CLAIMS

1. A cutting apparatus that receives a supply of process water from a water supply facility outside the cutting apparatus, the cutting apparatus comprising:

a cutting unit configured to cut an object to be cut;

a supply unit configured to directly or indirectly supply the process water received from the water supply facility to at least one of the object to be cut and the cutting unit;

a detection unit configured to detect a flow rate of the process water supplied by the supply unit;

an adjustment unit configured to adjust the flow rate of the process water supplied by the supply unit; and

a control unit including both a feedforward control unit configured to perform feedforward control, in which the adjustment unit is controlled based on a disturbance factor before cutting of the object to be cut, and a feedback control unit configured to perform feedback control, in which the adjustment unit is controlled based on a detection result of the detection unit such that the detection result approaches a target value,

wherein the feedback control unit generates, based on the detection result, a command value for causing the detection result to approach the target value,

wherein the feedforward control unit acquires information regarding the disturbance factor before cutting of the object to be cut and generates, based on the acquired information regarding the disturbance factor, a correction value for correcting the command value, and

wherein the control unit corrects the command value using the generated correction value and controls the adjustment unit based on the corrected command value.

2. The cutting apparatus according to claim 1,

wherein the disturbance factor includes at least one of a water pressure of the water supply facility, an amount of the process water supplied from the water supply facility, and a status of supply of water by the water supply facility to a device other than the cutting apparatus.

3. The cutting apparatus according to claim 1 or 2,

wherein a size of a process water supply opening of the supply unit is variable, and

the disturbance factor includes the size of the supply opening used to supply the process water.

4. The cutting apparatus according to any one of claims 1 to 3, further comprising:

a plurality of other supply units different from the supply unit,

wherein the plurality of other supply units are each configured to directly or indirectly supply the process water to at least one of the object to be cut and the cutting unit, and

the supply unit and the plurality of other supply units receive a supply of the process water from the same water supply facility.

5. The cutting apparatus according to claim 4,

wherein at least one supply unit among the plurality of other supply units cleans the object to be cut by directly or indirectly supplying the process water to the object to be cut.

6. The cutting apparatus according to claim 4 or 5,

wherein the disturbance factor includes the number of supply units that supply

the process water at the same time in a group including the supply unit and the plurality of other supply units.

7. The cutting apparatus according to any one of claims 4 to 6, further comprising:

a storage unit configured to store a provisional correction value for each combination of supply units that supply the process water at the same time in a group including the supply unit and the plurality of other supply units,

wherein the control unit performs the feedforward control using the correction value generated based on the provisional correction value associated with the combination.

8. The cutting apparatus according to claim 7,

wherein the control unit updates the correction values associated with the combinations based on the detection result of the detection unit.

9. A method for manufacturing a cut product using the cutting apparatus according to any one of claims 1 to 8, comprising:

cutting the object to be cut using the cutting apparatus.