In one aspect, the present disclosure provides an inspection system for inspecting a substrate while appropriately performing temperature control and a temperature control method.

Means for Solving the Problems

[0005]

To solve the problems, in one embodiment, an inspection system configured to inspect a substrate while performing temperature control using a temperature control mechanism is provided. The inspection system comprises a substrate holder configured to hold the substrate, a detector configured to supply an inspection power to an electrode portion of the substrate, and a controller. The detector includes a temperature estimation part configured to estimate a junction temperature of a junction portion provided at the substrate. The controller is configured to perform supplying the inspection power to the substrate, acquiring information on the junction temperature after the supply of the inspection power is stopped, determining an offset temperature of the substrate holder based on the information on the junction temperature, adjusting the temperature of the substrate holder based on a control temperature offset by the offset temperature, and supplying the inspection power to the substrate to inspect the substrate after the temperature of the substrate holder is adjusted.

Effect of the Invention

[0006]

In one aspect, an inspection system for inspecting a substrate while appropriately performing temperature control and a temperature control method can be provided.

CLAIMS

[Claim 1]

An inspection system configured to inspect a substrate while performing temperature control using a temperature control mechanism, comprising:

a substrate holder configured to hold the substrate;

a detector configured to supply an inspection power to an electrode portion of the substrate; and

a controller,

wherein the detector includes:

a temperature estimation part configured to estimate a junction temperature of a junction portion provided at the substrate, and

the controller is configured to perform:

supplying the inspection power to the substrate;

acquiring information on the junction temperature after the supply of the inspection power is stopped;

determining an offset temperature of the substrate holder based on the information on the junction temperature;

adjusting the temperature of the substrate holder based on a control temperature offset by the offset temperature; and

supplying the inspection power to the substrate to inspect the substrate after the temperature of the substrate holder is adjusted.

[Claim 2]

The inspection system of claim 1, wherein said acquiring information on the junction temperature includes:

acquiring transition of an offset temperature of the junction temperature, which is a difference between the junction temperature and the inspection temperature of the substrate.

[Claim 3]

The inspection system of claim 2, wherein said determining the offset temperature of the substrate holder includes:

estimating the offset temperature of the junction temperature at the time of stopping the supply of the inspection power based on the transition of the offset temperature of the junction temperature; and

determining the offset temperature of the substrate holder based on the estimated offset temperature of the junction temperature at the time of stopping the supply of the inspection power.

[Claim 4]

The inspection system of claim 1, wherein the temperature control mechanism is configured to detect the temperature of the substrate holder and adjust the temperature of the substrate holder.

[Claim 5]

The inspection system of claim 1, wherein the detector has a detection device configured to detect a plurality of electrical characteristics.

[Claim 6]

The inspection system of claim 1, wherein the substrate includes:

the electrode portion; and

an electronic device connected to the electrode portion, and

wherein the detector is configured to detect electrical characteristics of the electronic devices to which the inspection power is supplied.

[Claim 7]

A temperature control method for an inspection system for inspecting a substrate while performing temperature control using a temperature control mechanism,

wherein the inspection system includes:

a substrate holder configured to hold the substrate;

a detector that has a temperature estimation part configured to estimate a junction temperature of a junction portion provided at the substrate and is configured to supply an inspection power to an electrode portion of the substrate,

the method comprising:

supplying the inspection power to the substrate;

acquiring information on the junction temperature after the supply of the inspection power is stopped;

determining an offset temperature of the substrate holder based on the information on the junction temperature;

adjusting the temperature of the substrate holder based on a control temperature offset by the offset temperature; and

supplying the inspection power to the substrate and inspecting the substrate after the temperature of the substrate holder is adjusted.

[Claim 8]

The temperature control method of claim 7, wherein said acquiring information on the junction temperature includes:

acquiring transition of an offset temperature of the junction temperature, which is a difference between the junction temperature and the inspection temperature of the substrate.

[Claim 9]

The temperature control method of claim 8, wherein said determining the offset temperature of the substrate holder includes:

estimating the offset temperature of the junction temperature at the time of stopping the supply of the inspection power based on transition of the offset temperature of the junction temperature; and

determining the offset temperature of the substrate holder based on the estimated offset temperature of the junction temperature at the time of stopping the supply of the inspection power.