

Technic ISA

Insoluble Anode System for Acid Copper



TECHNIC

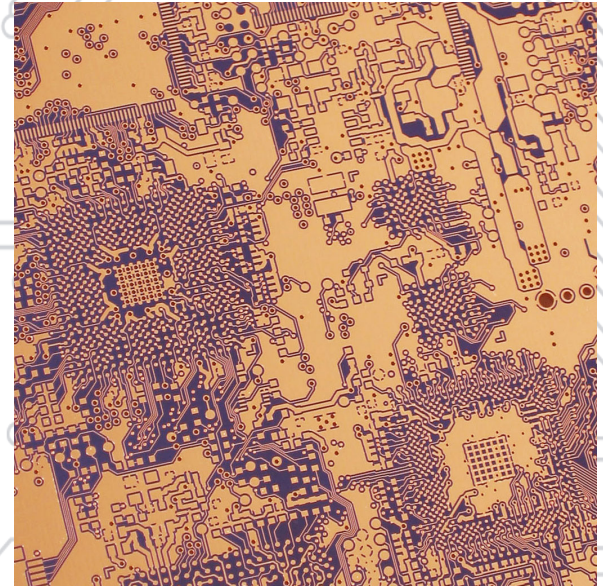
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The Perfect Copper Surface

Technic ISA is the combination of a proprietary insoluble anode system and specialized copper oxide replenishment for electrolytic copper plating. When used in conjunction with Technic acid copper Technic ISA provides a perfect copper surface.

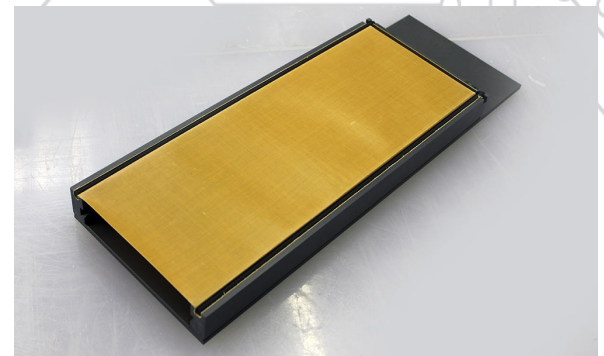
The Technic ISA anode utilizes a proprietary membrane that isolates the insoluble anode from the plating solution. This isolation eliminates breakdown of organic additives and provides the ability to focus current flow. This eliminates roughness typical with soluble anodes and yields outstanding thickness distribution.

Technic ISA Copper Oxide has been specifically chosen for its purity and ability to dissolve quickly and completely. Use of copper oxide eliminates excessive maintenance required with phosphorized copper anodes reducing cost and downtime.



Features

- Proprietary membrane system separating the anode from the plating bath
- Consistent and customizable anode area
- High purity easily dissolved copper oxide replenishment
- No Anode maintenance



Benefits

- Eliminates high additive consumption typical with insoluble anodes
- Outstanding surface quality demanded by high density electronics
- Outstanding plating distribution
- Elimination of nodules and pitting
- Increased capacity



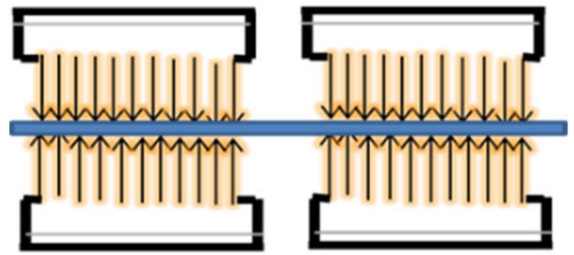
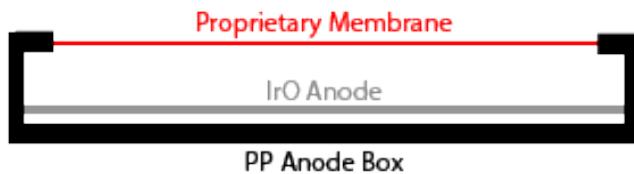
Technic ISA

The Perfect Copper Solution

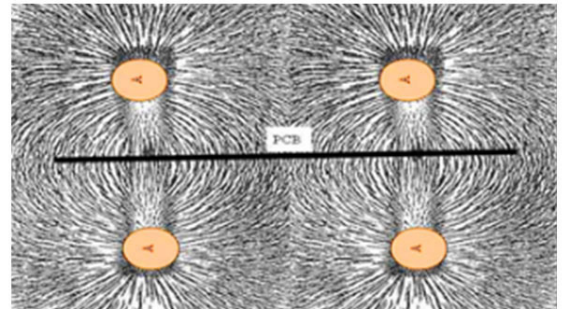
Excellent Surface Distribution

The Technic ISA anode encases an iridium oxide anode within a polypropylene box and a proprietary membrane that directs current flow. The shielding of the box, in conjunction with the membrane, focusses the current toward the part being plated. By creating a straight line current flow, Technic ISA diminishes high current density area yielding very tight thickness distribution.

In production, this has resulted in a thickness distribution with a tight bell curve with a three-sigma variation of less than 4 microns over a lot of plated boards. Previous equipment with soluble anodes could not hold that tolerance within one board.



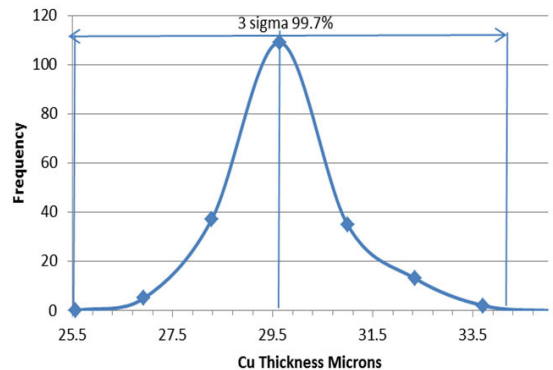
Technic ISA with focused current flow



Typical current flow with baskets

Eliminates Nodules and Reduces Additive Consumption

By replacing soluble anodes, Technic ISA eliminates the primary cause for nodules in acid copper plating. In addition, Technic ISA isolates the anode reaction from the main body of the plating bath. Organic additives are destroyed at the anode with soluble and competitive insoluble anodes. The Technic ISA membrane stops the organic additives from coming in contact with the anode eliminating high additive consumption typically seen with insoluble anodes.

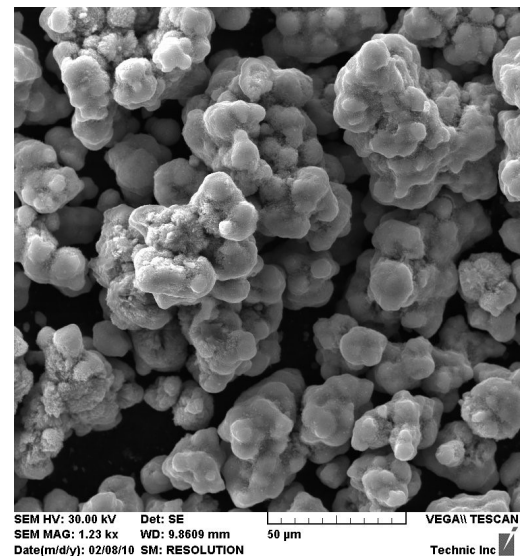


Production Thickness Distribution

Specialized Copper Oxide Replenishment

The purity and grain structure of the copper oxide is critical to the success of the Technic ISA system. Most commercially available CuO is high in chloride and or organics that would impact the quality of the deposit. To its advantage, the grain structure of the Technic ISA CuO is amorphous, ensuring quick dissolution into the plating solution.

Additions to the process can be made in manual to fully automatic systems eliminating extensive downtime and employee safety concerns due to maintenance of soluble anodes. No more dummy plating of anodes, no more downtime due to anode adds or changing anode bags, consistent anode area, and employees no longer risk injury by climbing on plating tank to replace soluble anodes.



ISA CuO Crystal Structure



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