

ABSTRACT

5 A polishing apparatus is disclosed, which can precisely control a polishing rate
by quickly decreasing a pad temperature to below ambient temperature. The polishing
apparatus includes a rotatable polishing table supporting a polishing pad; a polishing head
configured to press a substrate W against a polishing surface of the rotating polishing pad
to polish the substrate; at least one pad-temperature measuring device configured to
10 measuring a temperature of the polishing surface; a pad-temperature regulating apparatus
for regulating the temperature of the polishing surface; and a controller configured to
control operation of the pad-temperature regulating apparatus based on the temperature
of the polishing surface measured by the at least one pad-temperature measuring device.
The pad-temperature regulating apparatus includes: at least one cooling nozzle
15 configured to inject a cooling agent onto the polishing surface; and at least one gas nozzle
configured to inject dry gas onto the polishing surface. The cooling agent has a boiling
point lower than atmosphere temperature.

FIG. 4