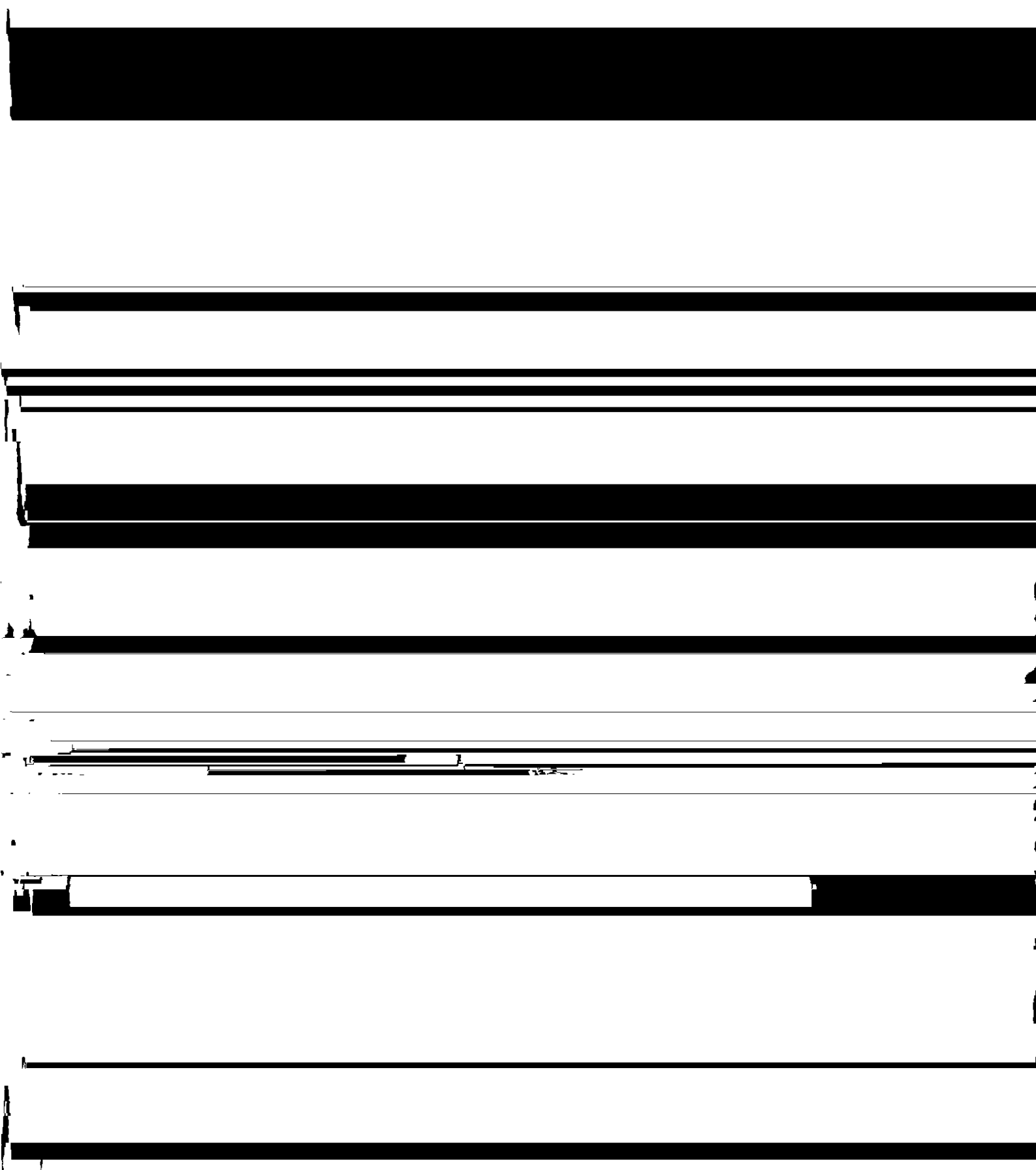
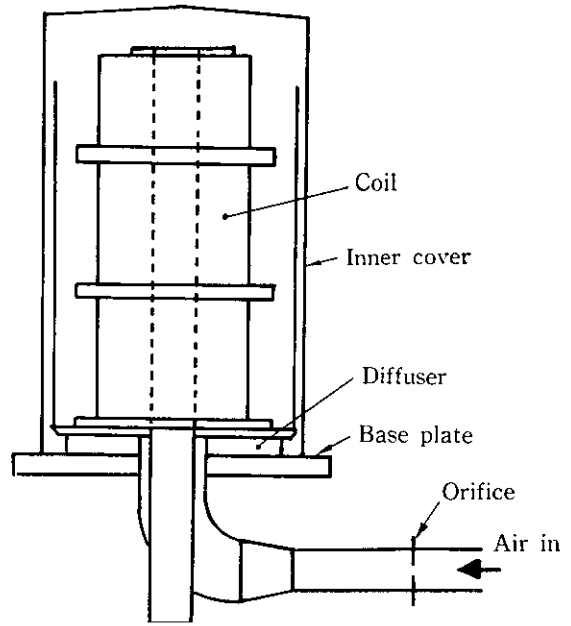
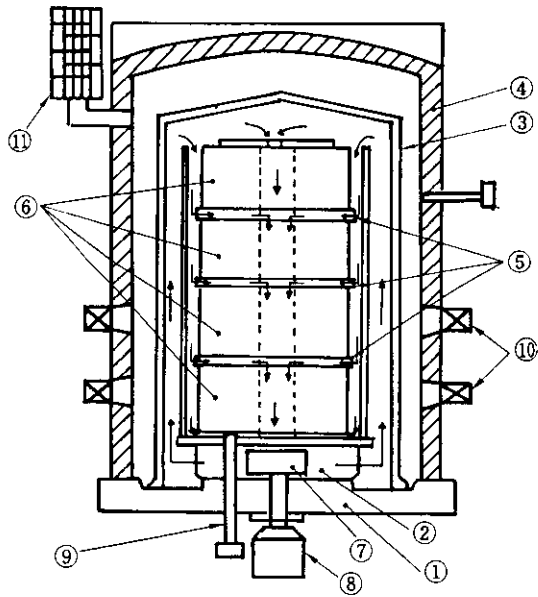


KAWASAKI STEEL TECHNICAL REPORT

Control System of Cold Spot Temperature





① Base plate ② Diffuser ③ Chamber ④ Outer shell ⑤ Vertical post ⑥ Shelf ⑦ Coil ⑧ Central shaft ⑨ Control panel ⑩ Valve ⑪ Control panel

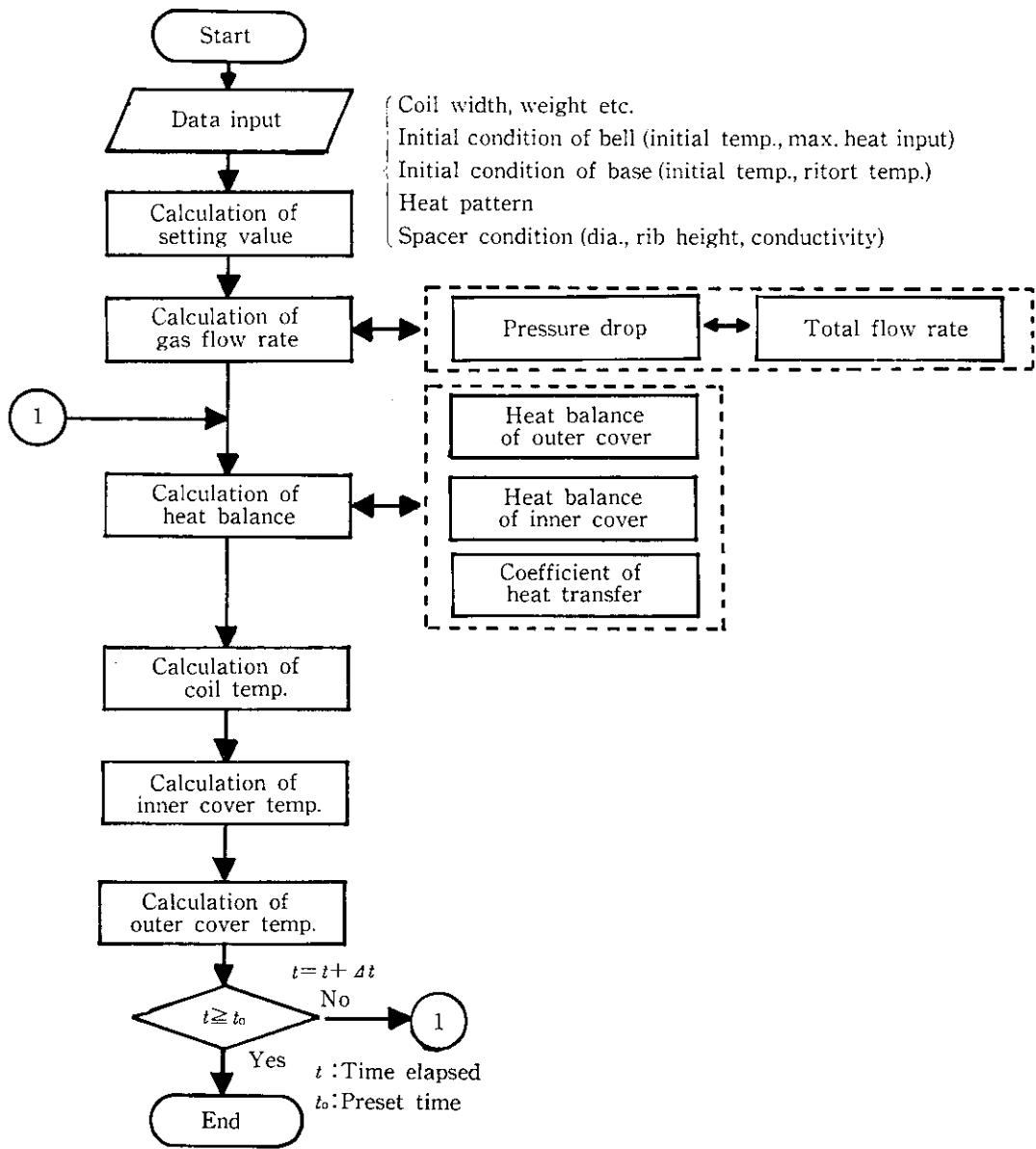


Fig. 4 Flow diagram for calculation of furnace temperature by calculation model

3.2 Outline of Simulation Model

For the atmospheric gas in the annealing furnace

fan. If the flow rates at various parts are known, the coefficient of convection heat transfer can be calculated to determine the boundary conditions around the coil

900

Bell temp.

20

Coil Coil width (mm)

(0.552 + 0.122 X - 0.008 Y) individual coils in the same charge from being over

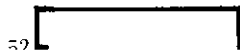
$$\frac{-\log(T_s - T_{cs})}{\dots} \dots (4)$$

stacking conditions (coil width, weight and target temperature) under which cold spot temperatures of

$3\sigma \quad \bar{x} \quad 3\sigma$

← ● → A : Conventional

The fluctuation was suppressed also quality. This is due to the reduction of fluctuation in the cold spot temperature as described in the above and the



tion in chemical composition and hot rolling conditions.

6.3 Energy Consumption and Efficiency

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