CLAIMS

1. A local polisher comprising:

a local polishing unit for performing local polishing on a wafer to be processed by making a polished surface of the wafer to be processed and a polishing surface of a polishing member, the polishing surface being smaller than the polished surface, slide upon each other;

a torque sensor for sensing torque generated to slide the polishing member during the local polishing;

a storage holding a recipe modification model that defines the relation between an input node and an output node, the input node being the torque, the output node being a polishing condition; and

a polishing condition modification unit for putting the torque sensed by the torque sensor into the input node of the recipe modification model and determining modified polishing condition of the local polishing during the local polishing,

wherein the local polishing unit changes the polishing condition during the local polishing.

2. The local polisher according to claim 1, wherein the polishing condition modification unit modifies a polishing condition into a new polishing condition when an amount of change in the torque per unit time is greater than or equal to a predetermined threshold.

3. The local polisher according to claim 1, wherein the polishing condition modification unit modifies a polishing condition into a new polishing condition when the torque crosses a predetermined threshold.

4. The local polisher according to claim 3, wherein the recipe modification model has the duration of service of the polishing member as an input node.

5. The local polisher according to any of claims 1 to 4, comprising a profile calculator for calculating the surface unevenness of the polished wafer based on the polishing condition and the torque during polishing.

6. The local polisher according to any of claims 1 to 5, wherein an initial polishing condition is set by predicting the surface condition of the wafer to be processed based on a condition of an upstream manufacturing process of the wafer to be processed or on a result of measuring the surface unevenness of the wafer to be processed.

7. A method of a local polisher performing local polishing on a wafer to be processed by making a polished surface of the wafer to be processed and a polishing surface of a polishing member, the polishing surface being smaller than the polished surface, slide upon each other, the local polishing method comprising the steps of:

the local polisher sensing torque generated to slide the polishing member during the local polishing;

the local polisher reading a recipe modification model from a storage, the recipe modification model defines the relation between an input node and an output node, the input node being the torque, the output node being a polishing condition; and

the local polisher putting the torque sensed by the torque sensor into the input node of the recipe modification model and determining modified polishing condition of the local polishing using data on the torque during the local polishing,

wherein the local polisher changes the polishing condition during the local polishing.

8. A program for controlling a local polisher that performs local polishing on a wafer to be processed by making a polished surface of the wafer to be processed and a polishing surface of a polishing member, the polishing surface being smaller than the polished surface, slide upon each other, the program causing the local polisher to execute the steps of:

sensing torque generated to slide the polishing member during the local polishing;

reading a recipe modification model from a storage, the recipe modification model defines the relation between an input node and an output node, the input node being the torque, the output node being a polishing condition;

putting the torque sensed by the torque sensor into the input node of the recipe modification model and determining modified polishing condition of the local polishing during the local polishing; and

performing the local polishing according to the modified polishing condition during the local polishing.