

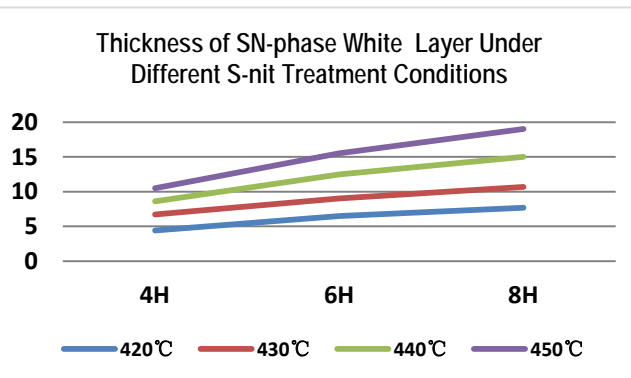
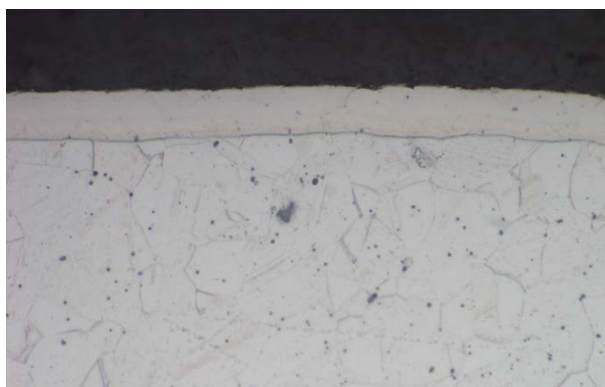
# S-Nit Treatment

A Process of Low Temperature Salt Bath Nitriding for Austenite Stainless Steel.



Material	SUS316L
Process	S-Nit
Key parameter	450℃以下
Apperance	Ash black or black

## ✧ Nitriding Layer

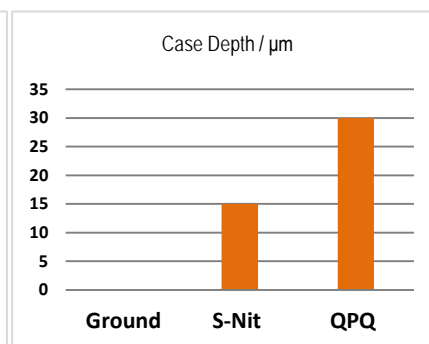
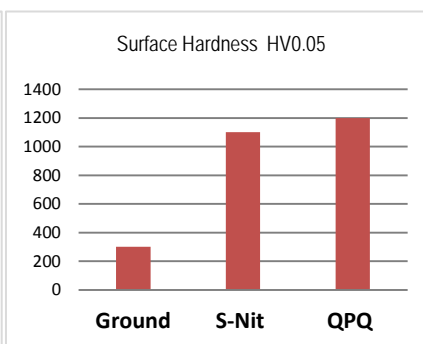
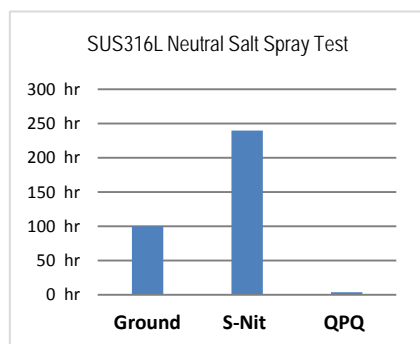


$S_N$ -phase white layer : 14.5 $\mu$ m ( The Figure above )

S-Nit process : a process of low temperature salt bath nitriding for Austenite stainless steel. S-Nit process is mainly developed to improve the defect of decreasing corrosion resistance after salt bath nitriding for stainless steel based on the original business project of salt bath Nitrocarburizing. After S-Nit treating, the stainless parts not only have high hardness and wear resistance, but also maintain high corrosion resistance. Because of lower treating temperature and smaller deformation, S-Nit process is more suitable for high precision parts.

After S-Nit treating, a white layer is formed on the surface called  $S_N$ -phase, that is a Supersaturated solid solution of N-atoms in  $\gamma$ -Fe by X-ray analysis. Because there is no CrN formed in the diffusion zone, a good corrosion resistance can be maintained. At the same time, the high hardness about 800~1300HV of  $S_N$ -phase can greatly improve the wear resistance.

## ✧ Comparing with QPQ



## ✧ Advantages

- ✦ High hardness, 800~1300HV;
- ✦ Excellent abrasion resistance;
- ✦ Low treatment temperature, small heat treatment deformation;
- ✦ Excellent corrosion resistance;