CINOS

Ultra-Precision Purity Cleaning Using Fine Grains

PSC™ Cleaning

As the primary physical reaction, fine CO_2 grains are sprayed at supersonic speed onto the object to be cleaned, leading to the occurrence of shrinkage cracks due t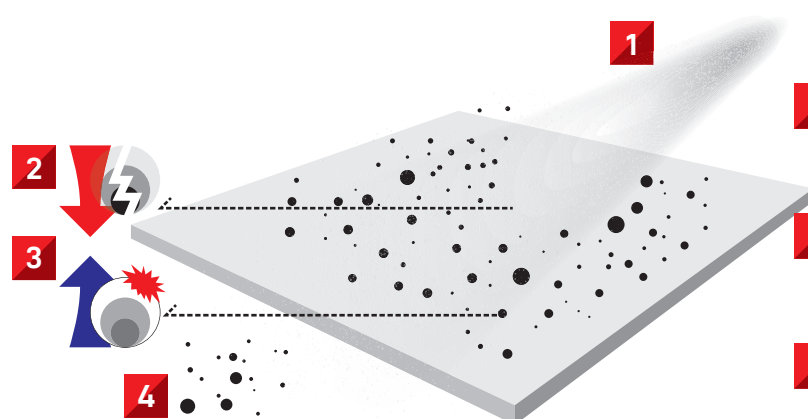o the impact and cooling of contamination, and fine CO_2 grains induce contamination ablation cleaning through sublimation as the secondary chemical reaction after penetrating in the generated crack. We have the technology that can selectively apply CO_2 grain size according to the material and shape of contamination and objects to be cleaned, **which can be very effective in preventing damage to the objects and cleaning weak points.**

Performance

Particle

Particles on the Surface — **B**efore

Particle Removed from the Surface — **A**fter
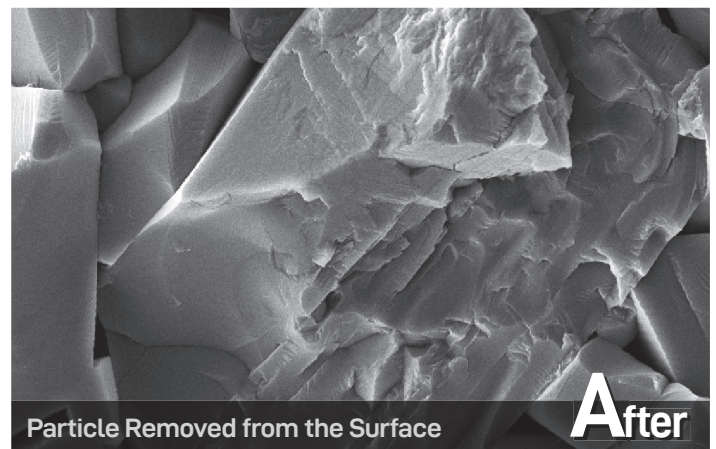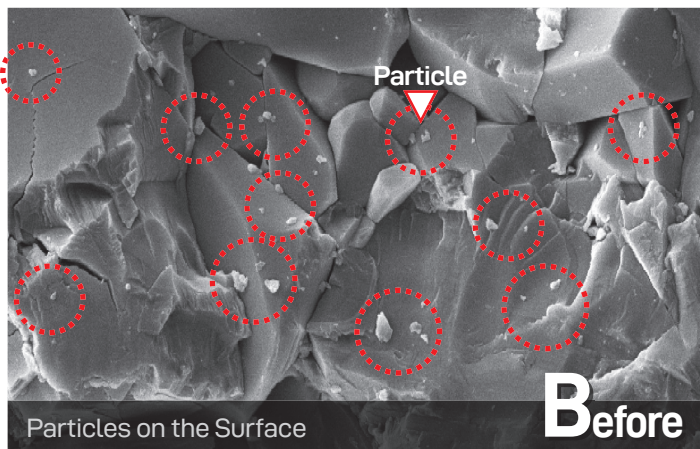
Method

1 Physical Blasting
- Fine grains are sprayed with compressed air and collide with the surface.

2 Thermal Shock
- Cracking Contaminants through Contracted by 78.5℃ Sublimation Heat.

3 Sublimation Expansion
- Expands to 800 times its own volume and destroys the interface.

4 Ablation
- Contamination Removal by Compressed Air with High-Speed.

Method Comparision

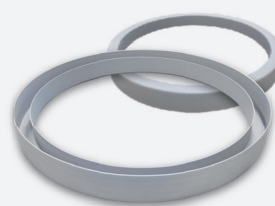| Method	Secondary Waste	Illuminance Change	Substrate Damage	Harmfulness
PSC™	X	X	X	X
Water	O	X	X	O
Steam	X	X	X	X
Bead	O	O	O	O
Solvent	O	O	O	O
Chemical	O	O	O	O

When chemicals are used for cleaning, environmental pollution and changes, damage, and harm to the substrate are accompanied. Unlike chemicals, PSC™ Cleaning is a cleaning method that produces little secondary waste and does not cause changes in illuminance, damage to the substrate, or is not harmful.
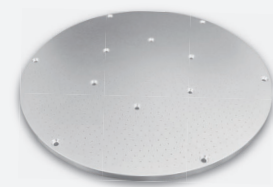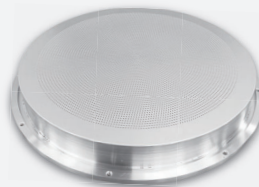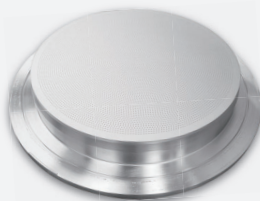
Merit

Al, Anod, CRM, SUS, Quartz etc
>At 0.1μm Avg, Particle

92% Compared to General Cleaning

Y_2O_3, YOF, YAM etc
>At 0.1μm Avg, Particle

77% Compared to General Cleaning

Application

Metal

CVD

Etch