

**SUBSTRATE PROCESSING APPARATUS, METHOD OF PROCESSING SUBSTRATE,
METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE, PROGRAM,
INDUCTION HEATING APPARATUS, AND INDUCTION HEATING METHOD**

ABSTRACT

There is provided a technique that includes (a) a process tube in which a substrate is accommodated and heat-treated; (b) a plurality of coils that are disposed along a longitudinal direction of the process tube and supplied with radio-frequency power from a power source; and (c) a controller configured to be capable of setting a phase difference between two adjacent coils, among the plurality of coils, to a predetermined value, wherein in (c) the predetermined value is changeable and is set so as to make a temperature discrepancy occurring in a vicinity of a boundary between the two adjacent coils smaller than a temperature discrepancy when the phase difference is set to zero.

Fig. 1