WHAT IS CLAIMED IS:

1. A substrate processing apparatus, comprising:

a reaction container configured to accommodate a substrate;

an exhaust pipe configured to exhaust an atmosphere inside the reaction container;

a gas supplier configured to supply a process gas to the substrate; and

a gas supply system comprising:

at least one gas supply pipe kept in fluid communication with the gas supplier and comprising a plurality of pipes that are serially connected to each other and configured to supply the process gas into the reaction container;

a plurality of valves installed between the plurality of pipes; and

a plurality of pressure detectors provided on the plurality of pipes, respectively, between a pair of valves among the plurality of valves; and

a controller configured to be capable of:

determining blockage levels of the plurality of pipes based on at least one pressure among measurement results of the plurality of pressure detectors;

determining whether a measurement result measured by one of the pressure detectors is higher than a predetermined value;

in response to determining that the measurement result is higher than the predetermined value, determining that blockage occurs on a downstream side of the one of the pressure detectors; and

in response to determining that the measurement result is lower than the predetermined value, determining that blockage occurs on an upstream side of the one of the pressure detectors.

2. The substrate processing apparatus of Claim 1, wherein the controller is configured to be

capable of controlling the gas supply system to execute a response program according to the blockage levels.

3. The substrate processing apparatus of Claim 2, further comprising a memory configured to store a plurality of response programs,

wherein the controller is configured to be capable of selecting a response program corresponding to the blockage level from the plurality of response programs and executing the selected response program.

4. The substrate processing apparatus of Claim 2, further comprising a display device connected to the controller,

wherein the controller is configured to be capable of displaying information about the response program on the display device according to the blockage level.

5. The substrate processing apparatus of Claim 1, wherein the gas supply system comprises a plurality of gas pipe heaters corresponding to the plurality of pressure detectors, respectively, and configured to heat the at least one gas supply pipe, and

wherein the controller is configured to be capable of controlling temperature of the plurality of gas pipe heaters according to the blockage levels.

6. The substrate processing apparatus of Claim 1, wherein the controller is configured to be capable of controlling a gas pipe heater located on a downstream side of the at least one gas supply pipe, which comprises a pressure detector for which blockage has been determined, among the plurality of pressure detectors, to raise temperature of the gas pipe heater.

7. The substrate processing apparatus of Claim 1, wherein the controller is configured to be capable of controlling a plurality of gas pipe heaters to, when raising temperature of the plurality

of gas pipe heaters, raise temperature of a gas pipe heater corresponding to a pressure detector for which blockage has been determined and temperature of a gas pipe heater located on a downstream side of the pressure detector to a substantially constant temperature.

8. The substrate processing apparatus of Claim 1, wherein the controller is configured to be capable of controlling a plurality of gas pipe heaters to, when raising temperature of the plurality of gas pipe heaters, raise heating temperature from a gas pipe heater, which corresponds to a pressure detector for which blockage has been determined, toward a downstream of the at least one gas supply pipe.

9. The substrate processing apparatus of Claim 5, wherein the gas supply system comprises an exhauster configured to evacuate an inside of the at least one gas supply pipe, and

wherein the controller is configured to be capable of controlling the exhauster to evacuate the inside of the at least one gas supply pipe while heating the at least one gas supply pipe.

10. The substrate processing apparatus of Claim 5, wherein the gas supply system comprises an inert gas supplier configured to supply an inert gas into the at least one gas supply pipe and an exhauster configured to evacuate an inside of the at least one gas supply pipe, and

wherein the controller is configured to be capable of controlling the inert gas supplier and the exhauster to repeat supplying the inert gas into the at least one gas supply pipe and evacuating the inside of the at least one gas supply pipe while heating the at least one gas supply pipe.

11. The substrate processing apparatus of Claim 4, wherein the controller is configured to be capable of notifying at least one selected from the group of the display device and a host device of information that a portion of the at least one gas supply pipe provided with a pressure

detector, for which blockage has been determined, is to be replaced.

12. The substrate processing apparatus of Claim 5, wherein the at least one gas supply pipe comprises a plurality of gas supply pipes, and

wherein the gas supply system comprises an exhauster configured to evacuate an inside of the plurality of gas supply pipes, and

wherein the controller is configured to be capable of controlling the exhauster to evacuate a gas supply pipe on an upstream side and a gas supply pipe on a downstream side of a gas supply pipe to which a pressure detector for which blockage has been determined belongs, among the plurality of gas supply pipes.

13. The substrate processing apparatus of Claim 5, wherein the at least one gas supply pipe comprises a plurality of gas supply pipes,

wherein the gas supply system comprises an inert gas supplier configured to supply an inert gas into the plurality of gas supply pipes, and

wherein the controller is configured to be capable of controlling the inert gas supplier to supply the inert gas into a gas supply pipe on an upstream side and a gas supply pipe on a downstream side of a gas supply pipe to which a pressure detector for which blockage has been determined belongs.

14. The substrate processing apparatus of Claim 13, wherein the gas supply system comprises an exhauster configured to evacuate an inside of the plurality of gas supply pipes, and

wherein the controller is configured to be capable of controlling the exhauster and the inert gas supplier to alternately perform:

evacuating the gas supply pipe on the upstream side and the gas supply pipe on the downstream side of the gas supply pipe to which the pressure detector for which blockage has been determined belongs; and

supplying the inert gas into the gas supply pipe on the upstream side and the gas supply pipe on the downstream side of the gas supply pipe to which the pressure detector for which blockage has been determined belongs.

15. The substrate processing apparatus of Claim 11, wherein the controller is configured to be capable of controlling a plurality of gas pipe heaters to lower temperature of a gas pipe heater provided on a gas supply pipe to which a pressure detector for which blockage has been determined belongs, while maintaining temperature of gas pipe heaters provided on an upstream side and a downstream side of the gas supply pipe to which the pressure detector for which the blockage has been determined belongs.

16. The substrate processing apparatus of Claim 10, wherein the controller is configured to be capable of controlling a plurality of gas pipe heaters to lower temperature of a gas pipe heater provided on a gas supply pipe to which a pressure detector for which blockage has been determined belongs, after evacuating the at least one gas supply pipe and supplying the inert gas into the at least one gas supply pipe are completed.

17. The substrate processing apparatus of Claim 11, wherein the controller is configured to notify the display device of a position of the portion of the at least one gas supply pipe to be replaced.

18. A method of manufacturing a semiconductor device, comprising:

determining blockage levels of a plurality of pipes based on at least one pressure among measurement results of a plurality of pressure detectors of a substrate processing apparatus that comprises:

a reaction container configured to accommodate a substrate;

an exhaust pipe configured to exhaust an atmosphere inside the reaction

container;

a gas supplier configured to supply a process gas to the substrate; and

a gas supply system comprising:

at least one gas supply pipe kept in fluid communication with the gas supplier and comprising the plurality of pipes that are serially connected to each other and configured to supply the process gas into the reaction container;

a plurality of valves installed between the plurality of pipes; and

the plurality of pressure detectors provided on the plurality of pipes, respectively, between a pair of valves among the plurality of valves;

determining whether a measurement result measured by one of the pressure detectors is higher than a predetermined value;

in response to determining that the measurement result is higher than the predetermined value, determining that blockage occurs on a downstream side of the one of the pressure detectors;

in response to determining that the measurement result is lower than the predetermined value, determining that blockage occurs on an upstream side of the one of the pressure detectors;

eliminating the blockage occurring on the downstream side or the upstream side of the one of the pressure detectors;

loading the substrate into the reaction container; and

supplying the process gas from the at least one gas supply pipe of the gas supply system to the substrate via the gas supplier.

19. A substrate processing method, comprising:

determining blockage levels of a plurality of pipes based on at least one pressure among measurement results of a plurality of pressure detectors of a substrate processing apparatus that comprises:

a reaction container configured to accommodate a substrate;

an exhaust pipe configured to exhaust an atmosphere inside the reaction container;

a gas supplier configured to supply a process gas to the substrate; and

a gas supply system comprising:

at least one gas supply pipe kept in fluid communication with the gas supplier and comprising the plurality of pipes that are serially connected to each other and configured to supply the process gas into the reaction container;

a plurality of valves installed between the plurality of pipes; and

the plurality of pressure detectors provided on the plurality of pipes, respectively, between a pair of valves among the plurality of valves;

determining whether a measurement result measured by one of the pressure detectors is higher than a predetermined value;

in response to determining that the measurement result is higher than the predetermined value, determining that blockage occurs on a downstream side of the one of the pressure detectors;

in response to determining that the measurement result is lower than the predetermined value, determining that blockage occurs on an upstream side of the one of the pressure detectors;

eliminating the blockage occurring on the downstream side or the upstream side of the one of the pressure detectors;

loading the substrate into the reaction container; and

supplying the process gas from the at least one gas supply pipe of the gas supply system to the substrate via the gas supplier.

20. A program that causes, by a computer, a substrate processing apparatus to perform a process comprising:

determining blockage levels of a plurality of pipes based on at least one pressure among measurement results of a plurality of pressure detectors of the substrate processing apparatus that

comprises:

a reaction container configured to accommodate a substrate;

an exhaust pipe configured to exhaust an atmosphere inside the reaction container;

a gas supplier configured to supply a process gas to the substrate; and

a gas supply system comprising:

at least one gas supply pipe kept in fluid communication with the gas supplier and comprising the plurality of pipes that are serially connected to each other and configured to supply the process gas into the reaction container;

a plurality of valves installed between the plurality of pipes; and

the plurality of pressure detectors provided on the plurality of pipes, respectively, between a pair of valves among the plurality of valves;

determining whether a measurement result measured by one of the pressure detectors is higher than a predetermined value;

in response to determining that the measurement result is higher than the predetermined value, determining that blockage occurs on a downstream side of the one of the pressure detectors;

in response to determining that the measurement result is lower than the predetermined value, determining that blockage occurs on an upstream side of the one of the pressure detectors;

eliminating the blockage occurring on the downstream side or the upstream side of the one of the pressure detectors;

loading the substrate into the reaction container; and

supplying the process gas from the at least one gas supply pipe of the gas supply system to the substrate via the gas supplier.