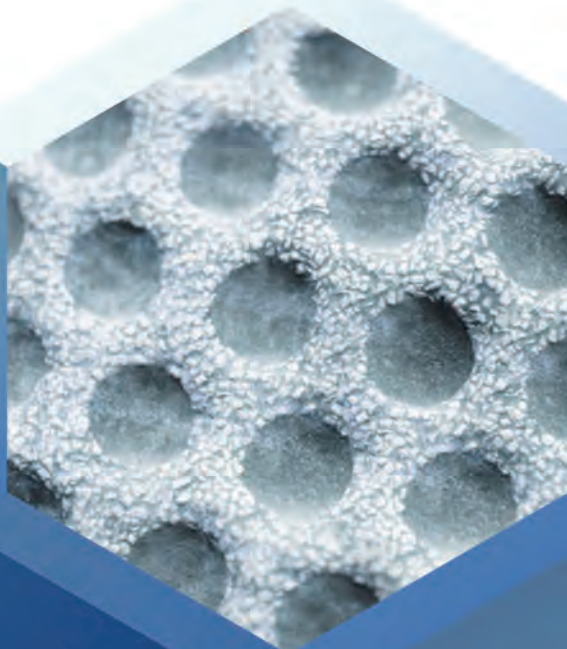


中国耐磨新材料领跑者

The Leader of New Wear-resisting Materials in China

陶瓷钢铁复合耐磨件

Ceramic-steel Composite (MMC) Wear Parts



公司简介

COMPANY PROFILE

广东越科新材料有限公司成立于 2018 年底，技术依托广东省科学院新材料研究所（前身是成立于 1971 年的世界上久负盛名的研究所之一：广州有色金属研究院）耐磨材料技术团队，主要从事高性能长寿命陶瓷 - 钢铁基复合耐磨材料板锤、锤头、衬板、磨辊等产品的研发、生产、销售与服务。产品广泛应用于电力、矿山、水泥、建筑等领域破碎 / 粉磨生产线的关键核心易损耗件，产品定位国内外高端高性能延寿耐磨材料应用市场。公司获得 ISO 9001 质量管理体系认证和 ISO 14001 环境管理体系认证。

Guangdong Yueke New Material Co., Ltd. was established at the end of 2018, whose technology relies on the wear-resisting material technical team of the Institute of New Materials, Guangdong Academy of Sciences. (It's former name was Guangzhou Non-ferrous Metal Research Institute, one of the most prestigious institutes in the world, which was founded in 1971.) Yueke is mainly engaged in the R&D, production, sales and service of high performance and long life span ceramic-steel composite (MMC) wear-resisting products, such as blow bars, hammers, liners, and grinding rollers. The products are widely used in the "crux and core" consumable parts of crushing/grinding production lines in the fields of electric power, mining, cement, and construction, etc. The products are positioned in the global high-performance life-extending wear-resistant material application market. The company has obtained the ISO 9001 quality management system certification and the ISO 14001 environmental management system certification.

公司位于广东梅州辖县，占地 20 余亩，现有厂房面积 5000 余平方米。复合耐磨构件生产装备和检测设备二十余台套，包括中频熔炼炉 2 台套、热处理炉 4 台、抛丸机 1 台等主要生产设备及多台套进口检测装备。企业以优质的产品和服务成为客户的长期合作伙伴。

The company is located in the Pingyuan County, Municipality of Meizhou, Guangdong Province, covering an area of more than 20 acres, and the existing plant area is more than 5,000 square meters. There are more than 20 sets of manufacture equipment and testing equipment for wear-resisting composite components, including 2 sets of MF Smelting Furnace, 4 sets of Heat Treatment Furnace, 1 Shot Blasting Machine and other major manufacture equipment and various sets of imported testing equipment, in order to be a long-term partner of customers with high-quality products and services.

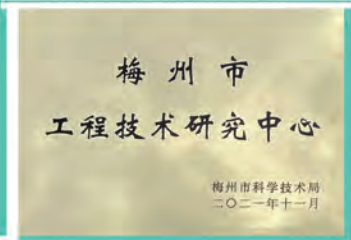


发展历程

DEVELOPMENT PROCESS

2021年

梅州市工程技术研究中心
Meizhou Engineering Technology Research Center



2021年

企业通过 ISO9001 质量体系认证
ISO9001 Quality Management System Certificate



2022年

认定为高新技术企业
Certificate of New High-tech Enterprise (Guangdong)



2022年

获得中国有色金属工业科学技术奖二等奖
China Nonferrous Metal Industry Science and Technology Award



2023年

“钢铁基复合板锤” 评选为名优高新技术产品
Guangdong Famous High-tech Products Certificate



2024年

企业通过环境管理体系认证证书
Environmental Management System Certificate



技术研发平台

TECHNOLOGY R&D PLATFORM

广东省科学院新材料研究所隶属广东省科学院，为其骨干科研院所。研究所拥有齐全、先进的表面工程技术设备，以及金属材料覆盖广、技术路径全的金属粉末研制装备，通过了GB/T33250-2016科研机构知识产权管理体系认证、国家CMA检验检测机构资质认证，形成了以周克崧院士和潘复生院士领军的高层次人才团队。

The Institute of New Materials of Guangdong Academy of Sciences is subordinate to Guangdong Academy of Science and is its backbone scientific research institute. The Institute has the complete and advanced surface engineering technology equipment, as well as the metal powder development equipment with the wide coverage of metal materials and the complete technological path. It has obtained GB/T33250-2016 intellectual property management system certification for scientific research institutes, the national CMA inspection and testing organization qualification certification, and formed a high-level team of talents led by Academician Zhou Kesong and Academician Pan Fusheng.

复合中心研发团队，专注于特种钢铁材料（耐磨/热/蚀铸造钢铁、高品质变形钢）及金属基复合材料（钢铁基复合材料及有色金属基复合材料）两个重点研发方向，开展系列应用基础研究及关键共性应用技术研究，承接国家、省、市等各级科研项目及企业委托的技术服务，并积极推动成熟技术的成果转化以及企业急需人才的技术培训。

The R&D team of the Composite Centre focuses on two pivotal R&D directions: the Special Steel Materials (wear-resistant /heat/erosion-resistant Casting Steel and High-quality Deformed Steel) and metal matrix composites (Steel Matrix Composites and Non-ferrous Metal Matrix Composites), and carries out a series of applied basic researches and researches on key common application technologies, undertakes scientific research projects at the national, provincial, and municipal levels, as well as technical services commissioned by the enterprises, and actively promotes the transformation of the achievements of the mature technologies and the technical training of the talents urgently needed by the enterprises.



部分专利标准及证书

SOME PATENT, STANDARDS AND CERTIFICATES

发明专利 Patents for Inventions

一种钢铁基复合板锤及其制备方法

An Iron and Steel Matrix Composite Blow Bar and its Preparation Method



发明专利 Patents for Inventions

一种复合板锤的制备方法

A Composite Blow Bar Preparation Method



实用新型专利 Patent for Utility Model

一种板锤和破碎机

A Kind of Blow Bar and Crusher



实用新型专利 Patent for Utility Model

一种耐磨型铲齿及使用其的挖掘机铲斗

A Kind of Wear-resistant Shovel Tooth and Excavator Bucket with It



团体标准 Group Standard

陶瓷颗粒增强钢基复合铸件

Steel Matrix Composite Casting Reinforced with Ceramic Particles



团体标准 Group Standard

陶瓷颗粒增强铁基复合铸件

Iron Matrix Composite Casting Reinforced with Ceramic Particles



设备

EQUIPMENT

生产设备 Manufacture Equipment



中频炉
MF Smelting Furnace



抛丸机
Shot Blasting Machine



热处理炉
Heat Treatment Furnace



龙门铣床
Gantry Milling Machine

检测设备 Testing Equipment



光谱仪
Spectrometer



便携式硬度计
Rockwell Hardometer



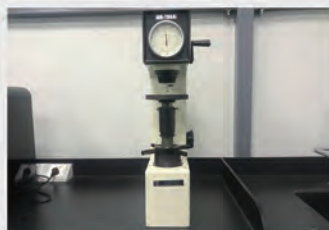
金相显微镜
Metallographic Microscope



金属探伤仪
Metal Flaw Detector



冲击试验机
Impact Tester



洛氏硬度计
Rockwell Hardometer



维氏硬度计
Vickers Hardness Tester

陶瓷金属复合材料综述

OVERVIEW OF CERAMIC-METAL COMPOSITES

陶瓷颗粒增强铁基耐磨复合材料因其高耐磨性，成为替代传统铁基（高锰钢、合金钢和高铬铸铁）耐磨材料首选，解决了传统铁基耐磨材料领域构件使用寿命低的关键共性技术难题。

陶瓷颗粒增强铁基耐磨复合产品，陶瓷颗粒硬度高，钢铁基体韧性好，产品使用后寿命较单一材料产品大幅提高 1-3 倍，显著降低各应用领域钢铁材料的消耗，增加用户收益。

Ceramic particles reinforced iron-based wear-resistant composites have become the first choice for replacing traditional iron-based (high-manganese steel, alloy steel and high-chromium cast iron) wear-resistant materials due to their high wear resistance, solving the pivotal common technical problem of short life span of components in the field of traditional iron-based wear-resistant materials.

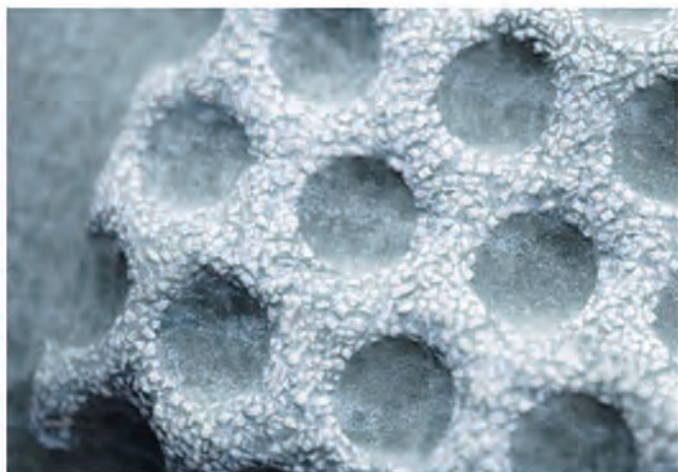
Products of ceramic particles reinforced iron-based wear-resistant composites have many advantages: high hardness of ceramic particles, good toughness of the iron matrix, the effectively increasing life span of 1-3 times compared to the single material products, the significant reducing consumption of steel materials in various applications, and increasing user benefits.

新产品性价比高，为用户企业节省了大量设备配件采购费用，降低了工人更换配件的频率，劳动强度减小，也减少了因设备停机造成的生产损失。

产品的广泛应用显著提升了中国强韧、耐磨钢铁基复合材料的制造水平，保持钢铁基复合材料的国际领先地位，带动了传统产业转型升级，推动了钢铁基复合材料理论研究和科技进步，引领和驱动了产业发展。

With their high performance cost ratio, the new products help the user enterprises not only save a lot of equipment parts procurement costs, reduce the frequency of workers to replace parts and labour intensity, but also lessen the production losses caused by equipment downtime.

The wide application of them has significantly improved the manufacturing level of tough and wear-resistant steel-based composites in China, kept the international leading position in high-end steel-based composites field, spurred the transformation and upgrading of traditional industries, promoted the theoretical research and technological progress of steel-based composite materials, and led and drove the development of the industry.



砂石骨料破碎易损件

CRUSHER WEAR PARTS



适用领域：制砂碎石、水泥生产、矿山开采、桥梁道路建设、建筑废品环保回收等。
Application: Aggregate, Cement, Mining, Bridge and Road Construction, Recycling, etc.

板锤 Blow Bar



反击板 Impact Plate



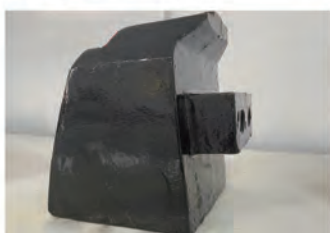
溜槽衬板 Chute Liner





导料头 Shoe

护板 Guard Plate



锤头 Hammer



圆锥 Bowl Liner



陶瓷板锤技术介绍

CERAMIC-STEEL BLOW BAR TECHNOLOGY INTRODUCTION

复合定位

> 陶瓷定位复合，在高应力和强冲击磨损工况下复合层不剥落，实现耐磨性和安全性相互匹配。

长久寿命

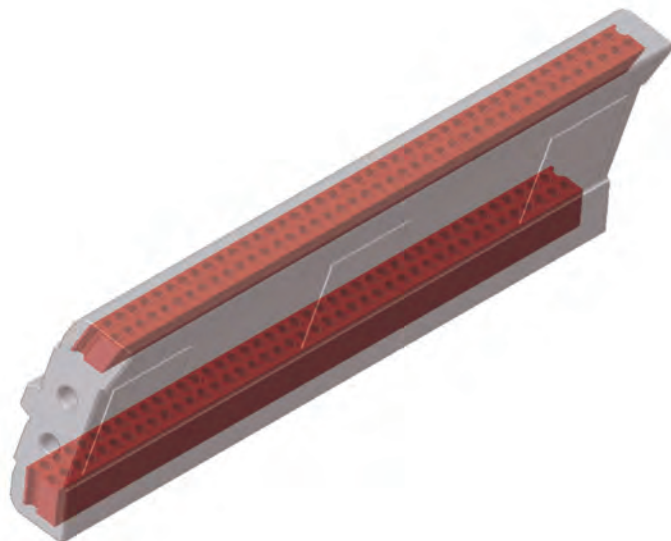
> 陶瓷板锤使用寿命较传统单一材质大幅提高1-3倍。大幅减少更换频率。

节能降耗

> 配件寿命的提高，带来了产品更换频率降低，节省人力物力，减少了停机带来的损失，降低了用户企业的运行成本。

量身设计

> 依赖强大的技术储备，通过与用户密切沟通，设计适合不同工况的破碎方案。



Compound Positioning

> The compound positioning of ceramics avoids the composite layer peeling off the metal matrix under high stress and strong impact wear conditions, which can achieve the mutual matching of wear resistance and safety.

Long Life Span

> The life span of the ceramic-steel (MMC) blow bar is considerably increased by 1-3 times compared with those traditional single material ones, which significantly reduces replacement frequency.

Energy-saving and Cost-reducing

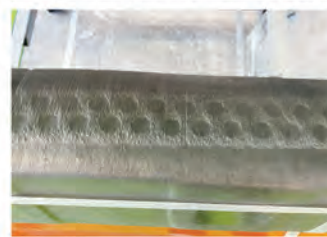
> The increase in life span of the ceramic-steel blow bar reduces the frequency of product replacement, leading to saving of labor and materials, reducing the loss caused by production shutdowns for maintenance and achieving the reduction of operating costs for user enterprises.

Customization

> The company has strong technical reserves and tailor-made designs of crushing solutions which meet various needs in different working conditions through efficient communication with users.

陶瓷板锤

Ceramic-steel (MMC) Blow Bar



陶瓷板锤金相图

Metallo

横截面

Transverse Surface

应用案例

APPLICATION

国内某石料破碎站

客户机型

- > 山特维克 QI442

板锤材质

- > 高铬铸铁+陶瓷

破碎物料

- > 类花岗岩

寿命对比

- > 陶瓷板锤使用寿命较传统单一材质大幅提高1-3倍。大幅减少更换频率

客户反馈

- > 使用陶瓷板锤性价比更高

国内某建筑垃圾破碎站

客户机型

- > 美斯达 MC-250IS

板锤材质

- > 高铬铸铁+陶瓷

破碎物料

- > 建筑垃圾

寿命对比

- > 陶瓷板锤使用寿命较传统单一材质大幅提高1-3倍。大幅减少更换频率

客户反馈

- > 更长的使用寿命，减少了停机次数，增加运营收益

A Stone Crushing Plant in China

Customer Equipment Model

- > SANDVIK QI442

Blow Bar Material

- > High Chrome Cast Iron + Ceramic

Material to be Crushed

- > Granite

Life Span Comparison

- > The life span of the ceramic-steel (MMC) blow bar is considerably increased by 1-3 times compared with those traditional single material ones, which significantly reduces replacement frequency

Customer Feedback

- > More cost-effective with ceramic blow bars

A Construction Waste Crushing Plant in China

Customer Equipment Model

- > MESDA MC-250IS

Blow Bar Material

- > High Chrome Cast Iron + Ceramic

Material to be Crushed

- > Construction Waste

Life Span Comparison

- > The life span of the ceramic-steel (MMC) blow bar is considerably increased by 1-3 times compared with those traditional single material ones, which significantly reduces replacement frequency

Customer Feedback

- > Longer life span, less downtime and increase in operating income



粉末研磨易损件

POWDER GRINDING WEAR PARTS



适用领域：电力、水泥、矿山、新能源电池原料加工等。

Application: Power Stations, Cement, Mining, New Energy Battery Raw Material Processing, etc.

磨辊 Roller



磨盘 Liner





球磨机衬板 Ball Mill Liner



雷蒙磨磨辊 Raymond Mill Roller



应用案例

APPLICATION

某矿山企业立磨

客户机型

> MPS2800

磨辊材质

> 高铬铸铁+陶瓷

Vertical Mill of a Mining Enterprise

Customer Equipment Model

> MPS2800

Roller Material

> High Chrome Cast Iron + Ceramic



陶瓷磨辊

Ceramic-steel (MMC) Roller

单一高铬材质与陶瓷复合材质磨辊对比

Grinding Roller Comparison : Single High Chrome Material VS Ceramic Composite Material

2500小时后
after 2500 Hrs



VS



平均寿命6000小时
Average Life Span of
Ceramic Composite
Material: 6000Hrs

结束语

CONCLUSION

更多专业的个性化解决方案，请联系我们的项目经理和专家，以实现您的愿景。

For more professional and tailor-made solutions, please contact our account managers and experts to find out the way to achieve your expectation.



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