

WKPT Update

New Blood in Precision Industry



Through the academy-industry cooperation programs, we cultivate the new blood of precision machining.

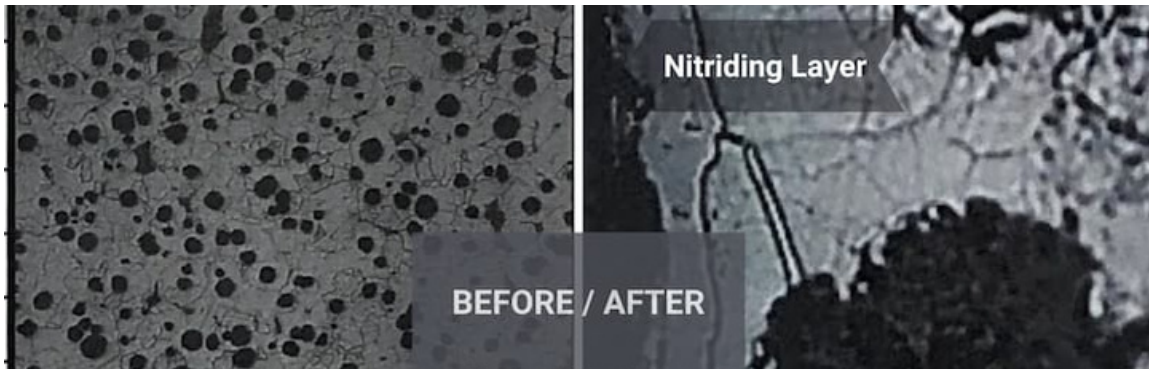
Due to the declining birthrate in Taiwan and the labor gap in the industry recently, the importance of talent cultivation is getting serious. The city government has recently implemented the "Talent Cultivation and Competency Enhancement Program" with academia and industry, hoping to upgrade the workforce.

WKPT was invited to the think tank of this program to provide training suggestions. In the field of mechanical drawing and CNC machines, we planned a relative learning map including design and development practices, design software applications, precision instrument interpretation and other capabilities.

In addition to this program, we have cultivated many technical talents in the academy-industry cooperation programs since 2017, and stayed connected with colleges through academy-industry research plans. In the academy-industry collaboration, students can gain industrial work experience and reduce the gap between learning and doing. After graduation, the work experience can benefit students and accumulate their knowledge in precision industry, then become a new generation of precision technology talents.

Information Express

How to Improve the Surface Hardness of Metal Parts



Product surface hardness after gas nitriding has perfectly reached the upper limit of client's request.

Nitriding refers to a heat treatment process in which the atoms of nitrogen infiltrate into the surface of alloy to harden it at an appropriate temperature. Soft nitriding is the process with the atoms of carbon, with a rather lower temperature and thinner compound layer. Nitriding/soft nitriding can greatly improve the surface hardness, wear-resistance and rust-resistance of metal parts, so it's widely used in precision parts manufacturing, and it's one of the common heat treatment processes.

One of the transportation parts we made for a global brand have surface hardness requirement due to long-term operation.

This part is made from ductile iron FCD450, and the surface hardness before soft nitriding is HB170 (approximately equal to HV180). The parts were placed in a nitrogen furnace for gas soft nitriding with appropriate parameters such as temperature, time, gas ratio, etc. The surface hardness of parts is increased to HV740-795 after treatment, perfectly reaching the upper limit required by our client, and successfully assisting the client's products in challenging tough scenarios.

Industry News

Best Metal Materials For Sustainable Development



The properties of aluminum alloy make it the best sustainable metal material.

"Aluminum is becoming a preferred material among many automakers as the industry shifts towards a sustainable future" (*The pros of lightweighting with aluminum in a battery-powered world*)

According to the report of "Automobile World", the most significant change in the application of aluminum alloy in the automobile industry is the lightweight of the body for its metal properties. In addition, its good recyclability and high durability make Al alloy the best choice for material and sustainable development.

In the field of metal forming and machining, WKPT not only covers casting iron, but also covers the process integration of aluminum alloy including procurement, forming, machining, and surface treatment, etc.

For example, the Al alloy A356-T6 gravity castings for both commercial and electric vehicles, and the easy-to-form Al alloy ADC-12 die castings suitable for wear resistance for agricultural machinery are all our Al alloy application achievements. For clients who need Al alloy products, our new plant in southern Taiwan is planning on operation in recent years, and will be an important base for Al alloy machining. We look forward to working with you to achieve sustainable development from metal parts in the future.