ABSTRACT

ELECTROPLATING CO-PLANARITY IMPROVEMENT BY DIE SHIELDING

Exemplary electroplating systems may include a vessel. The systems may include a paddle disposed within the vessel. The paddle may be characterized by a first surface and a second surface. The first surface of the paddle maybe include a plurality of ribs that extend upward from the first surface. The plurality of ribs may be arranged in a generally parallel manner about the first surface. The paddle may define a plurality of apertures through a thickness of the paddle. Each of the plurality of apertures may have a diameter of less than about 5 mm. The paddle may have an open area of less than about 15%.

FIG. 5