

CLAIMS

1. A liquid chemical processing device comprising:

5 a processing tank in which resist removal processing is performed by immersing substrates in a chemical;

a plurality of holders configured to hold the substrates in a vertical posture;

10 vertical drivers configured to individually and vertically drive the holders; and

a chuck configured to disengageably chuck the substrates,

wherein the vertical drivers are configured to
15 individually and vertically move the holders between an immersed position where the substrates are immersed in the chemical and a non-immersed position where the substrates are lifted up from the chemical, and the substrates held by the holders are subjected to the resist removal processing
20 in a single wafer manner,

wherein a nozzle is disposed at an upper portion of the processing tank, the nozzle being configured to eject the chemical downward toward the substrates, and

wherein the processing tank communicates with a
25 storage tank adjacent to the processing tank through a

communication port provided in a bottom of a communication side-wall of the processing tank.

2. The liquid chemical processing device
5 according to claim 1, wherein an ultrasonic generator is disposed at a bottom of the processing tank.

3. The liquid chemical processing device
according to claim 1, wherein a discharge tank is disposed
10 adjacent to the storage tank to store the chemical that overflows from the storage tank, and a circulation path is provided between the nozzle and the discharge tank to allow the chemical to circulate.

15 4. The liquid chemical processing device according to claim 3, wherein a filtering system in which recovery target size of sludge contained in the chemical is reduced stepwise is provided in the circulation path.

20 5. The liquid chemical processing device according to any one of claims 1 to 4, wherein a stagnation prevention portion is provided at a bottom of the storage tank on an opposite side of the communication port.

25 6. The liquid chemical processing device

according to any one of claims 1 to 5, further comprising a controller configured to control each of the vertical drivers and the chuck,

wherein the controller is configured to perform
5 the resist removal processing individually for each of the substrates, the resist removal processing including:

placing one of the substrates on the holder at the non-immersed position;

moving the holder holding the substrate downward
10 to the immersed position;

keeping the substrate at the immersed position for a predetermined time;

moving the holder holding the substrate upward to the non-immersed position;

15 chucking the substrate at the non-immersed position by the chuck and removing the substrate from the holder; and

placing another of the substrates different from the substrate on the holder at the non-immersed position.

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7. The liquid chemical processing device according to any one of claims 1 to 6, wherein the vertical drivers are provided in a staggered arrangement with respect to the processing tank.

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8. The liquid chemical processing device according to any one of claims 1 to 7, wherein the processing tank is fan-shaped in a plan view, and the vertical drivers are provided along an outer arc of the processing tank.