

SEMICONDUCTOR HEAT TREATMENT EQUIPMENT AND TEMPERATURE CONTROL METHOD THEREFOR

ABSTRACT

The present disclosure provides a semiconductor heat treatment equipment and a temperature control method therefor. The semiconductor heat treatment equipment includes: a coil, a chamber, a first temperature sensor, a second temperature sensor, and a temperature controller; the coil surrounds the chamber and provides a thermal field for the chamber, and the chamber is provided with a first temperature measurement hole and a second temperature measurement hole, which are distributed in a central region of the chamber; the first temperature sensor is configured to detect a temperature of the chamber through the first temperature measurement hole, and record the temperature as a first temperature; the second temperature sensor is configured to detect the temperature of the chamber through the second temperature measurement hole, and record the temperature as a second temperature; and the temperature controller is configured to acquire the first temperature and the second temperature, determine, when the temperature of the chamber reaches a steady state, whether a center position of the coil deviates from a center point of the chamber based on the first temperature and/or the second temperature, and control the coil to translate along a central axis based on the first temperature and/or the second temperature in response to the center position of the coil deviating from the center point of the chamber until the center position of the coil reaches the center point of the chamber. The semiconductor heat treatment equipment can ensure temperature uniformity of a wafer.

FIG. 2b