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

NEEQ：838329

公司简介

Company Profile

公司简介
Company profile

- Beijing JinMei Entrepreneur Co., Ltd (DJM) is established in March, 2006 and located in Zhongguancun High-tech Park in Beijing, China. It is a research and development, production, export sales of Internet + new materials manufacturing enterprises. Company's main business includes import and export, metal matrix composites, wear-resistant and heat-resistant material, castings and forgings, hardware and electrical, mining equipment, etc.

- Our company is mainly engaged in wear-resistant and heat-resistant materials, composite materials and new materials development, production, import and export. The main products: all kinds of high manganese steel, high chromium cast iron, Nickel Hard cast iron, and iron-based ceramic composite materials, ZTA ceramic mechanical parts.

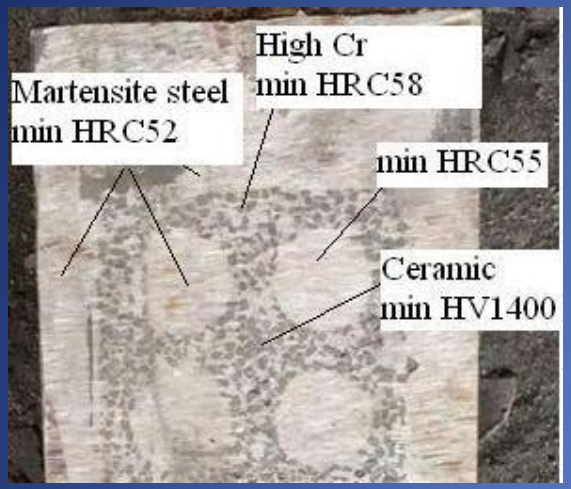
- Our company keeps the most advanced research achievements of theory and application in modern industrial production practice, and get the customer satisfaction in wear-resistant and heat-resistant material, and make full use of existing market and internet to occupy the industry's high-end market rapidly, this make the company become a new materials company with leading technology, first-class products, production stability, market recognition and modern management.

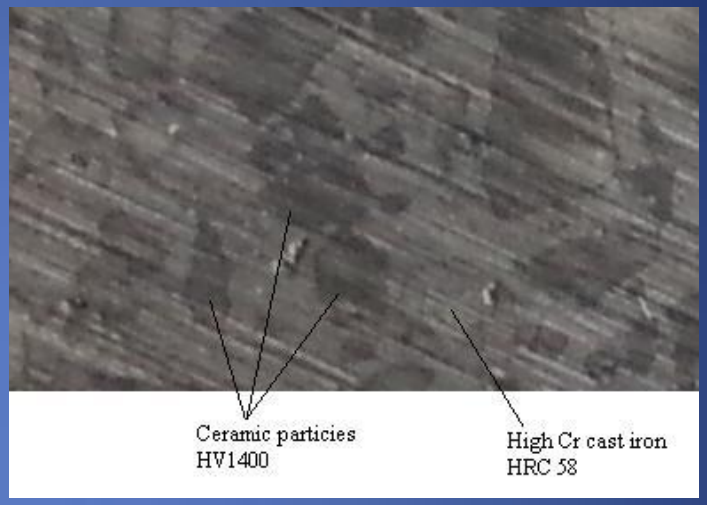
Metal Ceramic composite material introduction

- 1. High Chrome Ceramic casting wear-resistant material
- Make the high-chromium cast iron as the base of the metal parts, and putting the infiltration and composite enhanced phase ceramic particles into the easy abrading sections. First, the reinforced phase ceramic particles, the powder and the binder are mixed and pressed into ceramic pellets, and then the pellets are pre-baked, the pellets are fixed on the surface of the metal parts, and then the molten metal is cast on the pellets. The pressure and capillary force are impregnated into the core with the enhanced phase ceramic particles infiltrated and compounded, forming a metal and reinforced phase composite layer while forming the casting.
- The hardness of the ceramic particles in the composite layer can reach 3 to 4 times higher than the high chromium cast iron. At the same time, the cracks in the cast iron phase can't be extended to the ceramic phase due to the difference between the shrinkage, the coefficient of thermal expansion and the density of the ceramic particles. And some ceramic particles in the cracks, but also confined to the particles themselves without extending to the matrix, thus achieve wear and crack resistance effect; compared with ordinary high-chromium cast iron, the product life extension of 2-4 times.

- 2. Martensitic steel composite casting wear-resistant impact-resistant materials
- Make the martensitic steel as the base of the metal parts, and putting the infiltration and composite enhanced phase ceramic particles into the easy abrading sections. Give full play to the high strength and high hardness of martensitic steel to reduce the plastic deformation of metal parts and improve the impact resistance; combined with the high wear resistance of ceramic particles to improve the work surface of the anti-wear properties; thus to get the wear and impact resistance metal parts. Because of the choice of martensitic steel as the substrate, so that the martensitic steel matrix has a good welding and processing performance, while the product for flame gas cutting, abrasive saw, shear, water cut, plasma and other cutting, welding without preheating or subsequent heat treatment; compared with ordinary high-chromium cast iron, the product life extension of 2-4 times.

Metal Ceramic composite material Hardness and Inner Structure





主营产品介绍
Main production description

1, 陶瓷金属复合立磨配件:　辊套、碾底、衬板，导向板，动静环
DJM Metal ceramic composite vertical mill spare parts
Roller， Mill pan， Liner

2，陶瓷金属复合破碎机配件: 板锤、锤头、蹄锤
- DJM Metal ceramic composite crusher spare parts
- Blow bar， Hammer， Shoe hammer of VSI Crusher

3, 陶瓷金属复合工程机械耐磨件: 斗齿,护板, 刀片
- Metal ceramic composite Bucket Teeth, liner, Blade

4, 陶瓷金属复合混凝土搅拌站（机）耐磨件: 叶片, 刀片,衬板
metal ceramic composite concrete batching plant（mixer）wear resistant part （Blade, Paddle, Liner）

5, 金属陶瓷复合铸造可焊接耐磨条/板
DJM martensite steel ceramic composite wear parts
(weldability wear-resistant bar/liner)

陶瓷金属复合破碎机配件
Metal ceramic composite spare parts
Blow bar






Blow Bars

- DJM chooses high-chrome cast iron (or martensitic steel) ceramic composite material to make the blow bar: in the high chromium cast iron (or martensitic steel) material embedded ceramic particles on the surface to form ceramic metal composite material layer, the wear resistance of the composite layer can be up to 3 to 4 times higher than the high Cr material, and the thickness of the composite layer can be made 1/3 of the thickness of the original part. Compared with common High Cr, the life of the ceramic composite can reach more than 2 times.

附图-1-1 高 Cr 陶瓷复合板锤外观图

Picture 1-1 external view

附图-1-2 高 Cr 陶瓷复合板锤外观局部放大图

Picture 1-2 partial enlargement of appearance

Blow Bars

- DJM offers a wide range of designs and alloy solutions, from standard cast alloys to martensitic or manganese steels, including our Metal ceramic composite solution.
- Industry: Aggregates/ Recycling
- Equipment: Horizontal Impact Crushers/ Vertical Shaft Impacters
- Tech specs:
- Low chrome Martensitic Steel(High impact conditions -primary applications and concrete recycling)
- High chrome White Iron(low to medium impact conditions- secondary/tertiary applications-soft concrete and asphalt recycling)
- Low Chrome Ceramic steel(high impact conditions-primary applications and tough concrete recycling)
- Medium Chrome Ceramic White Iron(medium to hard impact conditions-primary applications-medium to tough concrete recycling)
- High Chrome Ceramic White Iron(Low to medium impact conditions – secondary/tertiary applications- pre- crushed concrete)
- Key Benefits:
- Increased lifetime: 1.5 to 3 times, High Chrome

专利技术证书（板锤）
Patent certificate（Blow bar）

证书号第4236528号

实用新型专利证书

实用新型名称：蜂窝ZTA陶瓷复合高铬铸铁板锤结构

发　明　人：李刚

专　利　号：ZL 2014 2 0557072.1

专利申请日：2014年09月25日

专 利 权 人：北京金煤创业进出口有限公司

授权公告日：2015年04月15日

本实用新型经过本局依照中华人民共和国专利法进行初步审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

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局长
申长雨

中华人民共和国国家知识产权局
2015年04月15日

第1页（共1页）

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(19)中华人民共和国国家知识产权局

(12)实用新型专利

(10)授权公告号 CN 204261737 U
(45)授权公告日 2015.04.15

(21)申请号 201420557072.1

(22)申请日 2014.09.25

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(51)Int.Cl.
B02C 13/28(2006.01)

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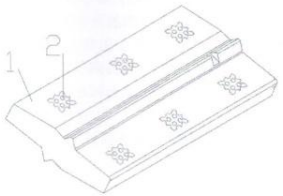
(54)实用新型名称
蜂窝ZTA陶瓷复合高铬铸铁板锤结构

(57)摘要

本实用新型涉及一种蜂窝ZTA陶瓷复合高铬铸铁板锤结构，包括板锤本体，在板锤本体的工作面上镶嵌有数块陶瓷层，所述陶瓷层为陶瓷芯块，其中所述陶瓷芯块大体呈一长方体结构，陶瓷芯块的端面上设置一个或多个透孔，同时陶瓷芯块的边缘端面上设置数个凹槽，透孔与凹槽轴向平行，透孔和凹槽内分别填制粘结在一块的陶瓷粉末，本实用新型使高铬铸铁板锤的耐磨性能大大提高，既提高了高铬铸铁板锤的耐磨强度，又增加了高铬铸铁板锤的使用时间，减少了更换高铬铸铁板锤的次数，提高了生产效率，节约了生产成本。



CN 204261737 U

立轴破(制砂机)蹄锤/抛头
Anvil/Shoe hammer of VSI Crusher

附图-2 高 Cr 陶瓷复合蹄形锤头外观图

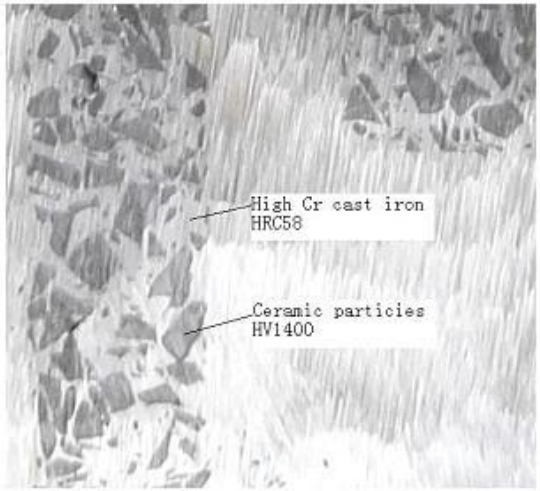
Picture -2 external view

附图-3 高 Cr 陶瓷复合蹄形锤头外观局部放大图

Picture -3 partial enlargement of appearance

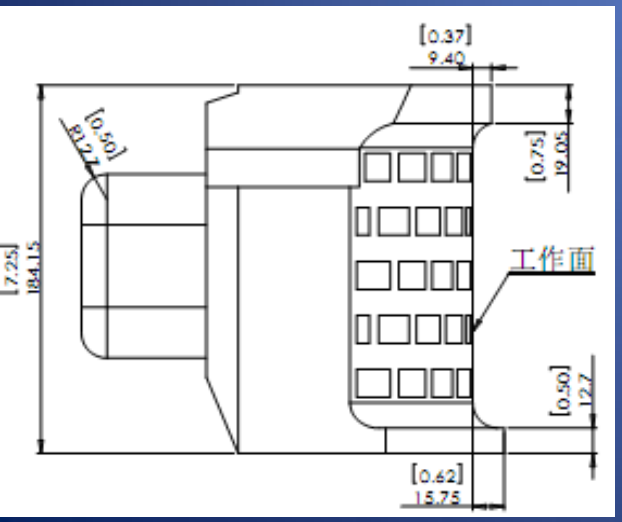
附图-1-4 高 Cr 陶瓷复合蹄形锤头局部解剖图

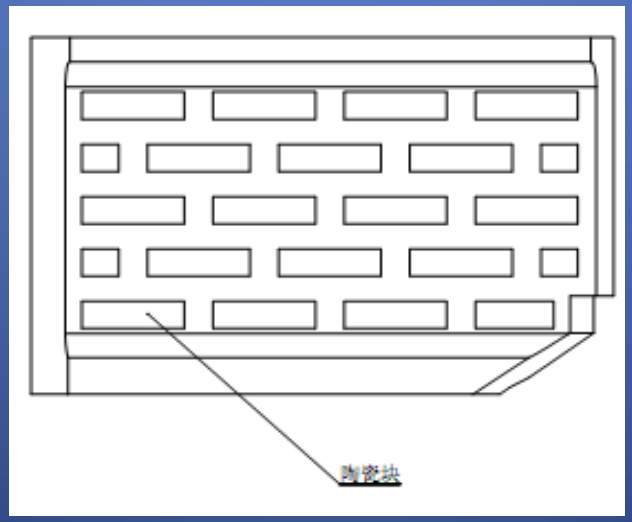
Picture 1-4 Part sectioned view



立轴破(制砂机)蹄锤/抛头
Anvil/Shoe hammer of VSI Crusher

- In order to get a further improvement of the wear life, DJM selects high-Cr cast iron(or martensite steel)ceramic composite materials, which forms the ceramic metal composite reinforcement through injection of ceramic particles into the high-Cr material , the composite layer wear-resisting property is than high Cr material 3-4 times, at the same time, the composite layer thickness can be made to a third of the thickness of the original spare parts. Ceramic composite material blow bar life is longer than 2 times of a high Cr alloy blow bar.



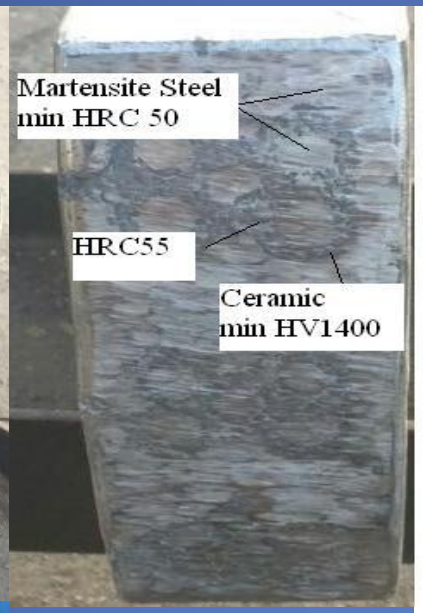


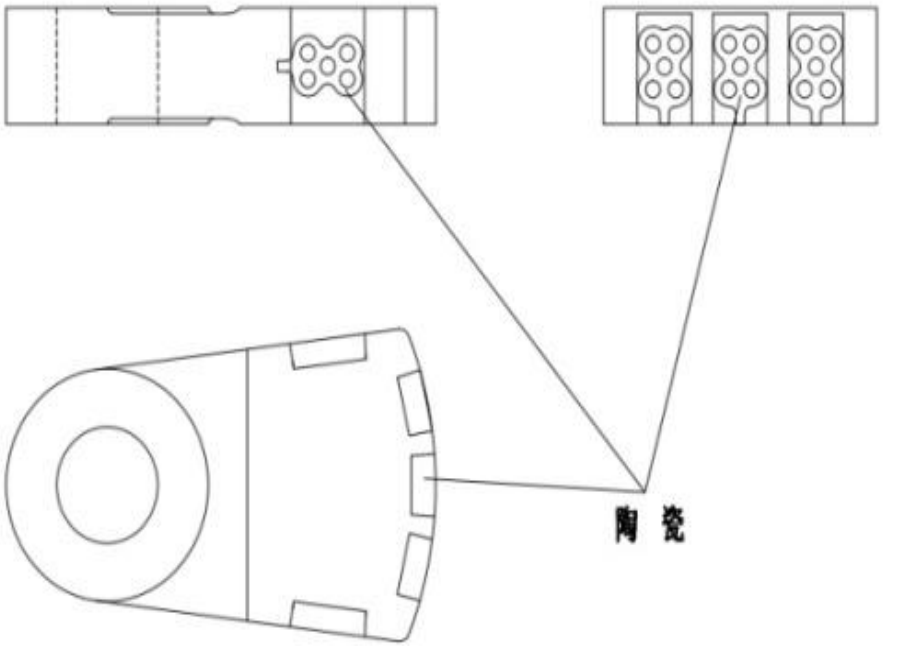
立轴破(制砂机)蹄锤/抛头
Anvil/Shoe hammer of VSI Crusher

- Our anvils are available in different designs and different alloys, either monoalloys or Metal Ceramic Composites, as to satisfy specific production requirements.
- Industry: Aggregates/ Recycling
- Equipment: VSI
- Principle: Crushing by impact

- Tech Specs:
- Anvils are available in different designs(proposal for best suited design to optimize process and wear)
- High wear resistant ceramic inserted into a shock-resistant metallic matrix.
- Alloys: monoalloys or Matal Ceramic composites to suit working conditions.
- Key benefits:
- Increased lifetime（3 to 4 times）

金属陶瓷复合铸造锤头
Metal matrix ceramic composite Hammer



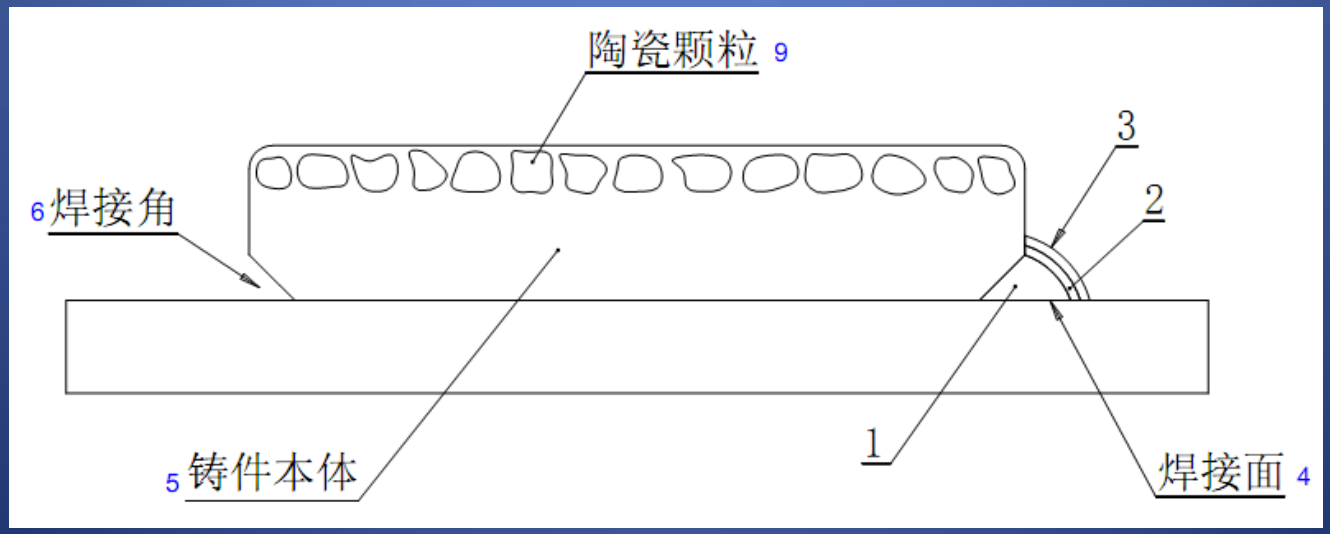


金属陶瓷复合铸造锤头
Metal matrix ceramic composite Hammer

- DJM use the composite of high Cr cast iron and ceramic on martensitic steel base. We adopt the powder metallurgy core making and casting sintering, the composite of high Cr and ceramic is put to reduce the temperature of molten martensitic steel during pouring, the alloy element in the composite are used to refine the martensitic steel grain to improve the performance, give full play to the capacity of self hardening under impact and improve the ability of impact resistance; High wear-resistant properties of composite of high Cr and ceramic will greatly improve the wear resistance of hammer surface, thus resulting in high impact and wear resistance for the hammer. Ceramic composite material blow bar life is longer than 2--3 times of a high Cr alloy blow bar.
- Tech specs:
- Low chrome Martensitic Steel(High impact conditions -primary applications and concrete recycling)
- High chrome White Iron(low to medium impact conditions- secondary/tertiary applications- soft concrete and asphalt recycling)
- Low Chrome Ceramic steel(high impact conditions-primary applications and tough concrete recycling)
- High Chrome Ceramic White Iron(Low to medium impact conditions – secondary/tertiary applications- pre- crushed concrete)
- Key benefits: Increased lifetime（2 to 3 times）

Metal ceramic composite weldable wear-resistant bar/liner introduction

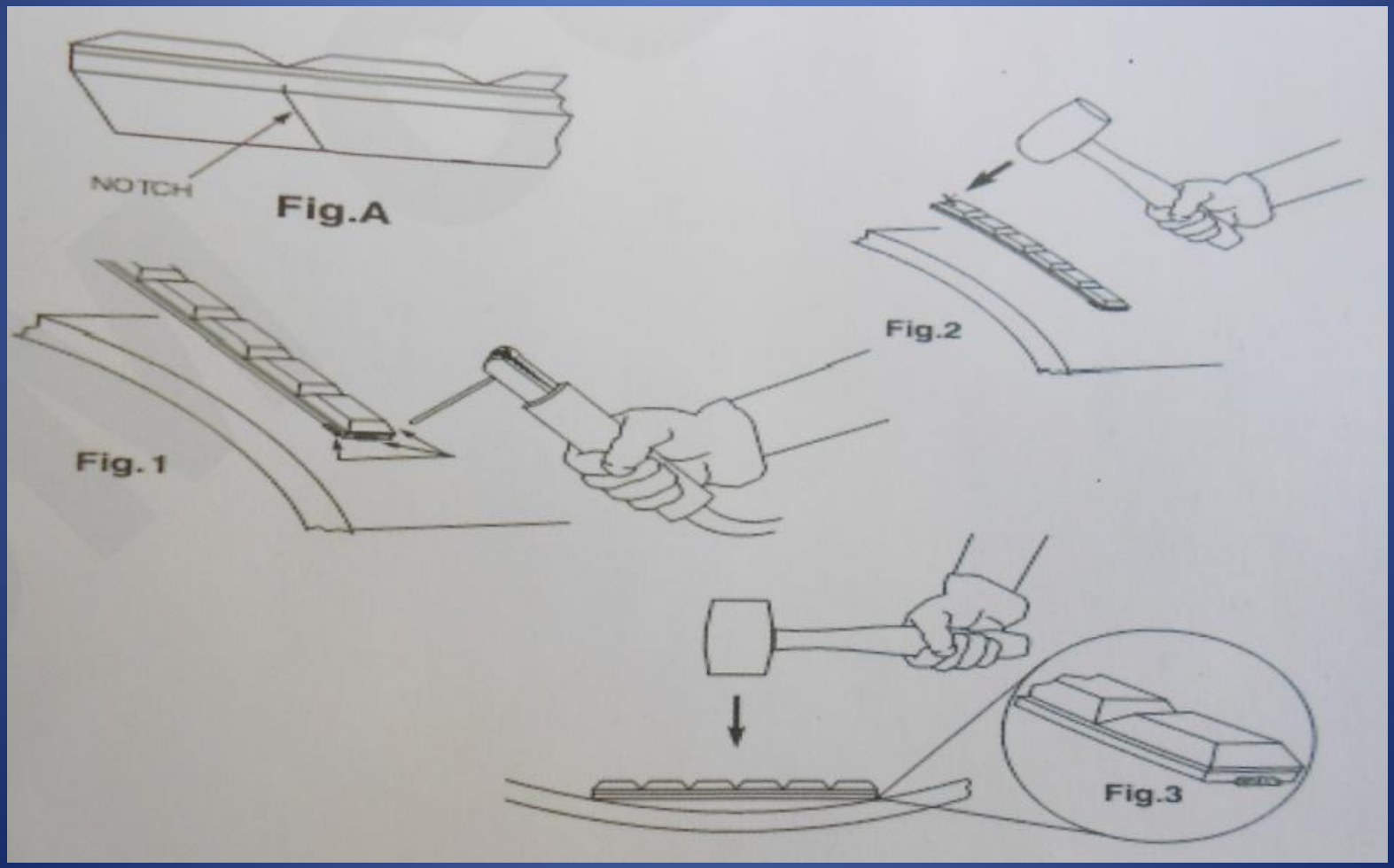
- Weldable wear-resistant bar/liner is martensic steel and ZTA ceramic composite casting and looks like chocolate. the composite layer wear-resisting property is 3-4 times more than high Cr material， and the thickness can be only 1/3 of the before spare part. The mild steel backing plate has very good welding performance while bearing high impact. This product is very easy to use. It's easy to be cut and welded on curved surface without pre-heat or post heat treatment. It's easy to be transported as it's very small. It's an ideal production to repair the small wearing and tearing area without too much welding time. We have complete range of specification and are able to customize and develop according to customer's requirement. Comparing with normal High Cr wear resistant casting wear parts, this product's service life is 2-4 times longer.



金属陶瓷复合铸造可焊接耐磨条/板(修补焊接用）
Martensite steel ceramic composite wear parts (weldability wear-resistant bar/liner)

Metal ceramic composite weldable wear-resistant bar/liner instruction

- First, the "V" groove is cut on the surface of the wear plate and slotted at the opposite position to assist in the molding (Figure A)
- And then clean up the welding position, welding the end of the wear plate (according to the welding process) at least 3. (Figure 1)
- Outer arc surface: with soft hammer to beat the end of the wear plate is not welded, so the wear plate and the arc in close contact. (Figure 2)
- Inside the arc surface: with soft flat hammer beat in the middle of the wear plate, so that the wear plate and the arc in close contact. (Figure 3)



结束语
End

- After years of development, relying on years of experience in technology and industry accumulation, the company differentiates the development of market positioning early, is located in the overseas market business of wear-resistant materials, compound materials and new materials products sales. Through the long-term market observation and analysis of need, the company can give more attention on research of wear resistant castings with various materials, and to understand the international and domestic advanced wear-resistant composite materials at the forefront of technology, thus to guide the company to research and develop the new material. At present, the company has built a R & D team with the actual R & D capability, and introduced advanced ceramic wear-resistant materials to the market. The future business development of the Company is forward-looking, and is good for continuing to develop in the field of wear resistant material.
- Nowadays, DJM have lots of foreign customers, and the volume of business is increasing. In the further development, we still follow our goal which is excellent quality and great service. Welcome all friends come to visit and negotiation.

谢谢！
Thanks！

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