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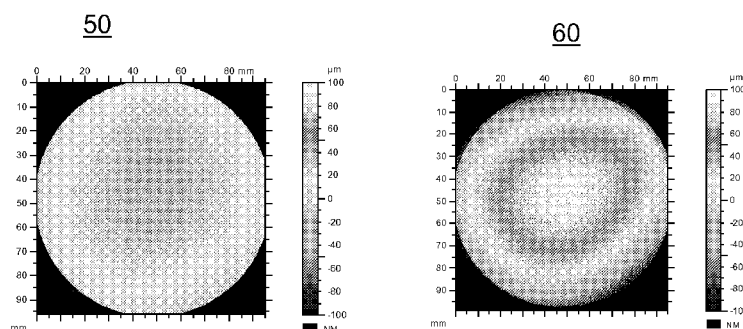


FIG. 5

FIG. 6

(57) Abstract: An abrasive tool with flat and consistent surface topography for conditioning a CMP pad and method for making are disclosed. The abrasive tool includes abrasive grains coupled to a low coefficient of thermal expansion (CTE) substrate through a metal bond. There is an overall CTE mismatch that ranges from about 0.1 $\mu\text{m}/\text{m}^\circ\text{C}$ to about 5.0 $\mu\text{m}/\text{m}^\circ\text{C}$. The overall CTE mismatch is the difference between the CTE mismatch of the abrasive grains and the metal bond and the CTE mismatch of the low CTE substrate and the metal bond.