What is claimed is:

1. A washing device comprising:

an arm;

a two-fluid jet nozzle which is supported on a leading end of the arm and moving toward an outer circumference from a center of a substrate by rotation of the arm, to supply a jet flow, which is generated by mixing ultrapure water(DIW) with gas, onto the substrate; and

an on-arm spray nozzle which is provided in the arm to supply a chemical liquid, which has conductivity, to an upper surface of the substrate in a vicinity of the two-fluid jet nozzle;

wherein the chemical liquid is supplied to a vicinity of a washing location at which the jet flow collides with the upper surface of the substrate.

2. The washing device according to claim 1,

wherein a liquid-landing area by the on-arm spray nozzle is disposed in an area up to 180° rotation in a forward direction of a rotation direction of the substrate from the washing location by the jet flow of the two-fluid jet nozzle.

3. The washing device according to claim 1, wherein the two-fluid jet nozzle is supported at the leading end portion of the arm and the spray nozzle is provided in the vicinity of the two-fluid jet nozzle, and the arm is rotatably attached to a column at the other leading end portion of the arm.

4. The washing device according to claim 1, wherein the on-arm spray nozzle is inclined in the direction toward the washing location by the two-fluid jet nozzle with respect to the vertical direction.

5. The washing device according to claim 1, wherein the on-arm spray nozzle is inclined outward in the radial direction of the substrate.

6. The washing device according to claim 1, wherein the on-arm spray nozzle is provided to be closer to the center of the substrate than the two-fluid jet nozzle and on the upstream side in the rotational direction of the substrate than the two-fluid jet nozzle.