Attention points of spindle machining and necessary precautions

The main problem is how to ensure the spindle the spindle bearing neck size, shape, position accuracy and surface roughness, the front end of the main shaft, the outer conical surface in the shape accuracy, surface roughness and on their bearing neck position accuracy.
The spindle bearing neck of dimensional accuracy, shape accuracy and surface roughness requirements, can ensure the use of precision grinding method. To improve the fine datum accuracy should be before grinding.
To ensure the same precision grinding method should be used in the front end of the main shaft inside and outside the cone shape accuracy, surface roughness. In order to ensure the accuracy of relative position outside the cone bearing neck, and between the supporting shaft neck position precision, usually adopts combined grinding method, in one clamping and processing these surfaces, the machine has two independent wheel rack, fine grinding in two stations, station of grinding the front axle and rear axle neck cone, Station II with the angle of forming grinding wheel, grinding spindle front bearing surface and short cone.