

What are the differences of material and heat treatment between gears used in food machinery, ordinary machine tools and automobile reducer?



The gear used in the machine tools, working requirements are stable transmission is, small vibration and stable force, changed speed under the static state. and with good lubrication condition, and good working environment, so as usual, the medium carbon steel or the low alloy steel are chose after the forging and the mechanical processing, according to the need, and then carries on the different heat treatment for use.

As automobile gear speed is high, and it is often changed in dynamic state due to special circumstances such as uneven road surface, overload, to bear a greater impact, the gear is required to have high wear and impact resistance, so the automobile gear is often made from low-carbon alloy structural steel, such as 20CrMnTi , and then forging, mechanical processing, carburizing and quenching .

Gear used for food machinery, and machine tool, comparison with automobile cars, its stress and transmission stability requirements are lower, so they are generally made from medium carbon steel or low alloy steel before mechanical processing.

