

TITLE: TECHNIQUES FOR MAINTAINING A SUBSTRATE PROCESSING SYSTEM

ABSTRACT

Techniques and systems for maintaining a plasma processing kit and its components (as shown in FIGURE 2) without causing damage are introduced. Specifically, these include techniques for the precision cleaning and recovery of the contaminated kit components of a plasma doping (PLAD) system so as to extend the life and re-usability of these components. The methods described cover the stages of inspection, pre-cleaning, mechanical processing and texturing, post-cleaning, clean-room class cleaning and packaging of the components consisting of quartz, aluminum and/or silicon. Techniques described employ the combination of a variety of means (primarily chemical and mechanical) to achieve the desired levels of cleanliness. The result obtained by methods that include Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) and Laser Particle Count affirm the efficacy of these techniques.