

ABSTRACT

SUBSTRATE HOLDING APPARATUS, SUBSTRATE SUCTION DETERMINATION METHOD, SUBSTRATE POLISHING APPARATUS, SUBSTRATE POLISHING METHOD, METHOD OF REMOVING LIQUID FROM UPPER SURFACE OF WAFER TO BE POLISHED, ELASTIC FILM FOR PRESSING WAFER AGAINST POLISHING PAD, SUBSTRATE RELEASE METHOD, AND CONSTANT AMOUNT GAS SUPPLY APPARATUS

A substrate holding apparatus that can more accurately determine that a substrate is sucked and a substrate polishing apparatus including the substrate holding apparatus are provided, and a substrate suction determination method that can more accurately determine that a substrate is sucked and a substrate polishing method utilizing the substrate suction determination method are provided.

A substrate holding apparatus is provided, which includes a top ring main body to which an elastic film having a surface that can suck a substrate can be attached, wherein when the elastic film is attached to the top ring main body, a plurality of areas are formed between the elastic film and the top ring main body, a first line communicating with a first area of the plurality of areas, a second line communicating with a second area different from the first area of the plurality of areas, a pressure adjuster that can pressurize the first area by feeding fluid into the first area through the first line and can generate negative pressure in the second area through the second line, and a determiner that performs determination of whether or not the substrate is sucked to the elastic film based on a volume of the fluid fed into the first area or a measurement value corresponding to pressure in the first area. When the determination is performed, exhaust from the first area is not performed.

Figure 7