High-speed grinding pursuit of modern manufacturing technology to achieve two ma

General grinding speed reaches 45m / s or more known as high-speed grinding. In my eighties domestic research ZYS-811 automatic bearing grinder to represent, the first domestic bearing industry Rings grinding application speed grinding technology, supporting the successful development of a high-rigidity, high speed, high power spindle and High-speed wheel. The high-speed grinding already widely used at home and abroad, and with the widespread adoption of high grinding ratio, high durability super abrasive such as CBN, grinding wheel speed has reached 80 ~ 120m / s, or even higher. Such as: Germany Mikrosa, Japan KOYO company centerless grinder, Japan TOYO company bearing Grinder, the outer surface of the grinding wheel speed up to 120m / s, the inner surface of the grinding line speeds up to 60m / s ~ 80m / s.

Increased wheel drive (drive) system power increase machine rigidity, high-speed grinding an important measure, but its high-speed spindle unit high-speed grinder of the most critical components. High-speed grinding wheel should have sufficient strength in addition, we also need to ensure that a good grinding performance, in order to obtain high ground effect. In addition, the cooling device is also one of the means to achieve high-speed grinding is indispensable.

The outer surface of the grinding wheel balancing technology automatically

For the outer surface of the grinding wheel is large and non-homogeneous due to organizational body, the wheel spindle system deviates from the heart of the center of gravity of the total, would inevitably lead to a high speed rotating grinding wheel system and its entire machine vibration, direct impact on the life of the machine. In this case, it will be difficult to achieve high precision grinding, easily lead to the workpiece surface grinding chatter, waviness increases.

Wheel mounted directly on the machine or otherwise mechanically automatic balancing device, boot quickly and directly approaching the equilibrium position, the more sophisticated and self-balancing wheel static balance can be omitted. The technological breakthrough to promote the grinding technology development, but can greatly extend the limits of the wheel, dressing with a diamond and spindle bearing life, reduce machine vibration, long-term accuracy of the original machine.

Rapid elimination of empty inner surface grinding process technology

All bearings grinding equipment, the inner surface grinder level symbolic. This is mainly grinding wheel size and pore size limits set parameters corresponding system institutions, limiting the fundamental process system rigidity while its high precision machining requirements. All these require us to enter the inner surface of the grinding process in-depth study, in addition to the maximum limit to play the machine and wheel cutting capabilities, reduce auxiliary grinding time to improve grinding efficiency critical, because the total grinding grinding away empty time 10% or so.