ABSTRACT

Method and Apparatus for Applying a Protecting Film to a Semiconductor Wafer

In an apparatus and method of applying a protecting film to a semiconductor wafer, a semiconductor wafer is placed on top of a table, a protecting film is pressed onto the wafer by a press roller biased toward the table, the table is moved to apply the protecting film to the wafer, a tension roller arranged upstream from the press roller applies a tensile force to the protecting film in a direction opposite the feeding direction of the film, the tensile force of the tension roller is first set at a relatively high value at the beginning of the application of the protecting film to place the protecting film in a stretched state and then at a relatively small value during the application of the protecting film to prevent the portion of the protecting film which has not yet been applied from coming into contact with the wafer, and then, after the protecting film has been applied to the wafer, a cutting blade is used to cut the protecting film to match the shape of the semiconductor wafer by first moving the cutting blade in the Y direction to cut from an angular portion C_1 of the orientation flat portion to an angular portion C_2, then rotating the table while moving the cutter and the table to align the cutting direction of the cutting blade with the tangential direction of the circumferential portion of the semiconductor wafer, and then rotating the table to cut the protecting film along the circumferential portion of the semiconductor wafer.

(Figs. 6A to 6E)