Copper in the importance of the application of powder metallurgy

By mhcmp
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In recent years, scholars pay more attention to PM with "nano" and "composite" to the material properties while ignoring the basic materials and processes in the field of powder metallurgy expanded role. Copper in the field of powder metallurgy has played a huge role, will continue to promote its development. This article discusses the application of copper in the field of powder metallurgy and process development, reviewed the history of copper, properties and applications. This paper supports this view: the application of copper in the powder metallurgy will continue to increase, in the field of thermal management materials, and conventional powder metallurgy, its application prospects.

The article discusses the application of copper in the powder metallurgy field and process development, reviewed the history of the development of copper, properties and applications. The author believes that the application of powder metallurgy copper will continue to increase, in the field of thermal management materials and traditional powder metallurgy, its application prospects.

Of copper in the powder metallurgy

As early as 10,000 years ago, copper powder (FCu), copper was found as a unique metal and understanding. At first it was used for jewelry and other accessories. Natural copper block or copper ore as raw material, processing is very simple, that is the original cold. Back to 8700 years BC, there do necklace pendant with copper.

Copper has excellent thermal and electrical conductivity and good corrosion resistance and mechanical properties. Copper easily processed into complex shapes and filaments. Architects often use their bright red and its subsequent erosion aeruginosa, as buildings, decorative ceiling and outdoor installations.

Easily with other elements in the formation of copper alloy, a large number used to make shaped forgings, copper powder (FCu) wholesaler, castings and powder metallurgy products. Formation of copper and nickel alloy has excellent resistance to seawater corrosion performance. Tin copper solid solution can improve the strength and corrosion resistance. Zinc and copper alloys, copper powder (FCu) supplier, brass powder that was used for water pipes, locks, fittings, valves, pipe fittings. Containing nickel, tin, titanium, beryllium copper and cobalt alloy strength equivalent to high strength steel, and has high electrical conductivity and thermal conductivity. Copper and zinc alloy often used to produce flakes of gold dust. By adjusting the tin-nickel composition, can generate a specific color.

In the field of powder metallurgy, using copper powder and heat production of electronic components. Containing tin, zinc, nickel, copper or iron alloy is widely used in automobiles, lawn park equipment, tools and electronics. Copper up to use in self-lubricating bearing, the other is pre-mixed Fe-Cu, the chemical industry in the field of dialysis and the friction material components.

Important and unique copper application of powder metallurgy in the field. The materials in this area is not obtained by melting and casting, for example: dispersion strengthened Cu-Al2O3 to strengthen and manufacturing welding electrode (for the automotive and other industries) for the thermal management of electronic components W-Cu and Mo -Cu, such materials need to control its porosity. Self-lubricating
bearings and filters are typically used powder metallurgy field. These materials require control of appropriate porosity and oil content in order to achieve excellent lubrication.

Copper powder metal injection molding process through can be made into complex shapes of electrical and electronic components, the product has good electrical conductivity and thermal conductivity. We can use high-purity copper powder, the final part by increasing the density to increase electrical conductivity and thermal conductivity. Injection molding process can increase the density of copper powder, the product of conductivity and thermal conductivity increased.

Powder metallurgy products

The primary application of copper powder tin powder mixture of copper, to make bronze pieces. The early twenties of the twentieth century, is located in Carteret, New Jersey, autonomous regions and metal refining (USMR), began production of electrolytic copper powder. The plant size, with large cathode slot. At peak production, copper powder factory about 455 tons per month. The mid-eighties in the 20th century, smelting and electrolytic refining businesses forced to close, because Carteret plant closures, although some companies try to produce electrolytic copper powder, the United States no longer electrolytic copper powder production.

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Our company main production are Aluminium Powder, TiN Powder, Tin Powder, Brass Powder (FCuZn), Copper Powder (FCu), Bronze Powder (FCu633), Nickel Powder, Silver Powder etc

Category: Business, Industrial
Tags: copper powder ( fcu ), copper powder ( fcu ) supplier
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