

Effect of heat treatment quality on bearing quality

1. The quality of the heat treatment directly affects the life of the bearing. If the heat treatment temperature is too high, the crystal grains are coarse, and the quenching crack is likely to occur. The quenching temperature is too low and the hardness is slightly lowered, which is called underheating.
 2. If the tempering temperature is too high, the hardness will decrease and the stress removal will be better. The tempering temperature is too low, the hardness of the material is high, but the stress is difficult to go out, so the bearing steel generally adopts a tempering temperature of 150 to 180.
 3. The effect of preparatory heat treatment on bearing life, especially spheroidizing treatment. If the spheroidization is not ideal or uneven, it is easy to cause uneven carbide concentration. When quenching, the deformation of the ferrule will increase a lot and swell. Or shrinking the non-regularity, which is likely to lead to the scrapping of the margin caused by the large deformation,
 - 4, the impact of forging on bearing life, forging can be regarded as the first heat treatment of bearing manufacturing, if the forging temperature is too high, the grain is coarse, the quenching is easy to crack, the forging ratio is easy to cause carbide unevenness, which will also affect the quenching Deformation and cracking. The number of forgings is not enough to leave the forged structure, and it is necessary to resolutely eliminate the forged carbides. The carbide segregation and carbide segregation will affect the final quenching treatment.
- It can be seen from the above that forging annealing quenching and tempering play a decisive role in the life of the bearing.