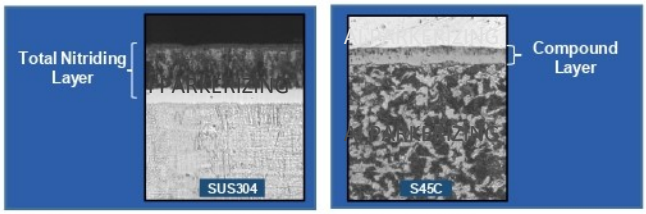
ISONITE ®

SALT BATH SOFT NITRIDING

Generate a compound layer and diffusion layer by nitrogen and carbon diffusion into the material

Characteristics

- » Improve wear resistance / Fatigue resistance / Corrosion resistance / Heat Resistance
- » Treated under low temperature (below 600° C) effect to low risk to distortion
- » Can apply to many material such as steel, stainless steel, cast iron
- » It improves adhesion and bonding strength



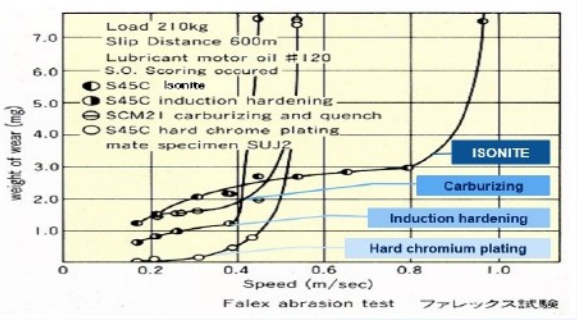
Pic 1: Microstructure of material SUS304 and S45C after ISONITE process

Material	Surface Hardness
Carbon steel <SXXC>	350-600 Hv
Cast iron <FC ● FCD>	500-700 Hv
Low alloy steel <SCM ● SCr>	700-800 Hv
Stainless steel <SKD ● SUS>	≥ 1,000 Hv

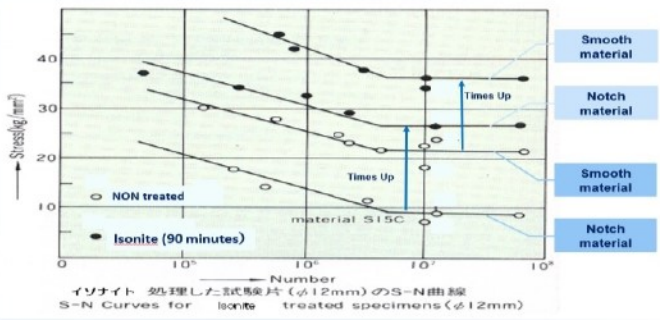
Table 1: Material & Hardness after ISONITE

Technical Data

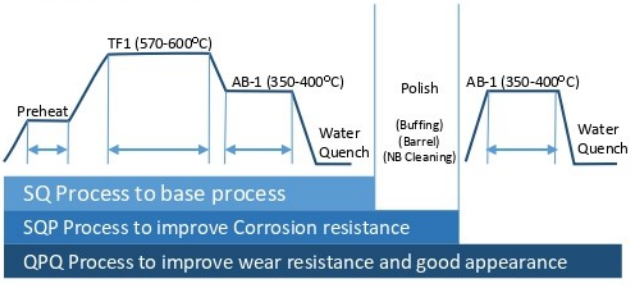
Wear resistance



Fatigue resistance



Product Type



QPQ Process (Oxynitriding Process)
Improve seizure resistance with surface hardness + Oxide layer

- » Oxide layer on the surface improve seizure resistance. Its black appearance add commercial value to the product
- » Corrosion resistance higher than ISONITE can be oxide film and polishing.
- » Selectable 3 processes SQ, SQP and QPQ tailored to cost. Require surface roughness and appearance can be obtained

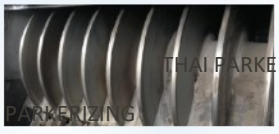
Part Applications

Ball retainer bearing

Engine Valve

Brake pad

Mold & die



Zero discharge wastewater technology to save the environment by CD Dryer system

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