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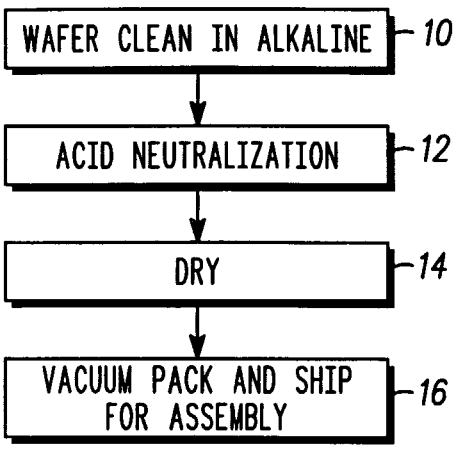
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(54) Title: METHOD OF PREPARING COPPER METALLIZATION DIE FOR WIREBONDING



(57) Abstract: A method of preparing a semiconductor wafer having a integrated circuits formed on it that have pads formed of copper includes the steps of removing oxide from the copper pads and then the vacuum packing the wafer in a shock-proof container. The oxide may be removed from the copper pads in a number of ways. A first way includes cleaning the wafer in an alkaline solution, performing acid neutralization on the cleaned wafer, and then drying the wafer. A second way includes cleaning the wafer with an acid solution, rinsing the acid cleaned wafer with water, applying an anti-oxidant activator to the surface of the copper pads, rinsing the wafer with water after the application of the anti-oxidant activator, and then drying the water rinsed wafer. Yet a third way includes plasma cleaning the copper pads using a combination of about 5-10% Hydrogen and about 90-95% Argon and then sputtering a very thin layer of aluminum on a surface of the copper pads. The layer of aluminum has a thickness of about 1-5 nanometers.

WO 02/073687 A2