

ABSTRACT

5 A polishing apparatus and a polishing method capable of accurately measuring a
film thickness of a workpiece, such as wafer, substrate, or panel, used in manufacturing of
semiconductor devices during polishing of the workpiece are disclosed. The processing
system is configured to determine a film thickness of the workpiece based on relative
reflectance data calculated by a calculation formula expressed as: the relative reflectance
10 data = $MD1 / [BD1 \cdot k]$, where MD1 represents first intensity measurement data indicating
intensity of the reflected light from the workpiece measured by the first spectrometer, BD1
represents the first base intensity data, and k represents a rate of change in second intensity
measurement data with respect to the second base intensity data. The second intensity
measurement data is indicative of intensity of the light of the light source measured by the
15 second spectrometer during polishing of the workpiece.

FIG. 2