The influence of rolling bearing inner ring of the bearing channel causes roundn

1 rolling bearing inner ring raceway roundness is an important indicator of quality, directly affect the bearing working accuracy, stability and service life. Grinding is usually the inner channel of the semi finishing or finishing process of finished product, inner ring channel roundness plays a decisive role, the inner ring raceway grinding roundness in addition to precision and dynamic characteristic depends on the grinding process of the system, but also closely related with the process parameters of grinding. The former, for many scholars pay attention to it, and made a lot of research, thereby greatly improving the grinding of inner raceway roundness. With the improvement of precision grinding process and the dynamic behavior of the system is improved, the grinding process parameters becomes the primary factor influencing the roundness, so the research of grinding process parameters on the influence of roundness, the reasonable selection of process parameters, to ensure that the grinding of bearing raceway roundness, and then realize the process parameter of grinding bearing channel optimization, have important significance.
2 bearing inner ring channel usually adopts variable feeding speed plunge grinding mode, the grinding cycle can be divided into: fast approaching, the workpiece rough feed fine feed and feed grinding, four stages.

Machine tool vibration caused by the 3 grinding wheel unbalance or otherfactors, it will seriously affect the grinding workpiece roundness. Maintain goodworking state machine and grinding wheel good balance, is a prerequisite forapplication of roundness mathematical model fitting the front. In addition, the grinding wheel hardness, organization and the grinding particle and abrasive type is different, and the cooling liquid composition is different, will be on thegrinding roundness has certain influence.

