PROCESS FOR POLISHING DISSIMILAR CONDUCTIVE LAYERS IN A SEMICONDUCTOR DEVICE

Abstract of the Disclosure

A process of polishing two dissimilar conductive materials deposited on semiconductor device substrate optimizes the polishing of each of the conductive material independently, while utilizing the same polishing equipment for manufacturing efficiency. A tungsten layer (258) and a titanium layer (256) of a semiconductor device substrate (250) are polished using one polisher (10) but two different slurry formulations. The two slurries can be dispensed sequentially onto the same polishing platen (132) from two different source containers (111 and 112), wherein the first slurry is dispensed until the tungsten is removed and then the slurry dispense is switched to the second slurry for removal of the titanium. In a preferred embodiment, the first slurry composition is a ferric nitrate slurry while the second slurry composition is an oxalic acid slurry.

FIG. 2 to accompany the Abstract.

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