

**Apparatus and Method For Polishing A Flat Surface Using
A Belted Polishing Pad**

ABSTRACT OF THE INVENTION

The present invention relates to an apparatus and method of Chemical Mechanical Planarization ("CMP") for wafer, flat panel display (FPD), and hard drive disk (HDD). The preferred apparatus comprises a looped belt spatially oriented in a vertical direction with respect to a ground floor. A polishing pad is glued to an outer surface of the belt. At an inner surface of the belt, there are a plurality of wafer supports to support the wafers while they are in polishing process. Wafers are loaded from a wafer station to a wafer head using a handling structure before polishing and are unloaded from the wafer head to the wafer station after polishing. An electric motor or equivalent is used to drive the looped belt running over two pulleys. An adjustment means is used to adjust the tension and position of the belt for smooth running. This new CMP machine can be mounted in multiple orientations to save manufacturing space.

Figure 1