ABSTRACT

APPARATUS AND METHODS TO CLEAN COPPER CONTAMINATION ON WAFER EDGE

A new apparatus is provided that can be applied to clean outer edges of semiconductor substrates. Under the first embodiment of the invention, a brush is mounted on the surface of the substrate around the periphery of the substrate, chemicals are fed to the surface that is being cleaned by means of a hollow core on which the cleaning brush is mounted. The surface that is being cleaned rotates at a relatively high speed thereby causing the chemicals that are deposited on this surface (by the brush) to remain in the edge of the surface. Under the second embodiment of the invention, a porous roller is mounted between a chemical reservoir and the surface that is being cleaned, the surface that is being cleaned rotates at a relatively high speed. The chemicals that are deposited by the interfacing porous roller onto the surface that is being cleaned therefore remain at the edge of this surface thereby causing optimum cleaning action of the edge of the surface. After contaminants have been removed in this manner from the surface, the surface can be further cleaned by applying DI water.

Figure 1