

Toshiba Materials supplies high purity metals as the sputtering target materials for electronic devices, flat panel display devices and optical devices.  
We also offer thermal spray coating to reduce the particles in the chamber of thin film coating machine.

## Thermal Spray Coating



### A solution to a high-efficiency sputtering process

There are two challenging themes for sputtering machine. One is to improve the yield by reducing particles that are produced during film formation. The other is to improve productivity by elongating the life of components inside the chamber, namely shield components.

Toshiba Materials applies SLR spray coating to the components to reduce particles because it makes component surfaces very smooth. On the other hand, we applies PDM coating to elongate life because it gives the component surfaces the most desirable structure.

#### [Advantages]

- Suppression of particle generation due to good adhesion of re-deposited film.
- Film can be made despite low gas emission.
- There are no cracks or peeling of re-deposited films by thermal cycling.
- The damage of parts is so small that components can be used repeatedly.
- Surface roughness and film thickness can be secured even for complex-shaped components.



#### [Applications]

- Spray coating is applied to the components inside the chamber of sputtering machine.  
Semiconductors, LCDs, magnetic recording media and other mass manufacturing lines
- Home electric appliances (anti-abrasion, thermal conductivity and acoustic properties)  
VTR drums, speakers, IH cooking apparatus, hot plates, etc.
- Automobile parts (anti-abrasion, sliding property and formic acid resistance)  
Engine parts, brake parts, gear boxes, etc.
- Industrial machinery (anti-abrasion, corrosion resistance, thermal resistance)  
Guide rolls, guide pins, roller tables, etc. for iron- and steel-making equipment Calendar roll, doctor blade etc.

## UTR Coating

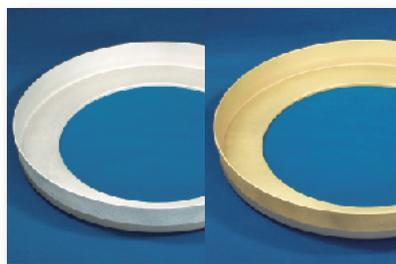


UTR coating is advanced arc thermal spray coating that micro-fine molten particles to make low-roughness, high-adhesion films.

#### [Advantages]

For shield parts of various sputtering machine

## SLR Coating



SLR coating is plasma thermal spray coating and makes coating film with very low surface roughness, which is advantageous in suppressing projection or particle production that occurs during deposition.

#### [Advantages]

Ti/TiN chine

## PDM Coating



PDM coating is effective to relax a stress of the deposited film on the sputtering chamber parts, and prevents its peeling away.

#### [Advantages]

Sputtering machine for TiN, WSi, W, TiW and TaN films