

WHAT IS CLAIMED IS:

1. A buffing apparatus for buffing a substrate, the buffing apparatus comprising:

a buff table for holding the substrate, the buff table being rotatable;

a buff head to which a buff pad for buffing the substrate is attachable, the buff head being rotatable and movable in a direction approaching the buff table and a direction away from the buff table, and an internal supply line for supplying process liquid for the buffing to the substrate being formed inside the buff head;

an external nozzle provided separately through the internal supply line in order to supply the process liquid to the substrate; and

a control section configured to control an operation of the buffing apparatus;

wherein the control section is configured to supply the process liquid through the internal supply line after the buff head approaches the buff table as close as a position for bringing the buff pad into contact with the substrate in a state in which rotation of the buff table and the buff head is stopped and start the rotation of the buff table and the buff head after the process liquid is supplied for a predetermined time.

2. The buffing apparatus according to claim 1, wherein the control section is configured to control the buffing apparatus to supply the process liquid only through the internal supply line after a start of the buffing or after elapse of a predetermined time from the start of the buffing.

3. The buffing apparatus according to claim 1, wherein the control section is configured to control the buffing apparatus to supply the process liquid through both of the internal supply line and the external nozzle during the buffing.

4. The buffing apparatus according to claim 1 wherein the control section is configured to control the buffing apparatus to supply the process liquid from the external nozzle in a state in which rotation of the buff table is stopped before the buff head approaches the buff table as close as the contact position, and to move the buff head to the contact position after the supply is started.

5. The buffing apparatus according to claim 1, wherein the control section is configured to control the load of the buff head such that a first load acts on the substrate with the buff head in an initial period of the buffing and a second load larger than the first load acts on the substrate in a period after the initial period.

6. A substrate processing apparatus comprising:
a chemical mechanical polishing apparatus; and
the buffing apparatus according to claim 1 for performing post process of a substrate processed by the chemical mechanical polishing apparatus.

7. A method for buffing a substrate with a buffing apparatus, the method comprising:

a step of disposing a the substrate on a buff table for holding and rotating the substrate;

a step of supplying the process liquid from an external nozzle in a state in which rotation of the buff table is stopped before bringing a buff pad attached to a buff head, in which an internal supply line for supplying process liquid for the buffing to the substrate is formed, into contact with the substrate;

a step of bringing the buff pad into contact with the substrate and starting the rotation of the buff table after the supply of the process liquid from the external nozzle is started,; and

a step of performing the buffing while supplying the process liquid through the internal supply line after the step of starting the rotation of the buff table.