

[Abstract]

To provide a double-sided polishing device that can suppress deviation of a workpiece shape after completing final polishing from a target shape and can obtain a desired workpiece shape, a controller (30) that is configured to control a polishing machine (10) based on measurement results of a thickness measuring apparatus (20) includes a first learner (31) that has learned a correlation among a main polishing condition, an outer peripheral flatness, and an in-plane flatness; a second learner (32) that has learned a correlation among an endpoint polishing condition, a degree of change in the in-plane flatness when the main polishing is stopped, a degree of change in the outer peripheral flatness when the main polishing is stopped, and an amount of change in the outer peripheral flatness during the endpoint polishing; a main polishing condition correcting portion (33) that is configured to correct the main polishing condition at a time of correction by the main polishing condition obtained by inputting, into the first learner (31), a target value of the outer peripheral flatness and a correction target value of the in-plane flatness obtained from a learning result of the first learner (31); and a main polishing stop condition setting portion (34) that is configured to set a main polishing stop condition by using the amount of change in the outer peripheral flatness obtained from a learning result of the second learner (32).

Fig. 1