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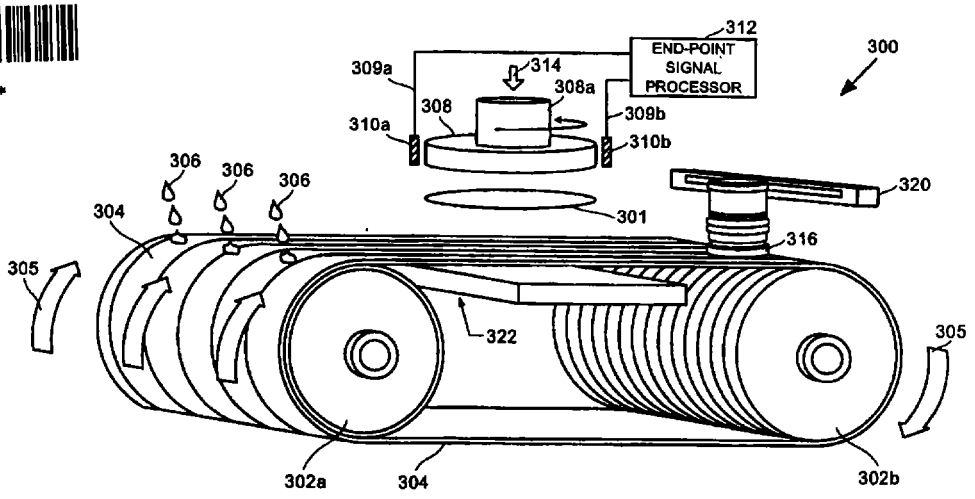
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(54) Title: END POINT DETECTION SYSTEM FOR CHEMICAL MECHANICAL POLISHING APPLICATIONS

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(57) Abstract: Chemical mechanical polishing systems and methods are disclosed. The system includes a polishing pad (304) that is configured to move from a first point to a second point. A carrier (308) is also included and is configured to hold a substrate (301) to be polished over the polishing pad. The carrier is designed to apply the substrate to the polishing pad in a polish location that is between the first point and the second point. A first sensor (310a) is located at the first point and oriented so as to sense an IN temperature of the polishing pad, and a second sensor (310b) is located at the second point and oriented so as to sense an OUT temperature of the polishing pad. The sensing of the IN and OUT temperatures is configured to produce a temperature differential that allows monitoring the process state and the state of the water surface for purposes of switching the process steps while processing wafers by chemical mechanical planarization.

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