CLAIMS

WHAT IS CLAIMED IS:

1. A method for draining a liquid of a pipe of a liquid supplying device comprising:

a step for drying an inside of the pipe by circulating an inert gas in the pipe without dividing the pipe of the liquid supplying device,

wherein the step for drying includes a step for protecting a pressure sensor from a static electricity by electrically connecting a sensor covered portion of the pressure sensor with a housing of the liquid supplying device, the sensor covered portion is exposed to the inside of the pipe or exposed to a flow path communicating with the inside of the pipe.

2. The method according to claim 1, wherein the pipe has a branch part integrally formed without a joint detachably connecting the pipe.

3. The method according to claim 1 or 2, wherein the liquid supplying device is a cleaning device,

and the method further includes a step for circulating ~~a DIW~~De-Ionized Water inside the pipe of the cleaning device, before the step for drying.

4. The method according to claim 1 or 2, wherein the liquid supplying device is a slurry supply device,

and the method further includes a step for cleaning a slurry inside the pipe of the slurry supply device by a chemical, before the step for drying.

5. The method according to any one of claims 1 to 4, wherein the inert gas is a nitrogen gas, and the nitrogen gas is circulated inside the pipe with a supply pressure in a range of 200 kPa or more to 300 kPa or less.

6. The method according to any one of claims 1 to 5, wherein in order to perform switchings of a supply of a first liquid and a supply of a second liquid to a flow rate control device, below steps are included before the step for drying:

a step for switching an opening/closing of a first valve which controls the supply of the first liquid to the flow rate control device disposed on the pipe, and

a step for switching an opening/closing of a second valve which controls the supply of the second liquid to the flow rate control device,

wherein the step for switching the opening/closing of the second valve is performed at a predetermined delay time after the step for switching the opening/closing of the first valve.

7. The method according to claim 6, wherein when the switchings of the supply of the first liquid and the supply of the second liquid to the flow rate control device are performed,

the switching of the second valve from closed to open is performed at a first delay time after the first valve is switched from open to closed, and/or, the switching of the first valve from closed to open is performed at a second delay time after the second valve is switched from open to closed.

8. The method according to claim 6 or 7, wherein the flow rate control device includes a flow meter, and a flow rate control valve which controls a flow rate of the first liquid and/or the second liquid according to a measured value of the flow meter,

and the predetermined delay time, the first delay time and the second delay time are set to times so that a pressure upper limit error by the flow meter does not occur during the switching of the first valve and/or the second valve.

9. The method according to claim 8, wherein the flow meter is a differential pressure type flow meter or an ultrasonic flow meter.

10. A liquid supplying device, comprising:

a pipe including a branch pipe having a branch part, wherein the branch part is integrally formed without a joint, and

a pressure sensor that has a sensor covered portion exposed to an inside of the pipe or exposed to a flow path communicating with the inside of the pipe,

wherein the sensor covered portion is electrically connected with a housing of the liquid supplying device.

11. A substrate processing device, comprising:

the liquid supplying device according to claim 10, and

a processing device which supplies a liquid supplied from the liquid supplying device to a substrate to process the substrate.

12. A substrate polishing device, comprising:

a polishing part for polishing a substrate, and

a cleaning part for cleaning the substrate which has been polished,

the liquid supplying device according to claim 10 for supplying a liquid to at least one of the cleaning part and the polishing part.

~~13. A non-transitory machine-readable storage medium having a liquid draining program stored thereon, the liquid draining program being executed in a liquid supplying device having a sensor covered portion of a pressure sensor electrically connected with a housing of the liquid supplying device to protect the pressure sensor from static electricity, and the sensor covered portion is exposed to an inside of the pipe or exposed to a flow path communicating with the inside of the pipe, the liquid draining program comprising:~~

~~switching an opening and closing of a first valve that is disposed on the pipe, and controlling a supply of a first liquid to a flow rate control device,~~

~~switching an opening and closing of a second valve that is disposed on the pipe, and controlling a supply of a second liquid to the flow rate control device,~~

~~wherein the switching of the opening and closing of the second valve is performed at a predetermined delay time after the switching of the opening and closing of the first valve.~~

~~14. A pressure sensor assembly for use in measuring pressure of liquid flow in a conduit to supply a liquid from a liquid supplying device to a treating device, comprising~~

~~a pressure sensor, the pressure sensor includes a strain gauge;~~

~~a sensor covered portion exposed to an inside of the pipe or exposed to a flow path communicating with the inside of the pipe, the sensor covered portion comprises a diaphragm or a membrane covering the diaphragm,~~

~~wherein the sensor covered portion is electrically connected with a housing of the liquid supplying device.~~