

CLAIMS

[Claim 1] A substrate processing apparatus comprising:

a first cleaning lane including a plurality of first cleaning units each for cleaning a substrate while supplying pure water to the substrate;

5 a second cleaning lane including a plurality of second cleaning units each for cleaning a substrate while supplying pure water to the substrate;

a first pure-water supply pipe for supplying the pure water to the first cleaning lane; and

10 a second pure-water supply pipe for supplying the pure water to the second cleaning lane.

[Claim 2] The substrate processing apparatus according to claim 1, further comprising:

15 a first introduction port and a second introduction port for introducing a hydrogen peroxide solution into the first pure-water supply pipe and the second pure-water supply pipe, respectively.

[Claim 3] The substrate processing apparatus according to claim 1:

20 wherein each of the first cleaning units includes a first pure-water supply nozzle for supplying pure water to the substrate, and a first liquid-chemical supply nozzle for supplying a mixture of pure water and a liquid chemical to the substrate; and

wherein the first pure-water supply pipe includes a first pure-water supply line coupled to the first pure-water supply nozzle, and a first pure-water mixing line coupled to the first liquid-chemical supply nozzle.

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[Claim 4] The substrate processing apparatus according to claim 3, wherein the first pure-water mixing line extends to the first liquid-chemical supply nozzle via a mixer for mixing the pure water and the liquid chemical.

[Claim 5] The substrate processing apparatus according to claim 1:

 wherein each of the second cleaning units includes a second pure-water supply nozzle for supplying pure water to the substrate, and a second liquid-chemical supply
5 nozzle for supplying a mixture of pure water and a liquid chemical to the substrate; and

 wherein the second pure-water supply pipe includes a second pure-water supply line coupled to the second pure-water supply nozzle, and a second pure-water mixing line coupled to the second liquid-chemical supply nozzle.

10 [Claim 6] The substrate processing apparatus according to claim 5, wherein the second pure-water mixing line extends to the second liquid-chemical supply nozzle via a mixer for mixing the pure water and the liquid chemical.

15 [Claim 7] The substrate processing apparatus according to ~~any one of claims 1 to 6,~~
 wherein:

 the first cleaning lane further includes a first drying unit for supplying pure water to the substrate and then drying the substrate; and

 the second cleaning lane further includes a second drying unit for supplying pure water to the substrate and then drying the substrate.

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[Claim 8] A pipe cleaning method for a substrate processing apparatus which includes a first cleaning lane including a plurality of first cleaning units each for cleaning a substrate while supplying pure water to the substrate, a second cleaning lane including a plurality of second cleaning units each for cleaning a substrate while supplying pure water
25 to the substrate, a first pure-water supply pipe for supplying the pure water to the first cleaning lane, and a second pure-water supply pipe for supplying the pure water to the second cleaning lane, said method comprising:

 supplying a hydrogen peroxide solution into the first pure-water supply pipe to

fill the first pure-water supply pipe with the hydrogen peroxide solution;

leaving the first pure-water supply pipe, filled with the hydrogen peroxide solution, as it is for a predetermined time, while cleaning a substrate in the second cleaning lane; and thereafter

5 supplying pure water into the first pure-water supply pipe to clean the first pure-water supply pipe.

[Claim 9] The pipe cleaning method according to claim 8, wherein a flow rate of the pure water when cleaning the first pure-water supply pipe is higher than a flow rate of
10 the pure water when cleaning the substrate.

[Claim 10] The pipe cleaning method according to claim 9, wherein a concentration of hydrogen peroxide in the hydrogen peroxide solution is in a range of 5 to 6%.

15 [Claim 11] The pipe cleaning method according to ~~any one of claims 8 to 10~~, wherein the predetermined time is not less than four hours.

[Claim 12] The pipe cleaning method according to ~~any one of claims 8 to 11~~, wherein a time for supplying the pure water into the first pure-water supply pipe to clean
20 the interior of the first pure-water supply pipe is not less than one hour.

[Claim 13] The pipe cleaning method according to ~~any one of claims 8 to 12~~, further comprising:

after the cleaning of the interior of the first pure-water supply pipe by supplying
25 the pure water into the first pure-water supply pipe, supplying a hydrogen peroxide solution into the second pure-water supply pipe to fill the second pure-water supply pipe with the hydrogen peroxide solution;

leaving the second pure-water supply pipe, filled with the hydrogen peroxide

solution, as it is for a predetermined time, while cleaning a substrate in the first cleaning lane; and thereafter

supplying pure water into the second pure-water supply pipe to clean the second pure-water supply pipe.

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[Claim 14] The substrate processing apparatus according to claim 1, wherein each of the first pure-water supply pipe and the second pure-water supply pipe can be connected to a factory pure-water line.