ABSTRACT OF THE DISCLOSURE

POLISHING APPARATUS AND POLISHING METHOD

A polishing apparatus capable of obtaining a desired film thickness profile is disclosed. The polishing apparatus includes: a polishing unit; a film thickness measuring device for measuring a film thickness profile of a substrate; and a controller for controlling at least operations of the polishing unit and the film thickness measuring device. The controller stores in advance a response model which is created by taking into consideration variation in an amount of polishing between monitored areas of the substrate due to variations in a pressure of a pressurized fluid supplied to each of pressure chambers. Further, the controller obtains a film thickness profile of the substrate before polishing by use of a film thickness measuring device, and causes the substrate to be polished with an optimized polishing recipe created based on the response model and a target polishing amount, which is a difference between the film thickness profile of the substrate before polishing and the target film thickness of the substrate. A next substrate is polished with a new optimized polishing recipe which is created based on a target polishing amount of the next substrate and a response model corrected by use of the optimized polishing recipe and film thickness profiles of the substrate before and after polishing.

FIG. 2