

advanced coatings

cleaning and refurbishment

original parts manufacturing

quality assurance

DPS I Chamber Re-Coat Benefits

- Measurable improvement in particle performance
- Dramatic increase in process up-time (*500 RF hrs for original A-coat vs. up to 4,000 RF hrs before re-coat with NxEdge alumina ceramic coating*)
- Improved kit life over the standard OEM operating life for DPS I Chambers
- Less downtime and handling by technicians

Problem Statement

As device geometrics continue to decrease in size, we have witnessed an industry-wide demand to improve the particle performance of the AMAT DPS I chamber and extend chamber life between PMs and cleans. Typically, particles may not only cause defect and yield loss, but also lost production time from extra seasoning wafers and a repetitious qualification process.

NxEdge Solution

NxEdge has engineered an alumina ceramic chamber coating to replace the AMAT original Boron Nitride coating inside the DPS I process chamber. The NxEdge coating was developed to decrease particles and improve production time between cleans.

Our in-house integrated service capabilities include: disassembling the entire DPS I chamber; stripping and re-coating the inside of the chamber body; cleaning all chamber components; and conducting a final vacuum test and helium leak check on the re-assembled chamber.



Integrated Capabilities

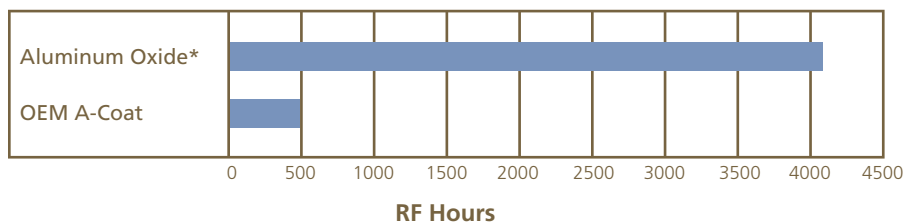
NxEdge in-house operations and processes enable us to perform multiple steps to deliver high-quality, completed parts with rapid turn-around time and lower overall cost. We offer end-to-end component design, plasma and other advanced coatings, precision manufacturing, and testing all under one roof, providing you with the convenience and assurance of one point contact.

Refurbishment Capabilities

NxEdge offers one-stop cleaning and refurbishment service solutions to extend component life and improve equipment performance.

- Total refurbishment of power source drive blocks for vacuum sputtering chambers
- Coating and parts refurbishment of major brand OEM etch, poly and other chambers
- Total re-coating and re-coiling of Novellus ceramic Speed™ domes
- Internal integrated remote plasma source cleaning without disassembly
- Online parts data tracking system for all orders

Actual FAB Data on DPS I Chamber
Std. A-Coat vs. NxEdge Re-Engineered Alumina Coating



* Reports of up to 4000 RF hours before re-coat.

AMAT DPS I Chamber Re-Coat

