律法规，建立完善的用工管理制度体系，最大限度地保障员工的各项合法权益，打造公司和员工利益共享机制，建立和谐劳动关系。

Complying with relevant laws and regulations, we have set up a sound employment management system to safeguard the legal rights and interests of employees. We have also created a mechanism for sharing the interests between the Company and employees to establish harmonious labor relations.





员工雇佣
Employment

按照“平等、自愿、协商一致”的原则，与员工签订书面劳动合同，各项合同条款均齐全、合法。制订配套的劳动合同管理制度并严格履行。在岗员工劳动合同签订率 100%。

In accordance with the principle of "equality, voluntariness and consensus", we sign written labor contract with employees, and all contract terms are complete and legal. The labor contract management system is formulated and strictly implemented. The Signing rate of labor contract for employees on duty is 100%.



薪酬福利
Compensation and Benefits

建立完善的薪酬管理体系，按时足额发放工资，在册员工均参加并足额缴纳社保“五险一金”，社会保险覆盖率 100%。

We establish a sound salary management system, pay salaries on time and in full, and all registered employees participate in and pay five social insurances and one housing fund in full (five social insurances included endowment insurance, medical insurance, unemployment insurance, employment injury insurance and maternity insurance), with 100% social insurance coverage.



民主管理
Democratic Management

切实维护员工参与企业民主决策、民主管理、民主监督的权利，深化厂务公开，规范职代会内容和程序，对员工反映的问题及时整改与反馈。鼓励员工为企业改革发展献计献策，收到员工合理化建议 7650 条，采纳实施 6388 条，采纳实施率 83.5%。

We effectively safeguard the right of employees in democratic decision-making, democratic management and democratic supervision of the Company, deepen factory affairs disclosure, standardize the content and procedures of the work council, and make timely rectification and feedback on the problems reflected by employees. Also, employees are encouraged to contribute to corporate reform and development. Among the 7,650 rationalized suggestions from employees, 6,388 are adopted and implemented, with the adoption and implementation rate of 83.5%.



员工培训
Staff Training

我们致力于人才队伍建设，注重人才吸纳与发展平台搭建，加强员工技能培训，促进员工能力提升。

We are committed to building a talent team, focusing on talent absorption and development platform building, strengthening skills training, and promoting capacity development.

公司人才管理体系进一步完善，建立健全工程技术人才、研发人才、技能人才、点检人才等序列管理办法，制定营销人才序列管理办法，加强公司营销人才队伍建设，实施人才分级分类培养，帮助员工成长，实现自我价值。

The talent management system of the Company is further improved, and the serial management methods for engineering and technical talents R&D talents, technical talents and inspection talents, are established and perfected. and developed the serial management methods for marketing talents, thereby strengthening marketing team. We also train talents in a hierarchical manner to help employees grow and realize their self-worth.



年轻干部培养
Youth cadres training

建立完善年轻干部人才信息库，制定培养计划，优化队伍结构。推荐优秀年轻干部参加中青年干部培训班，开展挂职实践锻炼，提升其政治素养和综合素质。

We establish and improve the information database of young cadres, develop training plans and optimize the team structure. Excellent young cadres are recommended to participate in the training courses designed for young and middle-aged cadres and secondment to improve their political quality and comprehensive quality.



技术人才培养
Technical talents training

在技术技能人才序列中选取业绩突出的相应人才，推荐入选“鞍钢英才计划”、四川省学术和技术带头人及后备人选。制定公司首席工程师评聘工作方案，选聘电气自动化、钙法提钒、化工安全首席工程师，调动专业技术人才积极性。

We select outstanding performers among the sequence of technical talents and recommend them as candidates of Anshan Iron and Steel Group Talent Plan, or academic and technical leaders and reserve candidates in Sichuan Province. We have formulated a work plan for the evaluation and recruitment of chief engineers, selecting and hiring chief engineers for electrical automation, calcium vanadium extraction and chemical safety, and mobilizing the enthusiasm of professional and technical talents.



新员工培养
Training of new employees

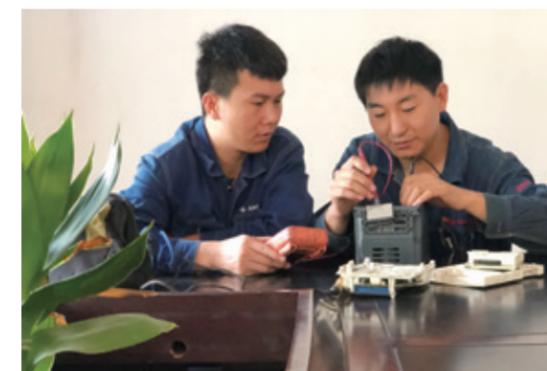
采用“一人二表三师”培养模式，启动“导师带徒助跑”计划，进行业务知识、经验、技能的交流、学习、分享与传承，提高员工整体素质。2020 年，签订导师带徒 191 对。

We adopt the training model featuring mentors, and initiate the "mentor-apprentice" program for the exchange, learning, sharing and transmission of business knowledge, experience and skills, so as to improve the overall quality of employees. 191 pairs of mentor-apprentice have formed in 2020.



测炉温

Measuring the temperature of the furnace



师徒情深

The master and the student love each other



案例 Case

空中课堂内训师培训

Online training by internal trainers

面对突如其来的疫情，攀钢钒钛创新培养手段，组织学员分段学习，利用平台自学、直播教学、远程辅导、后期面授等形式，做到在特殊情况下稳步有序推进培训工。2020年3月9日，攀钢钒钛首次“空中课堂”正式开课，110名内训师利用公司学习平台直播传授公司业务知、经验、技能。

Confronted by the unexpected pandemic, we innovate training means, organize learners to study in different periods, and make use of the platform for self-study, live teaching, remote coaching and face-to-face teaching at a later stage, so as to promote the training work steadily and orderly under special circumstances. On March 9, 2020, the first "Online Classroom" was officially opened. There are 110 trainers teaching the Company's business knowledge, experience and skills through the live broadcast via the Company's learning platform.



空中课堂内训师培训
Internal trainer training through air classes

确保安全生产
Securing work safety

攀钢钒钛始终坚持以人为本，将保障职工生命安全视为头等大事，2020年公司通过严格落实领导安全防火包保履责、狠抓隐患排查治理、持续夯实安全基层基础工作、推进安全生产专项整治三年行动计划和检维修作业“五清五杜绝”等专项工作狠抓安全生产管理，公司安全生产形势总体稳定。

Based on the principal of people-oriented, we consider the safety of employees as the top priority. In 2020, the Company strictly fulfill its commitment through strengthening the safety responsibility of leaders, strictly controlling potential hazards, continuously consolidating the basic work of safety, promoting the three-year action plan for special rectification of work safety and special work such as "five clearness and five prohibitions" for inspection and maintenance operations, etc. The Company's safety production situation is generally stable.

安全生产管理

攀钢钒钛把安全生产作为企业发展的命脉，全面推行安全生产清单制管理，大力推进安全风险分级管控与隐患排查治理双重预防体系建设、安全标准化达标建设等工作，不断提升安全管控能力和安全本质化水平。

Work safety management

The Company takes work safety as the lifeblood of development. We comprehensively execute the work safety list system, vigorously promote the dual prevention system of graded safety risk control and inspection and treatment of hidden dangers, and standardize the safety construction, so as to continuously improve the safety control ability and enhance the level of safety essentialization.

强化安全生产责任制
Strengthening the responsibility system of work safety

建立并发布 11 个主体责任清单、686 个安全生产岗位责任清单、53 个重大安全风险管控清单、284 个安全检查清单，把安全生产责任落实到每个岗位、每个环节。

We have established and released responsibility lists for 11 major entities, 686 work safety positions and 53 major safety risk control as well as 284 lists of safety inspection, thereby putting the responsibility of work safety into practice in every position and every link.

完善安全管理办法
Improving safety management methods

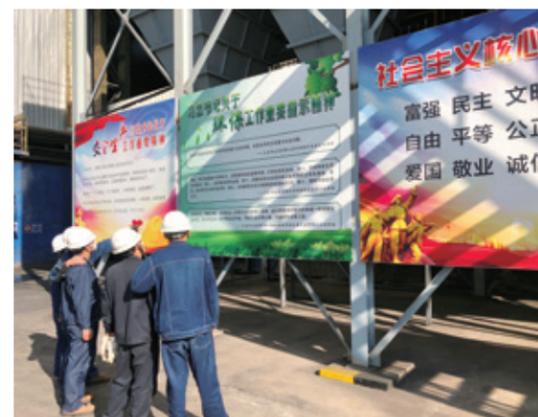
修订、发布《安全管理办法》《生产安全和火灾事故管理办法》等 7 个公司级安全管理办法，为公司安全管理工作提供制度保障。

We have revised and released 7 company-level safety management measures, including *Safety Management Measures*, *Production Safety and Fire Accident Management Measures*, thereby providing institutional guarantee for the Company's safety management.

加强相关方安全管理
Strengthening safety management of related parties

对功能承包、设备检修、劳务派遣等 5 类相关方的风险防控和隐患排查等安全工作开展调研、指导、考核，全面系统清理不合格的相关方，实行黑名单制。

We conduct research, guidance and assessment on safety work such as risk prevention and control and hidden danger investigation for 5 types of related parties, including functional contracting, equipment maintenance and labor dispatch. We systematically clear up the unqualified related parties and implement the blacklist system.



看安全展板
Looking at the Safety Board



铸铁生产场景
CAST iron production scene



提升安全意识

我们坚持红线意识和底线思维，夯实安全管理“基础、基层、基本功”，对安全生产知识和管理能力进行合规培训，提高员工安全意识与技能。2020年，安全环保教育培训3352人次。

Safety awareness improvement

We insist on the red line and bottom line consciousness, consolidate the “foundation, grassroots and basic skill” of safety management, provide compliance training on production safety knowledge and management ability, thereby raising employees’ safety awareness and skills. 3,352 employees took part in safety education and training 2020.



案例 Case

安全技术比武大赛

Competition of safety skills

为强化安全意识，守住安全底线，提升安全技能，攀钢钒钛举行安全员（青年岗员）安全技术比武大赛，从理论考试和实际操作两个方面考核安全管理知识和安全生产技术。深化体验式场景模拟，真实感受临战状态，检验突发事件现场指挥、协调、处置和救护能力。

To raise safety awareness, safeguard safety bottom line and improve safety skills, we hold safety technical competition involving safety staff (youth safety supervisor). The competition tests the safety management knowledge and work safety technology from both theoretical test and practical operation. Under experiential scene simulation, participants could feel the real conditions and their ability of command, coordination, disposal and rescue in case of emergency are checked.



安全技术比武大赛
Competition of safety skills



安全技术比武大赛
Competition of safety skills

安全应急管理

建立和完善科学有效的应急救援体系，有助于保障生命、降低伤害。2020年，攀钢钒钛开展山火报警、消防报警和防洪防汛等应急演练88次，参与1602人次，充分检验各单位应急指挥、应急联动、应急救援处置反应能力及突发事件处置的有效性。12月22日，攀枝花钒厂与东区生态环境局共同组织了氧化钒作业区硫酸泄漏突发环境事件IV级应急演练，提高政府相关部门和企业协同妥善处置突发环境事件的能力。

Safety emergency management

We have established and improved scientific and effective emergency rescue system to protect lives and reduce injuries. In 2020, we conducted 88 emergency drills for hill fire alarm, fire alarm and flood prevention and control, with 1,602 participants, fully testing the emergency command, emergency linkage, emergency rescue and disposal response ability and the effectiveness of emergency accident disposal of each department. On December 22, Panzhihua Vanadium Products Factory and the Ecological Environment Bureau of East district, Panzhihua city jointly organized an IV level emergency drill for sulfate process leakage in the vanadium oxide operation area, which helped to improve the ability of relevant government departments and enterprises to properly handle environmental emergencies.



攀钒厂与东区应急演练

Panzhihua Vanadium Products Factory and the Ecological Environment Bureau of East district jointly organized an emergency drill



应急救援演练
Emergency rescue drill



案例 Case

重大危险源应急演练

An emergency drill for major hazard resource

为进一步增强公司突发事件应急处置能力、检验公司应急预案效果及可操作性，我们举行了重大危险源（液氨库）液氨泄漏应急救援演练。通过模拟液氨泄漏及应急处置过程，提高员工对突发事件风险源的警惕性和应急意识，督促员工熟练掌握应急知识和处置技能，提高自救、互救能力；同时通过应急演练进一步检验了公司各层级应急预案的可适应性和可操作性。

We held an emergency rescue drill for liquid ammonia leakage as a way to test the effectiveness and operability of the Company's emergency plan and to further enhance its emergency response capability. By simulating liquid ammonia leakage and emergency disposal, we raise employees' vigilance and awareness of emergencies, urge them to acquire the emergency knowledge and skills, enhance the ability of self-help and mutual rescue. In



液氨泄漏应急演练

Emergency rescue drill for liquid ammonia leakage

In addition, the emergency drill tests the adaptability and operability of all levels.

职业健康管理

公司将员工健康放在企业发展的核心地位，以职业健康安全管理体系为抓手，2020年持续开展尘毒专项治理，定期开展职业病危害因素检测与监测、职业健康监护体检、健康体检并配备防护用品，从源头消除或控制职业危害因素。

职业健康培训

2367人

2,367 people attended occupational health training

员工体检及健康档案覆盖率

100%

100% coverage of employee medical check-up and health record

职业健康监护体检

2162人

2,162 people took occupational physical examination

Occupational health management

With staff health at the core and occupational health and safety management system as effective means, the Company sustains the special management of dust and poisonous gas in 2020. We regularly detect and monitor hazards causing occupational diseases, organize physical examination, medical check-up and provide protective equipment, aiming to eliminate or control occupational hazards from the source.

员工职业健康检查率

100%

100% occupational health inspection rate for employees

岗位尘毒合格率

100%

100% pass rate of dust and poisonous gas at positions

守护员工幸福

Guarding the happiness of employees

我们时刻关心员工的成长和生活，为员工提供权益保障，搭建成长平台，打造温暖港湾，守护员工幸福。2020年，员工收入稳步增长，员工幸福感和获得感不断增强。

As always, we care about the growth and life of employees, safeguard their rights and interests, build a platform for growth, create a warm harbor, and guard their happiness. In 2020, the income of employees keeps growing while their sense of happiness and fulfillment is also increasing.



你来我往

Back and forth



福写新春

Writing Spring Festival couplets

平衡工作生活

公司顺应全体员工对美好新生活的追求，扎实解决好员工关心的问题，加强与员工的沟通交流、开展促进员工身心健康的文体活动，平衡员工的工作与生活。

关心女性员工

我们充分关注女性员工身心健康，注重人文关怀和心理疏导，积极开展员工心理援助计划及女性专场健康讲座，每年组织女员工体检，提高女性的自我保健意识，提升幸福感与满意度。

帮扶困难员工

公司以精准帮扶为重点，切实解决员工困难，完善《爱心帮扶管理办法》，持续开展送温暖活动，加大对困难员工、重症病员工及家庭的帮扶力度。

Balancing work and life

Complying with employees' pursuit of a better life, we handle the problems which employees are concerned about, strengthen communication with employees, organize cultural and sports activities that conducive to their physical and mental health, thereby helping employees balance their work and life.

Caring for female employees

We pay full attention to the physical and mental health of female employees, focus on humanistic care and psychological guidance. We organize psychological assistance programs and special health lectures for women, and provide annual physical check, so as to help raise their awareness of self-care and enhance their sense of well-being and satisfaction.

Helping employees in difficulty

With targeted assistance as the focus, we effectively solve the difficulties of employees, improve the *Management Measures of Voluntary Help*, maintain the voluntary activities, increases the support for workers who are in difficulty or with serious illnesses as well as their families.



责任绩效

CSR Performance

类别 Category	关键指标 Key Indicators	2018 年绩效 Performance in 2018	2019 年绩效 Performance in 2019	2020 年绩效 Performance in 2020
经济 Economy	营业收入 (亿元) Operating revenue (100 million yuan)	151.61	131.59	105.79
	资产总额 (亿元) Total assets (100 million yuan)	118.66	129.66	116.49
	归属于上市公司股东的净利润 (亿元) Net profit attributable to shareholders of listed companies (100 million yuan)	30.90	14.19	2.25
	纳税额 (亿元) Taxes paid (100 million yuan)	8.62	6.08	2.67
	所有者权益 (亿元) Owner's equity (100 million yuan)	76.92	96.38	97.97
	资产负债率 (%) Debt-to-asset ratio (%)	35.18	25.67	15.9
	钛白粉产量 (万吨) Output of titanium dioxide (10,000 tons)	22.84	23.39	23.55
	钛渣产量 (万吨) Output of titanium slag (10,000 tons)	19.15	18.74	20.58
	钒制品 (以 V ₂ O ₅ 计) 产量 (万吨) Output of vanadium products (in terms of V ₂ O ₅) (10,000 tons)	2.25	2.20	2.40
	授权专利 (项) Number of patents authorized (item)	21	31	74
	其中发明专利 (项) Number of invention patents (item)	5	15	44
	申请专有技术 (项) Number of proprietary technology applied (item)	5	13	3
	重要科技奖项 (国家 + 省部级) (项) Important sci-tech awards (national, provincial & ministerial level) (item)	1	8	6
	重大决策法律审核率 (%) Legal review rate of major decisions (%)	100	100	100
	重要制度法律审核率 (%) Legal review rate of important systems (%)	100	100	100
	重大合同法律审核率 (%) Legal review rate of major contracts (%)	100	100	100

类别 Category	关键指标 Key Indicators	2018 年绩效 Performance in 2018	2019 年绩效 Performance in 2019	2020 年绩效 Performance in 2020
环境 Environment	各类环境污染事件 (件) Environmental pollution incidents in all types (number)	0	0	0
	环保投入 (亿元) Investment in environmental protection (100 million yuan)	1.2	1.2707	1.4
	化学需氧量 (吨) Chemical oxygen demand (ton)	597	501	463
	氨氮排放总量 (吨) Total ammonia nitrogen emissions (tons)	65	50	50
	二氧化硫 (吨) Sulfur dioxide (ton)	597	585	575
	氮氧化物 (吨) Nitrogen oxides (ton)	522	478	474
	节能量 (吨标煤) Energy saving (tce)	8,035	6,311	1,850
	万元产值能耗 (tce/万元) Energy consumption per 10,000 yuan output value (tce/10,000 yuan)	0.33	0.59	0.61
	V ₂ O ₅ 耗新水 (t/t) New water consumed by V ₂ O ₅ (t/t)	18.17	17.08	19.25
	TiO ₂ 耗新水 (t/t) New water consumed by TiO ₂ (t/t)	72.11	69.32	71.45
	FeV 耗新水 (t/t) New water consumed by FeV (t/t)	2.59	2.44	2.39
	固体废弃物利用率 (%) Solid waste utilization rate (%)	72.50	76.00	76.00
	煤气回收量 (亿立方米) Gas recovery volume (hundred million cubic meters)	/	0.18	0.15
循环水利用率 (%) Circulating water utilization rate (%)	95.15	95.17	95.21	
员工 Employees	劳动合同签订率 (%) Labor contract signing rate (%)	100	100	100
	在岗职工 (人) Employees on duty (number)	3,391	3,376	3,181
	员工流失率 (%) Employee turnover rate (%)	0.94	0.74	0.75
	培训人次 Number of training participants	23,327	37,730	30,476
	培训经费 (万元) Training expenses (10,000 yuan)	404	446	275
	培训总学时 (小时) Total training hours (hours)	12,300	13,885	10,386



类别 Category	关键指标 Key Indicators	2018 年绩效 Performance in 2018	2019 年绩效 Performance in 2019	2020 年绩效 Performance in 2020
员工 Employees	员工健康体检 (人) Employees received health checkups (number)	2,055	2,310	2,162
	体检及健康档案覆盖率 (%) Medical and health record coverage (%)	100	100	100
	发放救济金 (慰问金、帮扶救助金、助学金) (万元) Relief money (condolence, assistance, student subsidies) (10,000 yuan)	20.30	22.59	31.35
安全 Security	一般及以上事故 (件) General and serious accidents (number)	0	0	1
	安全环保教育培训 (人次) Number of safety education and training participants (person-time)	4,191	3,703	3,352
	安全培训覆盖面 (%) Safety training coverage (%)	100	100	100
	安全生产支出 (万元) Work safety expenditure (10,000 yuan)	2,688.15	4,330.94	4,741.34
	安全、消防应急演练 (场) Safety, fire emergency drills (number)	105	111	88
社会 Social	责任采购率 (%) Responsible purchasing rate (%)	100	100	100
	扶贫资金投入 (万元) Poverty alleviation funds (10,000 yuan)	100.00	763.49	976.02
	实施扶贫项目 (个) Poverty alleviation projects implemented (number)	1	14	12
	青年志愿者 (人) Youth volunteers (number)	435	446	238
	青年志愿者服务队 (个) Youth volunteer teams (number)	6	7	7
	志愿服务活动 (人次) Volunteer activities (person-time)	732	736	136
	志愿服务活动次数 Number of volunteer activities	34	37	8
党建 Party building	下属基层党组织数 (个) Number of grass-roots CPC organizations	61	61	57
	党委数 (个) Number of CPC committees	5	5	5
	党总支数 (个) Number of General CPC Branches	5	5	5
	党支部数 (个) Number of CPC Branches	54	54	49
	党员数 (人) Number of CPC members	1,342	1,332	1,092

展望 2021 Outlook 2021

2021年,是中国共产党成立一百周年,也是“十四五”规划的开局之年,我们将继续把履行社会责任放在关键位置,为促进企业、社会与环境的可持续发展贡献钒钛力量。

The year 2021 marks the 100th anniversary of the founding of the Communist Party of China (CPC), and the start of 14th Five-Year Plan (2021-2025) for National Economic and Social Development. We will continue to place emphasis on fulfilling our social responsibilities and contributing to the sustainable development of our company, society and the environment.

稳步推进改革发展 Advancing reform and development steadily

以习近平新时代中国特色社会主义思想为指引,以“十四五”规划为蓝本,深化国有企业改革,推进对标学习,优化公司制度管理体系,加快内部组织机构调整,打造“最优工厂”。

Guided by Xi Jinping New Thought on Socialism with Chinese Characteristics for a New Era, we will take the 14th Five-Year Plan as the basis, deepen the reform of state-owned enterprises, learn from counterparts, optimize the management system, speed up the adjustment of internal organization, and build the Optimal Factory.

稳步推进创新共享 Advancing innovation and sharing steadily

坚持科学技术是第一生产力的理念,完善科技创新工作机制,加大科研经费投入,搭建更加完善的创新平台,在全公司营造创新共享氛围。

We insist on the concept that science and technology is the first productive force, improve the mechanism of S&T innovation, invest more in scientific research, build a more complete innovation platform, and create an atmosphere of innovation and sharing in the whole company.

稳步推进绿色发展 Advancing green development steadily

坚定不移打好“蓝天保卫战”,进一步加强环境管理,构建更加完备的环境管理体系,严格落实风险管控,加强环保意识培训,开发绿色技术,持续推进降本增效举措,提高资源利用率,减少污染物排放。

We firmly undertake the Blue Sky Protection Campaign, further strengthen environmental management, build a more complete environmental management system, strictly implement risk control, intensify environmental awareness training, develop green technologies, sustain cost reduction and efficiency improvement initiatives, improve resource utilization and reduce pollutant emissions.

稳步推进合作交流 Advancing cooperation and exchange steadily

坚持合作共赢的理念,加强与上下游供应商的交流与合作,打造责任供应链,继续组织和参与行业会议以及行业标准、国家标准制定,努力带动钒钛产业向高质量发展。

We adhere to the concept of win-win cooperation, strengthen communication and cooperation with upstream and downstream suppliers, create a responsible supply chain, continue to organize and participate in industry conferences and the development of industry standards and national standards, and strive to drive the vanadium and titanium industry towards high-quality development.

稳步推进人本管理 Advancing people-oriented management steadily

坚持以人为本的理念,保障职工合法权益,提高职工的获得感与幸福感;拓展各类型人才培养,提高员工的岗位适配度;进一步加强安全生产管理,健全安全生产责任制;继续参与志愿者服务与公益事业,以自身行动回报社会。

We persist in people-oriented principle, protect the legitimate rights and interests of employees and improve their sense of achievement and happiness; we will provide training for all types of talents and improve the job suitability of employees, further strengthen the management of work safety and improve the responsibility system; we will proceed to repay society with practical actions, such as participating in volunteer services and public welfare undertakings.

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意见反馈

Feedback

攀钢钒钛非常关心您对本报告的意见。请就本报告提出您的宝贵意见和建议，以便我们持续改进。
Any comment on this report you want to share with us is welcomed. Your valuable opinions and suggestions will facilitate our improvement.

- 您认为本报告是否能够反映攀钢钒钛对经济、社会、环境的重大影响？（请在相应的位置选择打“√”）
Do you think this report can reflect the significant impact of the Company on economy, society and environment?(Please tick "√" in the corresponding option)
是 Yes 一般Fair 否No
- 您认为本报告所列出的利益相关方与攀钢钒钛的相互关系分析是否准确、全面？（请在相应的位置选择打“√”）
Do you think the analysis of the relationship between stakeholders and the Company in this report is accurate and comprehensive?(Please tick "√" in the corresponding option)
是 Yes 一般Fair 否No
- 您认为本报告所披露信息、数据和指标是否清晰、准确、完整？（请在相应的位置选择打“√”）
Do you think the information, data and indicators disclosed in this report are clear, accurate and complete?(Please tick "√" in the corresponding option)
是 Yes 一般Fair 否No
- 您认为本报告的内容安排和版式设计是否有利于您的阅读？（请在相应的位置选择打“√”）
Do you think the layout and design improve the readability of this report?(Please tick "√" in the corresponding option)
是 Yes 一般Fair 否No
- 您认为《攀钢钒钛2020年社会责任报告》是否符合您对我们的了解？（请在相应的位置选择打“√”）
Do you think this report help you better understand the Company? (Please tick "√" in the corresponding option)
是 Yes 一般Fair 否No

您认为本报告最让您满意的方面是什么？
What do you think is the most satisfactory aspect of this report?

您认为是否还有您需要的信息没在本报告中反映？
Do you think there is any information that has not been disclosed in this report?

您对我们今后发布社会责任报告有何建议？
What suggestions do you have for our social responsibility reporting in the future?

您对攀钢钒钛社会责任工作有何建议？
What suggestions do you have for our social responsibility work?

您可将信息表传真到+86-812-3385285，也可以选择通过网络 (<http://www.pgvt.cn/>) 反馈您的意见和建议。
You can fax the feedback form to us(+ 86-812-3385285), or send your suggestions through our website (<http://www.pgvt.cn/>).



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攀钢集团钒钛资源股份有限公司

ANSTEEL Pangang Group Vanadium & Titanium Resources Co., Ltd.

地址:四川省攀枝花市东区钢城大道西段 21号

Address: No.21, West Section of Gangcheng Avenue, East District, Panzhihua City, Sichuan Province, China

电话:0812-3385366

Tel: 86+ 812-3385366

传真:0812-3385285

Fax:+86-812-3385285

邮政编码:617067

Postcode:617067

电子邮箱:psv@pzhsteel.com.cn

E-mail: psv@pzhsteel.com.cn