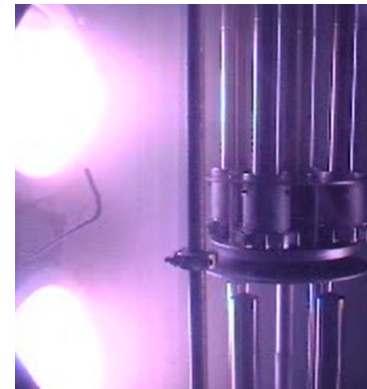


Standard type Basic PVD coating

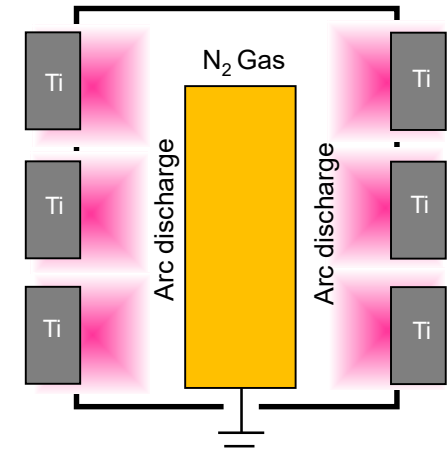
- Basic PVD coating suitable for cutting tools, molds and machine parts.
- We support large workpieces with one of the largest AIP equipment in the industry.
- We promise to improve your productivity with high performance, quick delivery and cost performance.

Industry standard arc ion plating

- This is the most popular coating process for cutting tools and molds using the arc ion plating method.
- The target material is evaporated by arc discharge to efficiently coat the surface of the target workpiece.

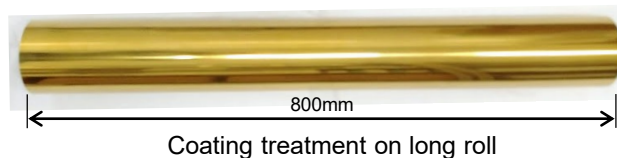


State of arc discharge

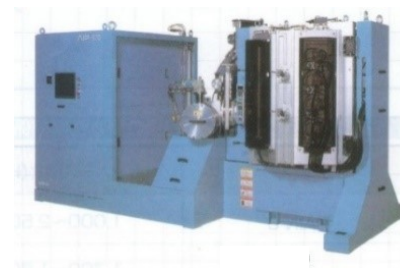


Large workpiece and short delivery time

- With the largest arc ion plating equipment in Japan, coating treatment of large workpieces up to $\phi 750 \times 900$ mm and 360 kg.
- Three units (large, medium and small) of arc ion plating equipment manufactured by Kobelco allow us to process in a short delivery time.



Coating treatment on long roll



AIP-S70 (Largest in Japan)



AIP-S40

Kobelco arc ion plating equipments

Standard type Basic PVD coating

Lineup

TiN

Titanium Nitride

- Hardness: 2000HV <
- Thickness: 3 ± 1 μm
- Heat resistance temp. : 600°C
- Surface roughness : Rz < 0.8
- Friction coefficient : 0.5
- Coating temp.: < 500°C

Balance of hardness, adhesion and heat resistance.
Titanium is a standard for coating

TiAlN

Titanium Aluminium Nitride

- Hardness: 3000HV <
- Thickness: 3 ± 1 μm
- Heat resistance temp. : 800°C
- Surface roughness : Rz < 0.8
- Friction coefficient : 0.5
- Coating temp.: < 500°C

Characterized by high hardness and heat resistance
Compatible with all cutting tools and dies

TiCN

Titanium Carbon Nitride

- Hardness: 3000HV <
- Thickness: 3 ± 1 μm
- Heat resistance temp. : 400°C
- Surface roughness : Rz < 0.8
- Friction coefficient : 0.2-0.5
- Coating temp.: < 500°C

Characterized by high hardness and low friction
Coating for cold forming dies

CrN

Chromium Nitride

- Hardness: 1500HV <
- Thickness: 3 ± 1 μm
- Heat resistance temp. : 700°C
- Surface roughness : Rz < 0.8
- Friction coefficient : 0.5
- Coating temp.: < 500°C

Strong adhesion to substrate and excellent reliability
Coating for mechanical parts

In a variety of applications, with 20 years of experience

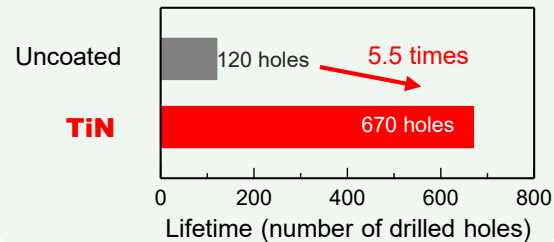


Drilling of steel (SCM440)

The progress of wear on the drill edge is suppressed, greatly improve the drill life.

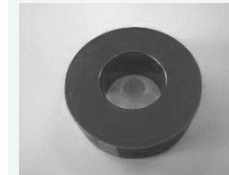


- Tool: φ6mm SKH51 drill
- Work material: SCM440 (thickness: 20mm)
- V=18m/min, f=0.16mm/rev



Bending and forming of steel plate (SPCC)

Scratches on mold corners can be suppressed, greatly improve the lifetime of the mold.



- Mold: SKD61 die
- Material: SPCC
- Effectiveness: Suppression of bending scratches

