CLAIMS

[Claim 1] A substrate polishing apparatus comprising:

a first polishing module;

a second polishing module;

a third polishing module;

a fourth polishing module;

an abnormality detecting system configured to detect an abnormality that occurs in any one of the first to fourth polishing modules; and

a management controller configured to control operations of the first to fourth polishing modules,

wherein the first polishing module and the fourth polishing module are configured to polish the same region of a substrate, and

the management controller is configured to create a process flow which is performed using the fourth polishing module and without using the first polishing module when the abnormality detecting system detects an abnormality in the first polishing module.

[Claim 2] The substrate polishing apparatus according to claim 1, wherein the first polishing module, the second polishing module, the third polishing module, and the fourth polishing module are aligned in a straight line when viewed from above the substrate polishing apparatus.

[Claim 3] The substrate polishing apparatus according to claim 1 or 2, wherein

each of the first polishing module and the fourth polishing module is one of a notch polishing module configured to polish a notch of the substrate, a bevel polishing module configured to polish a bevel portion of the substrate, a back-surface polishing module configured to polish a back surface of the substrate, and a device-surface polishing module configured to polish a device surface of the substrate,

the second polishing module is other one of the notch polishing module, the bevel polishing module, the back-surface polishing module, and the device-surface polishing module, and

the third polishing module is a remaining one of the notch polishing module, the bevel polishing module, the back-surface polishing module, and the device-surface polishing module.

[Claim 4] The substrate polishing apparatus according to claim 1, further comprising:

a housing,

wherein the first polishing module, the second polishing module, the third polishing module, and the fourth polishing module are arranged in the housing.

[Claim 5] The substrate polishing apparatus according to claim 4, further comprising:

a first control module configured to control an operation of the first polishing module;

a second control module configured to control an operation of the second polishing module;

a third control module configured to control an operation of the third polishing module; and

a fourth control module configured to control an operation of the fourth polishing module,

wherein the first to fourth polishing modules and the first to fourth control modules are detachably arranged in the housing.

[Claim 6] The substrate polishing apparatus according to claim 5, wherein the first to fourth polishing modules have the same size, and the first to fourth control modules

have the same size.

[Claim 7] The substrate polishing apparatus according to claim 5 or 6, wherein

the management controller is configured to control operations of the first to fourth control modules,

the first control module includes a first wire connector which can be electrically coupled to the management controller and the first polishing module,

the second control module includes a second wire connector which can be electrically coupled to the management controller and the second polishing module,

the third control module includes a third wire connector which can be electrically coupled to the management controller and the third polishing module, and

the fourth control module includes a fourth wire connector which can be electrically coupled to the management controller and the fourth polishing module.

[Claim 8] The substrate polishing apparatus according to claim 5 or 6,

wherein each of the first polishing module and the fourth polishing module is one of a notch polishing module configured to polish a notch of the substrate, a bevel polishing module configured to polish a bevel portion of the substrate, a back-surface polishing module configured to polish a back surface of the substrate, and a device-surface polishing module configured to polish a device surface of the substrate.

[Claim 9] The substrate polishing apparatus according to claim 1 or 2, further comprising:

a first control module configured to control an operation of the first polishing module;

a second control module configured to control an operation of the second polishing module;

a third control module configured to control an operation of the third polishing

module;

a fourth control module configured to control an operation of the fourth polishing module,

wherein the management controller configured to control operations of the first to fourth control modules,

the first control module includes a first wire connector which can be electrically coupled to the management controller and the first polishing module,

the second control module includes a second wire connector which can be electrically coupled to the management controller and the second polishing module,

the third control module includes a third wire connector which can be electrically coupled to the management controller and the third polishing module, and

the fourth control module includes a fourth wire connector which can be electrically coupled to the management controller and the fourth polishing module.

[Claim 10] The substrate polishing apparatus according to claim 9,

wherein each of the first polishing module and the fourth polishing module is one of a notch polishing module configured to polish a notch of the substrate, a bevel polishing module configured to polish a bevel portion of the substrate, a back-surface polishing module configured to polish a back surface of the substrate, and a device-surface polishing module configured to polish a device surface of the substrate.