a supply unit for supplying a cleaning liquid;

a substrate support unit for holding a dummy substrate; and

a cleaning member holding unit for performing the break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate,

wherein the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member.

[0008]

[Concept 2]

In the break-in apparatus according to Concept 1,

the cleaning member holding unit may be configured to be able to hold three or more cleaning members.

[0009]

[Concept 3]

In the break-in apparatus according to Concept 1 or 2,

the cleaning member may be a roll cleaning member or a pencil cleaning member.

[0010]

[Concept 4]

In the break-in apparatus according to any one of Concepts 1 to 3,

the cleaning member holding unit may be configured to be able to hold two or more cleaning members and to contract the cleaning members with each of a front side and a backside of the dummy substrate, and

the substrate support unit may hold the dummy substrate to vertically extend.

[0011]

[Concept 5]

The break-in apparatus, according to any one of Concepts 1 to 4, may further comprise

a first movement unit for enabling the break-in apparatus to move.

[0012]

[0013]

[Concept 6]

The break-in apparatus, according to any one of Concepts 1 to 5, may further comprise

a detection unit for detecting a force applied to the cleaning member.

[0014]

[Concept 7]

The break-in apparatus, according to any one of Concepts 1 to 6, may further comprise

a first communication unit for making communication with a substrate cleaning apparatus, wherein

the break-in apparatus may start the break-in processing

for the cleaning member when receiving information from the first communication unit.

[0015]

[Concept 8]

The break-in apparatus, according to any one of Concepts 1 to 7, may further comprise

a recovery and use unit for recovering and using the cleaning liquid supplied to the dummy substrate, wherein

the supply unit may supply the dummy substrate with the cleaning liquid recovered by the recovery and use unit.

[0016]

[Concept 9]

In the break-in apparatus according to any one of Concepts 1 to 8,

the cleaning member holding unit may be able to hold a dummy cleaning member.

[0017]

[Concept 10]

A break-in system according to another aspect of the present invention may comprise:

a break-in apparatus having a supply unit for supplying a cleaning liquid, a substrate support unit for holding a dummy substrate, and a cleaning member holding unit for holding a cleaning member removably and performing a break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate; and

a substrate cleaning apparatus for cleaning a substrate by a cleaning member, wherein

the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member, and

the substrate cleaning apparatus may be able to transmit information about exchanging the cleaning member used in the substrate cleaning apparatus to the break-in apparatus.

[0018]

[Concept 11]

A break-in system according to another aspect of the present invention may comprise:

a break-in apparatus having a supply unit for supplying a cleaning liquid, a substrate support unit for holding a dummy substrate, a cleaning member holding unit for holding a cleaning member removably and performing a break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate, and a first communication unit for receiving information about exchanging the cleaning member from outside;

a substrate cleaning apparatus for cleaning a substrate by a cleaning member, the substrate cleaning apparatus having a second communication unit for transmitting the information about exchanging the cleaning member to the break-in apparatus; and

a break-in control unit having a program for controlling the break-in apparatus based on the information about exchanging the cleaning member, wherein

the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member, and

the information about exchanging the cleaning member may include cleaning member identification information and

apparatus identification information.

[0019]

[Concept 12]

A storage media according to another aspect of the present invention may be a readable storage media storing a program, which works in a computer, for controlling the break-in system according to Concept 11, wherein

the program, in operation, may make the computer control the break-in system so that the break-in system according to Concept 11 performs the break-in processing on the cleaning member.

EFFECT OF INVENTION

[0020]

If the break-in apparatus according to the embodiments of present invention is employed, the break-in processing by the substrate cleaning apparatus may be eliminated or reduced, thereby shortening a time in which the substrate cleaning apparatus stops operating. Further, it is possible to more appropriately perform the break-in processing depending on the sizes, the shapes, and the surface properties of the respective cleaning members used in the substrate cleaning apparatus.

BRIEF DESCRIPTION OF DRAWINGS

[0021]

FIG. 1 is a plan view showing an entire configuration of a processing apparatus including a substrate processing

Claims

1. A break-in apparatus for performing a break-in processing on a cleaning member comprising:

a supply unit for supplying a cleaning liquid;

a substrate support unit for holding a dummy substrate; and

a cleaning member holding unit for performing the break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate,

wherein the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member.

2. The break-in apparatus according to claim 1, wherein

the cleaning member holding unit is configured to be able to hold three or more cleaning members.

3. The break-in apparatus according to claim 1 or 2, wherein

the cleaning member is a roll cleaning member or a pencil cleaning member.

4. The break-in apparatus according to any one of claims 1 to 3, wherein

the cleaning member holding unit is configured to be able to hold two or more cleaning members and to contract the cleaning members with each of a front side and a backside of the dummy substrate, and

the substrate support unit holds the dummy substrate to vertically extend.

5. The break-in apparatus, according to any one of claims 1 to 4, further comprising

a first movement unit for enabling the break-in apparatus to move.

6. The break-in apparatus, according to any one of claims 1 to 5, further comprising

a detection unit for detecting a force applied to the cleaning member.

7. The break-in apparatus, according to any one of claims 1 to 6, further comprising

a first communication unit for making communication with a substrate cleaning apparatus, wherein

the break-in apparatus starts the break-in processing for the cleaning member when receiving information from the first communication unit.

8. The break-in apparatus, according to any one of claims 1 to 7, further comprising

a recovery and use unit for recovering and using the cleaning liquid supplied to the dummy substrate, wherein

the supply unit supplies the dummy substrate with the cleaning liquid recovered by the recovery and use unit.

9. The break-in apparatus according to any one of claims 1 to 8, wherein

the cleaning member holding unit is able to hold a dummy cleaning member.

10. A break-in system comprising:

a break-in apparatus having a supply unit for supplying a cleaning liquid, a substrate support unit for holding a dummy substrate, and a cleaning member holding unit for holding a cleaning member removably and performing a break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate; and

a substrate cleaning apparatus for cleaning a substrate by a cleaning member, wherein

the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member, and

the substrate cleaning apparatus is able to transmit information about exchanging the cleaning member used in the substrate cleaning apparatus to the break-in apparatus.

11. A break-in system comprising:

a break-in apparatus having a supply unit for supplying a cleaning liquid, a substrate support unit for holding a dummy substrate, a cleaning member holding unit for holding a cleaning member removably and performing a break-in processing on the cleaning member by rotating the cleaning member and bringing the cleaning member into contact with the dummy substrate, and a first communication unit for receiving information about exchanging the cleaning member from outside;

a substrate cleaning apparatus for cleaning a substrate by a cleaning member, the substrate cleaning apparatus having a second communication unit for transmitting the information about exchanging the cleaning member to the break-in apparatus; and

a break-in control unit having a program for controlling the break-in apparatus based on the information about exchanging the cleaning member, wherein

the supply unit starts to supply the cleaning liquid from inside the cleaning member, and then the supply unit starts to supply the cleaning liquid from outside the cleaning member, and

the information about exchanging the cleaning member includes cleaning member identification information and apparatus identification information.

12. A readable storage media storing a program, which works in a computer, for controlling the break-in system according to claim 11, wherein

the program, in operation, makes the computer control the break-in system so that the break-in system according to claim 11 performs the break-in processing on the cleaning member.