

Corrosion-Resistant, Surface Hardening System Equipment for Austenite Stainless Steel **MIRDC**

Improve equipment production efficiency with patented technology, and promote Austenite Stainless Steel objects with high quality and high added value

Introduction

- Austenite Stainless Steel (SUS 304/316) has corrosion resistance; however, due to its low hardness, it is prone to scratches and surface damage due to external forces when used in housing parts. Although the traditional heat treatment method can strengthen the surface hardness, the corrosion resistance stays relatively low. How to balance the hardness and corrosion resistance is the current goal of improving this technology.
- Remove the surface passivation film and apply it to gas to deactivate the stainless steel surface, and through gas nitriding, carburizing, or carbonitriding, the original hardness is less than Hv200 to Hv1,200, improving the hardness while retaining the corrosion resistance.
- Apply the technology to high-value and high-end products such as the anti-corrosion and wear-resistant treatment of pump rotors, mechanical shell parts, end plates, etc., stainless steel case parts, scratch-resistant treatment of watch straps, and surface hardening treatment of precision gears, etc.



Steel Corrosion-Resistant, Surface Hardening System Equipment for Austenite Stainless

Awards/Patents

- Patent 554467 and patent I605898
- R&D 100 (2022 Global Top 100 Innovation Award)
- 2020 Taiwan Innotech Expo, TIE Award of GOLD

Industrial Applications/ Case Studies



Nitrided pipe ferrule fittings for chemical use / ball valve Fastener products after nitriding



Griddle Plate