

Method of Manufacturing Rolling Bearings

Manufacturing of Bearing Parts-Reflection of Bearing Parts-Demagnetization, Cleaning, Antirust-Bearing Assembly-Reflection of Bearing Products-Demagnetization and Cleaning of Bearing Products-Storage of Oil-coated Packaging Bucket Products of Bearing Products.

Ring is the main part of [rolling bearings](#), because of the complexity of [rolling bearings](#), the ring size, structure, manufacturing equipment and process methods of different types of bearings are different. Because of many processing procedures, complex technology and high processing accuracy requirements, the processing quality of the ring has a major impact on the accuracy, service life and function of the bearing.

Ring forming method

At present, in the ring processing, the main forming methods are forging forming, turning forming, cold rolling forming and cold (warm) extrusion forming. Among the above forming methods, forging forming process is the most widely used, accounting for about 80% of the total output. For some small general products, bar direct turning can be used. Since 1980, some small and medium-sized enterprises in China have adopted cold rolling and cold extrusion technology in the production of small and medium-sized rings.

1. Forging Forming

Forging can eliminate the defect of metal connotation, improve the metal structure, make the metal streamline distribution reasonable, and the metal density is good. Forging forming process is widely used in bearing forming process. It can complete the processing from small products with inner diameter of 20mm to super large products with outer diameter of 5000mm. The common forging forming methods are hot forging, cold forging and warm forging. Hot forging is the main method in China.

Hot forging process can be divided into free forging process, press forging process, flat forging process and high-speed upsetting forging process because of different forming equipment.

2. Cold Rolling Forming

Cold rolling process is an advanced process which can improve the application rate of data, the compactness of metal structure and the linearity of metal flow. It is a chip-free processing method. In theory, the products formed by cold rolling can be directly processed by thermal treatment and grinding without turning. At present, the cold rolling process is mainly used for medium and small deep groove ball bearings. The main process is as follows:

Forging blank-turning) -rolling radius-soft grinding of both ends

When cold rolling process and forging forming process are adopted, the precision of products is affected not only by the accuracy of equipment, but also by the precision of forming die.

3. Turning Forming

In the bearing industry, the traditional turning forming skills are to use special lathes, using centralized process method to complete the forming process. However, because of the difficulty of adjusting the equipment, the low accuracy of machine tools and the low rate of data application, the process method is being reduced.

With the development of scientific skills, CNC turning machine tools are developing rapidly and becoming more and more perfect. Nowadays, more and more products with complex shape and high precision are adopting NC turning forming skills.

In summary, the bias of ring forming process should be toward high application rate of metal data, high production efficiency and high forming accuracy. Therefore, high-speed upsetting

skills, cold rolling skills, CNC turning and forming skills will be used more and more.