

The introduction to ceramic inset casting technology

The wear spare parts by ceramic insert casting is high wear resistant, the life span is several times of the traditional material. The technology is suitable for production of Blow bar, Jaw plate, bowl liner, Mantle/Concave, Grinding roller, Liner, Chute liner, Hammer, and etc....

The ceramic cores can be applied to resin sand casting, water glass sand casting, vacuum casting, and lost foam casting. The technology is suitable for production of high manganese steel, high chrome cast iron, heat resistant steel and alloy steel wear parts.

MMC-Mn- High Manganese Steel matrix ceramic insert composite casting

MMC-Cr- High Cr cast iron matrix Ceramic insert composite casting

MMC-M- Martensite Steel matrix Ceramic insert composite casting

MMC-B - Bimetallic ceramic insert composite casting

MMC-H - Heat resistant steel ceramic insert casting

The ceramic insert casting technology is accomplished by metallurgical combination of ceramic particles and casting Alloyed; The metallurgical combination of ceramic particles and metal is realized by the heat of metal liquid; The ceramic particles form a metal ceramic composite layer with the matrix metal. The hardness of the metal ceramic composite layer is distributed in steps:

Ceramic particles hardness= HV2100

Hardness of metal around ceramic particles = 60-65HRC

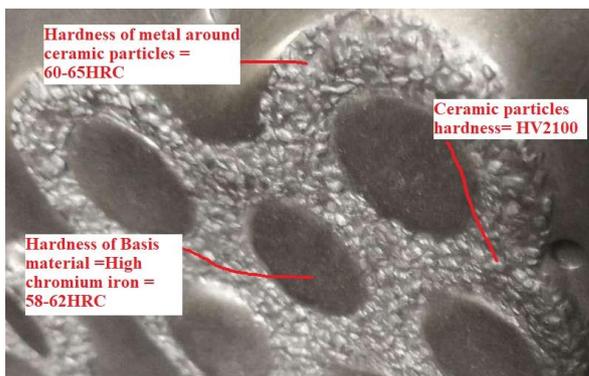
Basis material hardness is the same as that of conventional materials.

Martensite Steel hardness= 48-53HRC

High chromium iron hardness= 58-62HRC

High manganese steel = HB190-220

Impact hardness of High manganese steel = HB400-500



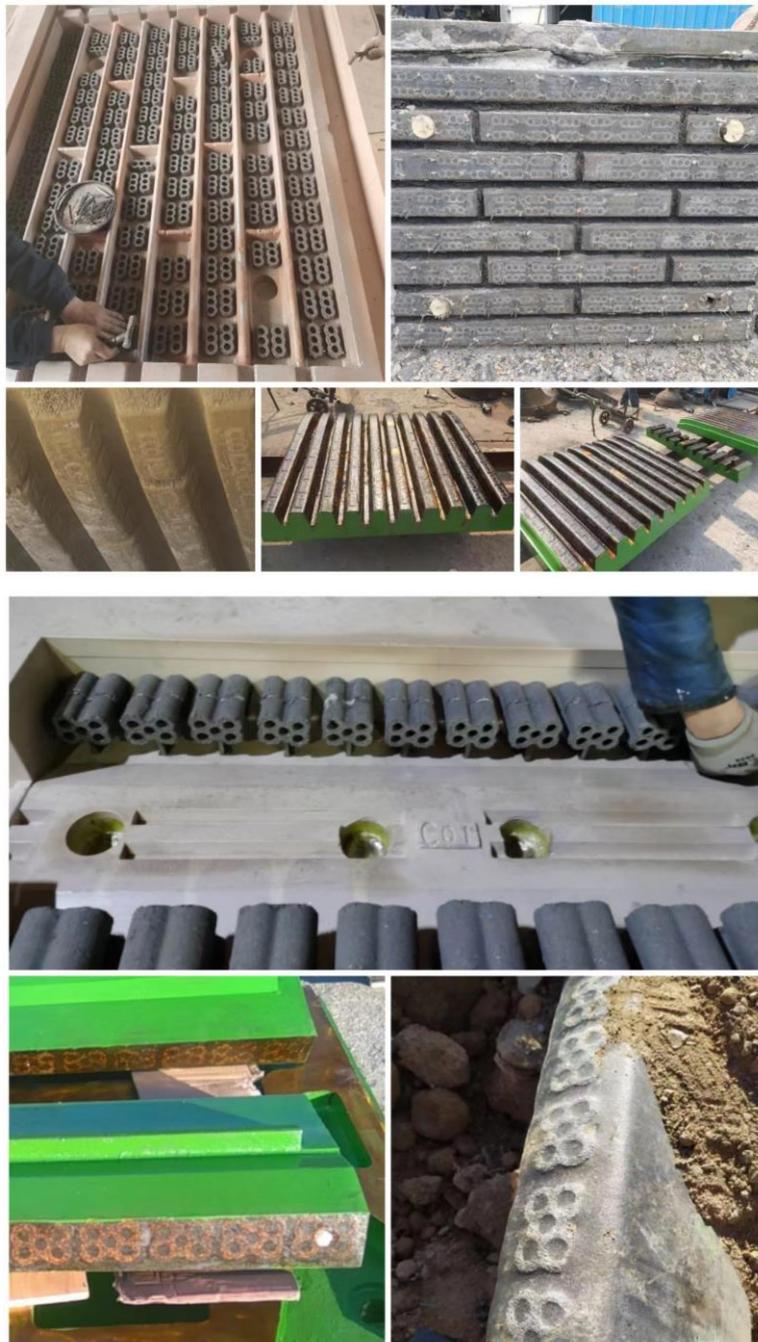
The biggest advantage of our Ceramic insert casting technology is that it greatly improves the service life of the product.

The life span is several times of the traditional material.

According to the user after the use of feedback statistics:

The average wear depth of the high-chromium composite casting roll sleeve and liner of coal mill is 1-3mm per 1000 hours; the service life of the MMC-Cr blow bar is more than 2 times of that of the common high-chromium blow bar; The service life of marteniste steel ceramic composite mill liner is more than 2 times of that of conventional mill liner or SAG liner; The service life of high chromium ceramic composite scraper, blade and liner is more than 3 times of that of conventional products, and the service life of high manganese steel ceramic composite casting concave/ mantel is more than 2 times of that of conventional products; The service life of Heat resistant steel ceramic insert casting Grate bar is several times of the traditional material.

The ceramic core is very simple and convenient to use, according to we design the casting process of the ceramic core with nails or self-tapping screws fixed to the sand mould can be.



Usually the shape type and size of the ceramic core should be selected according to the casting drawings. We will design the casting process, layout of the ceramics according to the casting drawings, and choose the type, size of the ceramic core. Other, We will also design special ceramic cores according to the product. We have 4 standard size ceramic cores



If you are interested in cooperate in the production of ceramic insert casting wear-resistant products. Please email us the drawings of the products you intend to produce. And please let me know you foundry detail, please send you some photos of your casting equipment and the production site. We will design the ceramic layout, casting process and calculate the cost and amount of ceramics according to your drawings. For detail information please contact us by Email: leegang@djm-bj.com or by WhatsApp: +8613901376361