

ABSTRACT OF THE DISCLOSURE

METHOD OF DETECTING ABNORMALITY OF A ROLLER WHICH TRANSMITS A LOCAL LOAD TO A RETAINER RING, AND POLISHING APPARATUS

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A method of detecting abnormality of a roller which transmits a local load to a retainer ring is disclosed. The method comprises: rotating a polishing head which includes a head body and a retainer ring, the head body having a pressing surface for pressing a substrate, the retainer ring being arranged so as to surround the pressing surface; measuring a
10 torque for rotating the polishing head, while rotating a rotary ring together with the polishing head and while exerting a local load to a stationary ring located on the rotary ring, the rotary ring being fixed to the retainer ring and having a plurality of rollers; generating a torque waveform indicating relationship between measured values of the torque for rotating the
15 the torque waveform to determine an intensity of frequency component of the torque waveform; and determining that at least one of the rollers malfunctions when the determined intensity of the frequency component is larger than a predetermined threshold value.

FIG. 7