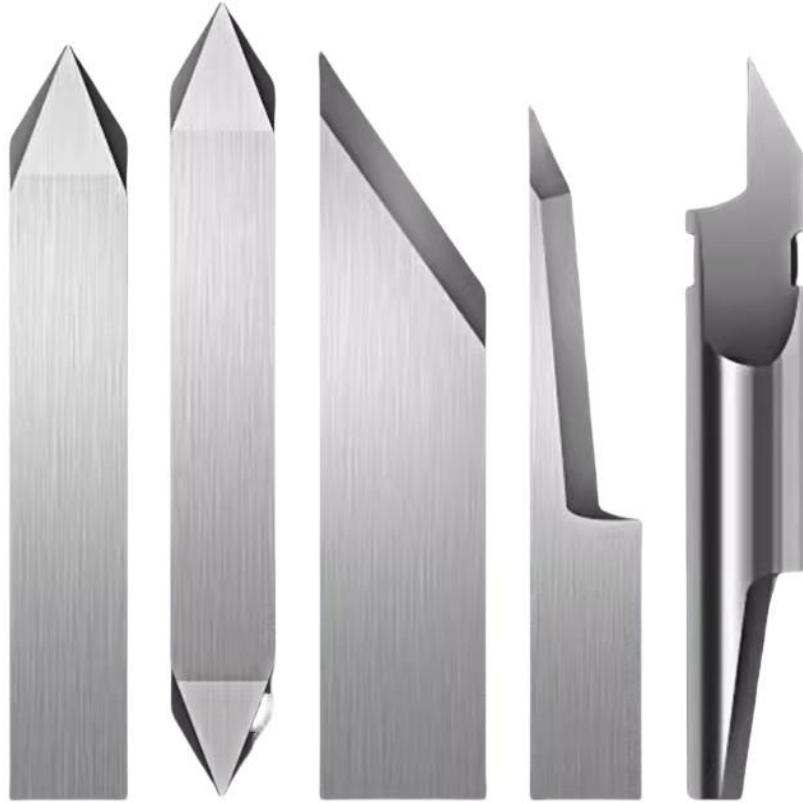


## What are the characteristics of the production process of special-shaped cemented carbide?



Special-shaped cemented carbide is a material with high hardness, wear resistance and thermal stability, and is widely used in drill bits, cutting tools, molds and other fields. Its production process has the following characteristics:

1. Exquisite material selection: The preparation of special-shaped cemented carbide uses tungsten (W), tungsten carbide (WC) and cobalt (Co) as the

main raw materials. Their formula and proportion are crucial to the performance of the product. The quality and proportion of the raw materials need to be precisely controlled during the production process to ensure that the product has the required hardness, toughness and wear resistance.

2. Powder metallurgy process: Special-shaped cemented carbide is usually prepared by powder metallurgy process. Tungsten powder, tungsten carbide powder and cobalt powder are mixed and pressed into blanks, and then sintered and heat treated to obtain finished products. Powder metallurgy process can realize the preparation of complex shapes and maintain the uniformity and stability of raw materials.

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3. High temperature sintering technology: In the process of producing special-shaped cemented

carbide, high temperature sintering is one of the key steps. By controlling the sintering temperature, time and atmosphere, the raw material particles are dispersed, the grains grow, and the intermetallic compounds are formed between cobalt and carbide, and other physical and chemical changes occur, thereby improving the hardness and wear resistance of the material.

4. Forming technology: Special-shaped carbide products usually need to be formed, such as cutting, grinding, polishing, etc. For products of different shapes and sizes, corresponding forming molds and processes need to be designed to ensure that the finished product meets the requirements.

5. Quality control: Quality control is a crucial link in the production of special-shaped cemented carbide. Through the whole process monitoring of raw materials, production process and finished products, ensure that the products meet the standard requirements. At the same time, strict inspection

and testing are also required to ensure the quality stability and reliability of the products.



In general, the production process of special-shaped cemented carbide is relatively complicated, but through the steps of fine raw material selection, powder metallurgy, high-temperature sintering, molding processing and quality control, finished products with excellent performance can be obtained. With the development and innovation of technology, the production process of

special-shaped cemented carbide will continue to improve, providing higher quality materials and products for all walks of life.