

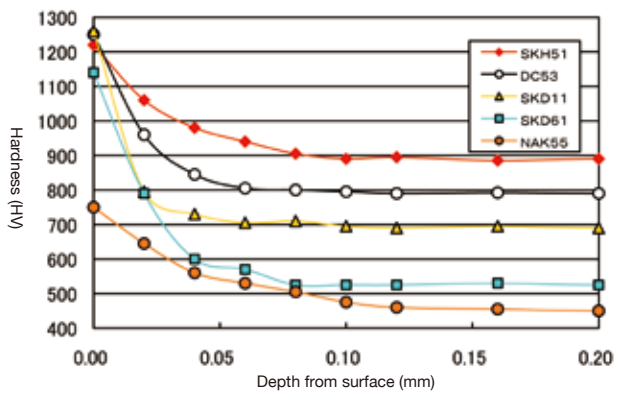
We perform a range of nitriding treatments, but we have added radical nitriding treatment to our nitriding lineup.

The features of radical nitriding treatment are a clean surface with minimal changes to the treated surface and the ability to nitride the base material surface before PVD treatment. Radical nitriding has broad applications including PVD base nitriding (duplex treatment name: Amicoat C) and plastic molds.

Features of Radical Nitriding

- Nitriding treatment without a compound layer.
- Surface condition is good with almost no change in the surface roughness (luster) before and after the nitriding treatment.
- Treatment is performed at low temperature (400°C to 500°C), so it can be applied to a wide range of steels and there is minimal change in dimensions from the radical treatment.
- By first performing radical nitriding of the base material, the difference in hardness of the PVD hardened coating is reduced, enhancing the effects of PVD treatment even further. (Amicoat C is a duplex PVD treatment that combines PVD treatment with optimal radical nitriding treatment.)

Hardness Distribution of Radical Nitriding



Radical Nitriding Equipment



↓ For survey purposes
↑ Ni plating

DC53 microstructure (50 µm) nitride layer target
No compound layer, approximately 50 µm nitride layer
Cross section hardness distribution: see DC53 figure

Effective dimensions: ø600 mm x 600 mm H
Maximum processing mass: 300 kg