



## Highlight the advantages of vacuum heat treatment technology tool

The tool has a series of outstanding vacuum heat treatment technology advantages: vacuum heat treatment has antioxidant effect. Surface is not oxidized, not decarbonization, and reducing rust effect, save the tool roughing process, saving expensive tool steel raw material consumption, save processing time and reduce product cost; The vacuum heat treatment with vacuum degassing & degreasing effect, There is no risk of hydrogen embrittlement. Prevent the tool from the surface of the refractory metal material is brittle, make the surface of the tool increase the purity of the material and improve tool fatigue strength, ductility and toughness and corrosion resistance, improved tool life. Vacuum heat treatment has little deformation hardening, can reduce stress deposit of conventional quenching distortion correction.

Reduce the possibility of the blade breaking during use, Vacuum heat treatment deformation of blade for salt bath quenching 1 / 2-1 / 10, after quenching generally do not need correction can be grinding processing to finished. Vacuum heat treatment process stability and good reproducibility. Once the process is determined, as long as the input process procedures, heat treatment operations will run automatically. Avoid instability caused by conventional heat treatment process caused by tool quality fluctuations. Vacuum heat treatment less power consumption, power consumption 80% for conventional heat treatment, low production costs, but one-time investment costs is large. Vacuum heat treatment safe operation, high degree of automation, good working environment, Pollution-free environment, in line with sustainable development requirements of China's industrial enterprises clean production.

The mold tool products on cryogenic technology evolved from industrial applications. Cryogenic processing and heat treatment, as it and the material properties, processing temperature, processing speed has a lot of different treatment methods are significantly different effect. Cryogenic technology for material processing less than -130 °C a process for cryogenic treatment not only can significantly improve the mechanical properties of the tool life, dimensional stability, improve uniformity and reduce distortion, and easy to operate, without damaging the workpiece, pollution, low cost tool to improve the quality of great help.