

# 北京金煤创业科技股份有限公司 BeiJing JinMei Entrepreneur Co., Ltd.

陶瓷复合立式螺旋搅拌磨机(塔磨机)螺旋衬板  
ceramic insert spiral liner of Vertical spiral agitating mill (towermill, SMD)

# 公司简介

## Company profile

北京金煤创业科技股份有限公司于2006年成立，2016年改制为股份制公司并成功登陆新三板。公司总部坐落在中国北京中关村科技园古城基地。是集研发，生产，出口销售的互联网+新材料制造企业。

公司主营金属基陶瓷复合材料，耐磨耐热材料，冶金、矿山、水泥、燃煤热电厂设备配件等。产品：高铬陶瓷复合铸造耐磨材料，马氏体钢陶瓷复合铸造耐磨耐冲击材料及各类高锰钢陶瓷复合材料，金属基陶瓷纤维复合材料，ZTA陶瓷机械零部件。

Beijing JinMei Entrepreneur Co., Ltd (DJM) was established in 2006, Headquarter located in Zhongguancun High-tech Park in Beijing, China. DJM was restructured into Joint-Stock company & listed on NEEQ in 2016. DJM's a research and development, production, export sales of Internet + new materials manufacturing enterprises.

DJM is focusing on Metal Matrix Ceramic Composite (MMCC) material, wear-resistant and heat-resistant material.

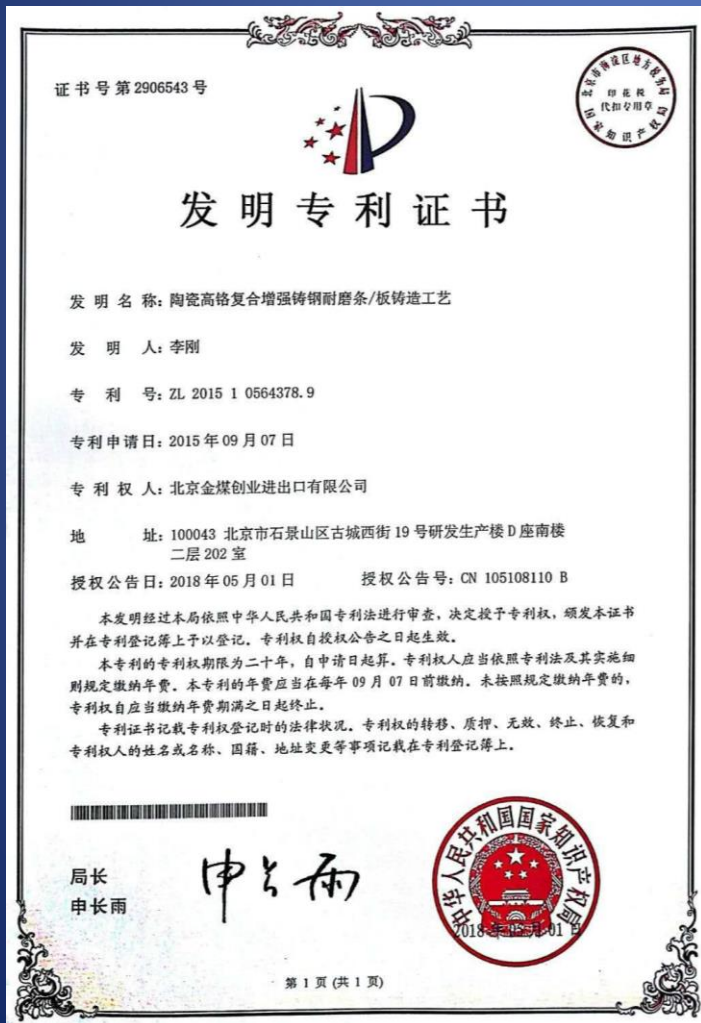
Products: High chromium cast iron ceramic composite castings, Martensite steel ceramic composite castings, high manganese steel ceramic composite castings, and Metal matrix ceramic fibre composite casting materials, ZTA ceramic mechanical parts. Products are widely used in metallurgical industry, mining, cement, Coal-fired thermal power plant as spare parts.



# 发明专利证书 Patent certificate

陶瓷高铬复合增强铸钢耐磨条板铸造工艺  
Metal Matrix ceramic composite casting

陶瓷高锰钢复合耐磨件铸造工艺  
High Mn Steel Matrix ceramic composite casting



# MMC-Cr 高铬铸铁陶瓷复合耐磨材料

MMC-Cr ( High Chromium cast iron matrix ceramic insert casting wear-resistant material )

## MMC-Cr ( High Chromium cast iron matrix ceramic insert casting wear-resistant material )

That is, the reinforcement phase - ceramic particles are fused and cast in the easily worn parts of metal parts with high chromium cast iron as the base material. The metal-ceramic composite layer is formed by the metallurgical combination of ceramic particles and casting alloy. The metallurgical bonding of ceramic particles with metal is realized by the heat of metal liquid. The hardness of ceramic-ceramic composite layer formed by ceramic particles and matrix metal shows a step distribution. The hardness of ceramic particles in the composite layer can reach 3-4 times of the hardness of high chromium cast iron material, so as to achieve the anti-wear effect; Compared with ordinary high chromium cast iron, the service life of the product is greatly extended.

The hardness of the High chromium iron ceramic composite layer is distributed in steps:

Ceramic particles hardness= HV2100

Hardness of metal around ceramic particles = 60-65HRC

Hardness of Basis material =High chromium iron = 58-62HRC

Suitable for use under low impact and high wear conditions

## MMC-Cr 高铬铸铁陶瓷复合耐磨材料

即在高铬铸铁为基材的金属部件易磨损部位熔铸增强相-陶瓷颗粒.通过陶瓷颗粒与铸造合金的冶金结合来实现金属陶瓷复合并形成金属陶瓷复合层;陶瓷颗粒与金属的冶金结合是通过金属液体的热量来实现的;陶瓷颗粒与基体金属形成金属陶瓷复合层的硬度呈阶梯分布:复合层中陶瓷颗粒的硬度可达高铬铸铁材料硬度的3-4倍,从而实现抗磨的效果;与普通高铬铸铁件相比,产品使用寿命大幅度延长。

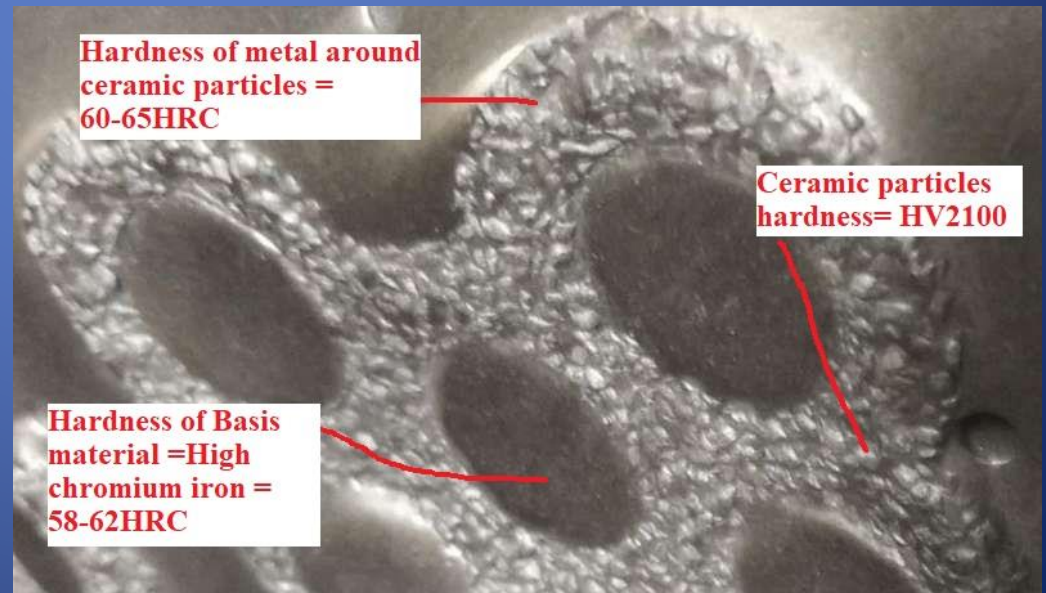
高铬陶瓷复合层的硬度呈阶梯分布:

陶瓷颗粒硬度= HV2100

陶瓷颗粒周围的金属硬度= 60-65HRC

基材硬度=高铬铸铁= 58-62HRC

适合在低冲击和高磨损条件下使用

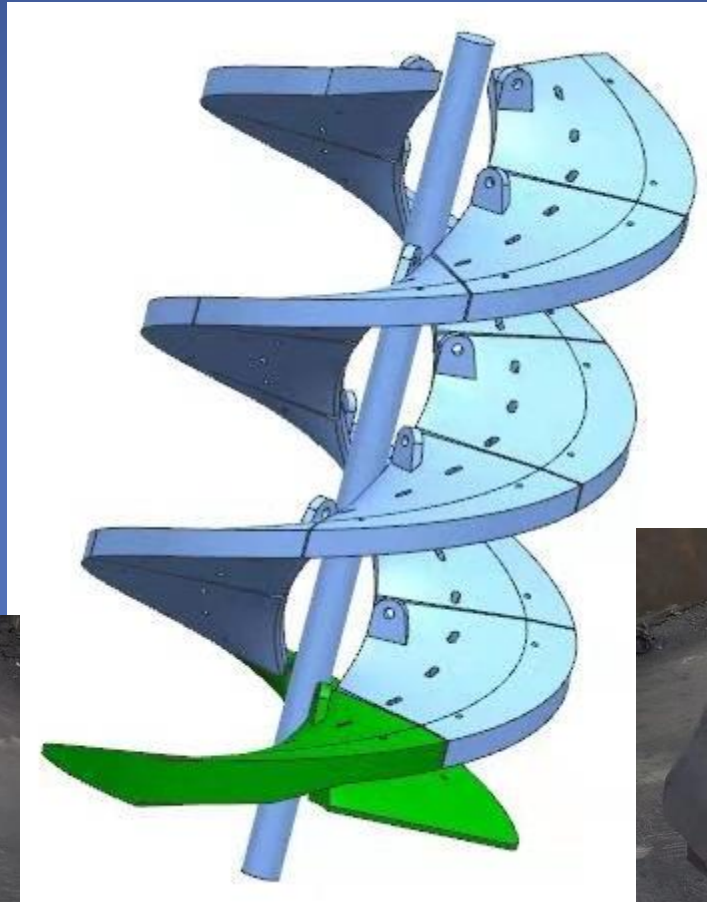


## 陶瓷复合立式螺旋搅拌磨机(塔磨机)螺旋衬板

ceramic insert spirall liner of Vertical spiral agitating mill (towermill, SMD)

- 为进一步提高衬板耐磨寿命，DJM 选用高铬铸铁陶瓷复合铸造工艺生产衬板，即在高铬铸铁材料表面熔铸陶瓷颗粒形成陶瓷金属复合材料层，这层复合层的耐磨性能可达高Cr材料的3-4倍，同时这一复合层可根据磨损曲线有针对性的制作，从而获得高耐磨且耐冲击的效果。陶瓷复合铸造衬板使用寿命是高铬产品的2倍以上。
- In order to further improve the wear resistance life of the lining plate, DJM selects the high chromium cast iron ceramic composite casting process to produce the lining plate, that is, casting ceramic particles on the surface of the high chromium cast iron material to form a ceramic-metal composite material layer, the wear resistance of this composite layer can reach 3-4 times that of the high Cr material, and the composite layer can be made according to the wear curve. Thus, the effect of high wear resistance and impact resistance is obtained. The service life of ceramic composite casting lining is more than 2 times that of high chromium products.

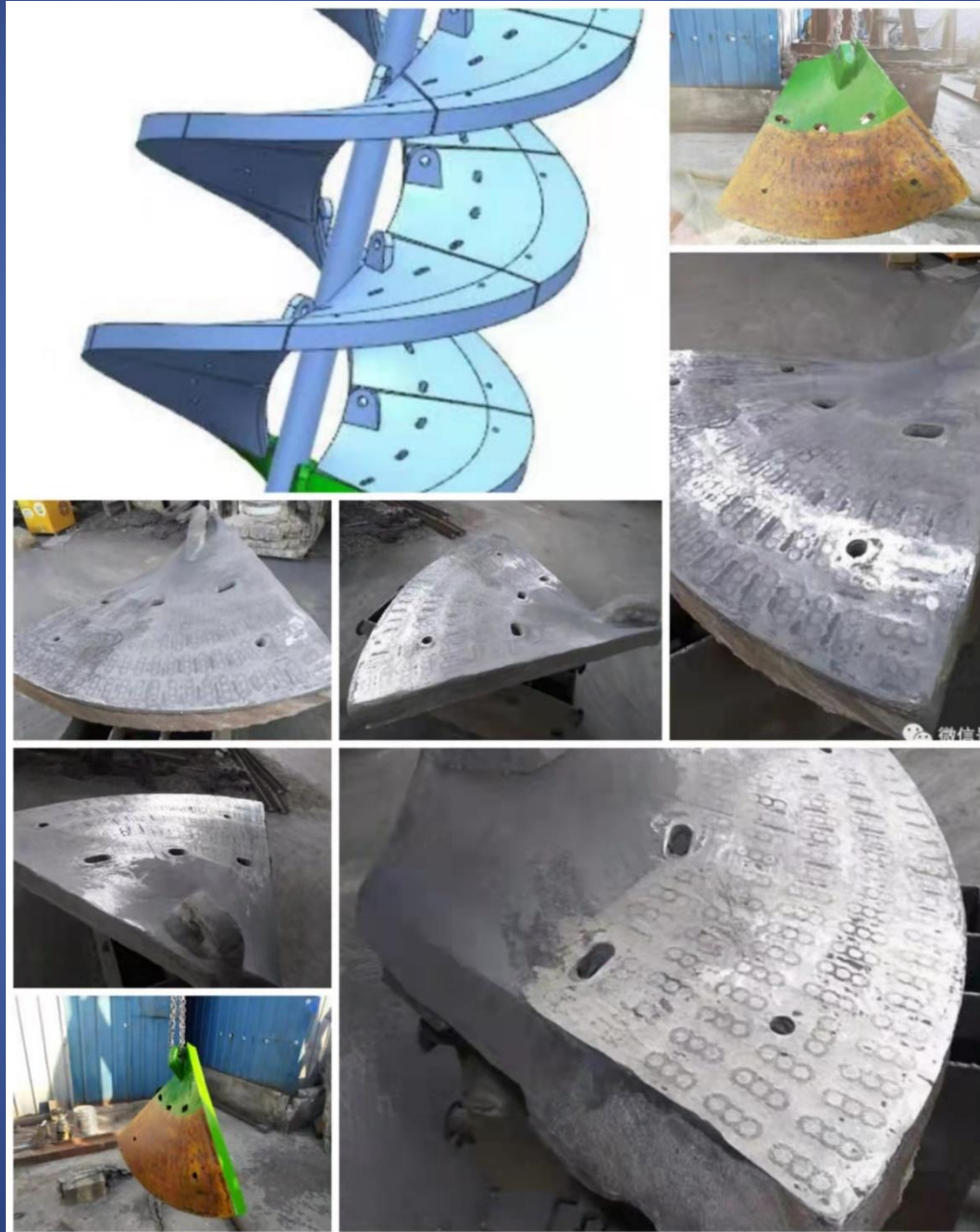
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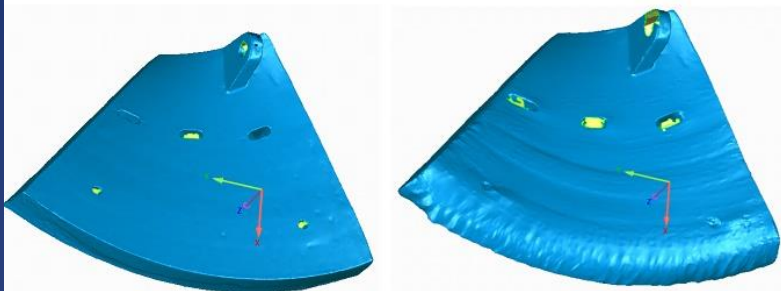




# 陶瓷复合立式螺旋搅拌磨机(塔磨机)螺旋衬板 ceramic insert spiral liner of Vertical spiral agitating mill (towermill, SMD)

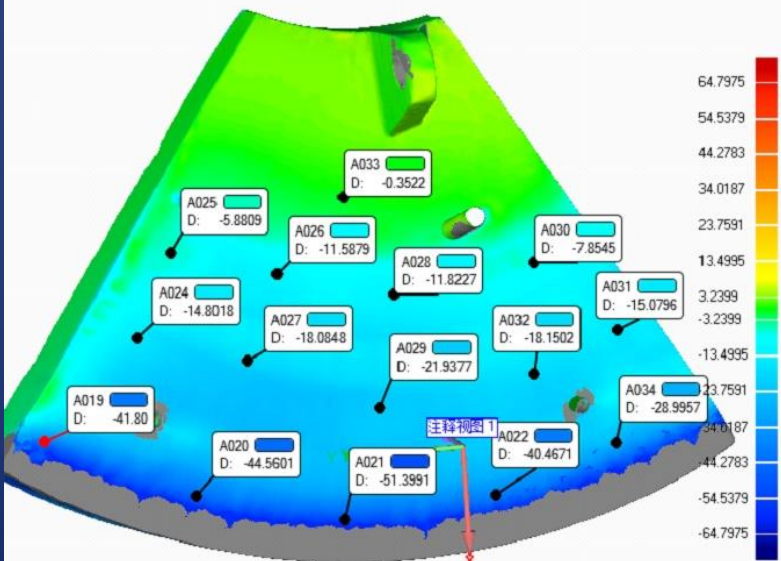
## 螺旋衬板磨损情况报告

1、使用前后图片



使用前后扫描图

2、3D 对比图



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谢谢！ / Thanks！

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