

WHAT IS CLAIMED IS:

1. An edge trimming apparatus comprising:

a chuck table that has a ring-shaped groove with an outer diameter smaller than an outer diameter of a wafer and causes the ring-shaped groove to communicate with a suction source to hold under suction a lower surface of the wafer by the ring-shaped groove;

a table rotation mechanism that rotates the chuck table;

at least one cutting unit that rotates at least one spindle on which at least one cutting blade is mounted and annularly cuts a circumferential part of the wafer held by the chuck table;

at least one horizontal movement mechanism that moves the at least one cutting unit in a center axis direction of the at least one spindle, and

at least one cleaning unit that cleans a region outside the ring-shaped groove in an upper surface of the chuck table and the upper surface of the chuck table including the ring-shaped groove,

wherein

the at least one cleaning unit is positioned to the region outside the ring-shaped groove in the upper surface of the chuck table and the upper surface of the

chuck table including the ring-shaped groove, and the chuck table is rotated by the table rotation mechanism, to clean the region outside the ring-shaped groove in the upper surface of the chuck table and the upper surface of the chuck table including the ring-shaped groove,

the at least one cutting unit includes at least one spindle unit that rotates the at least one spindle to which at least one mount on which the at least one cutting blade is mounted is coupled and at least one blade cover that surrounds the at least one mount and the at least one cutting blade,

the at least one cleaning unit includes at least one cleaning nozzle that is mounted on the at least one blade cover and jets high-pressure water in a downward direction, and

a landing area of the high-pressure water jetted from the at least one cleaning nozzle is positioned to the region outside the ring-shaped groove in the upper surface of the chuck table and the upper surface of the chuck table including the ring-shaped groove by the at least one horizontal movement mechanism, and cleaning is executed.

2. The edge trimming apparatus according to claim 1, wherein ~~further comprising~~:

a support substrate with substantially same diameter
as the wafer is bonded to a front surface of the wafer by
an adhesive, and

the at least one cutting blade cuts into the wafer
by a predetermined depth from the back surface of the
wafer,

the predetermined depth is a cutting-in depth
of the at least one cutting blade with which the
circumferential part of the wafer is completely cut and
the at least one cutting blade does not reach the
adhesive or slightly cuts into the adhesive. ~~a horizontal~~
~~movement mechanism that moves the cutting unit in a~~
~~center axis direction of the spindle,~~

wherein

~~the cutting unit includes a spindle unit that~~
~~rotates the spindle to which a mount on which the cutting~~
~~blade is mounted is coupled and a blade cover that~~
~~surrounds the mount and the cutting blade,~~

~~the cleaning unit includes a cleaning nozzle that~~
~~is mounted on the blade cover and jets high-pressure~~
~~water in a downward direction, and~~

~~a landing area of the high-pressure water jetted~~
~~from the cleaning nozzle is positioned to the region~~
~~outside the ring-shaped groove in the upper surface of~~

~~the chuck table and the upper surface of the chuck table including the ring-shaped groove by the horizontal movement mechanism, and cleaning is executed.~~

3. The edge trimming apparatus according to claim 1, wherein

the at least one cleaning unit includes a sponge and a nozzle for sponge that supplies cleaning water to the sponge, and

the sponge is positioned to the region outside the ring-shaped groove in the upper surface of the chuck table and the upper surface of the chuck table including the ring-shaped groove, and cleaning is executed by the sponge to which the cleaning water is supplied from the nozzle for sponge.

4. The edge trimming apparatus according to claim 1, wherein

the at least one cutting unit comprises a first cutting unit and a second cutting unit,

the second cutting unit is opposed to the first cutting unit,

the first cutting unit and second cutting unit each includes a first cleaning unit including a first cleaning nozzle, and a second cleaning unit including a second cleaning nozzle respectively, and

cleaning areas of the first cleaning and the second
cleaning nozzle can be made different to change the role
in cleaning, wherein

the first cleaning nozzle is dedicated to
intensive cleaning for the region outside the ring-shaped
groove in the upper surface of the chuck table and is
caused to jet the high-pressure water in a circular
column shape, and

the second cleaning nozzle is dedicated to
cleaning of a wide range mainly for the upper surface of
the chuck table including the ring-shaped groove and is
caused to jet the high-pressure water in a fan shape.