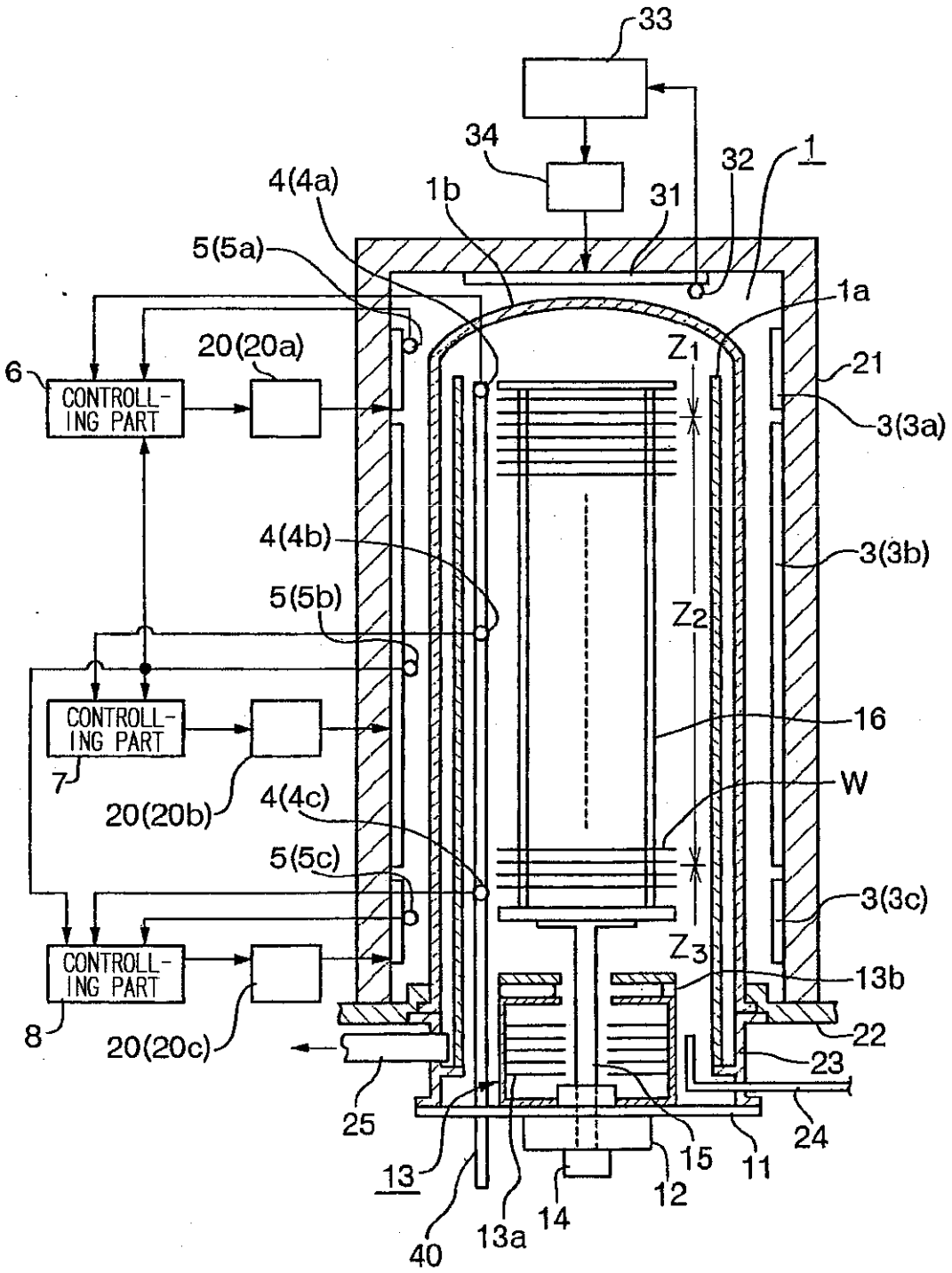

33
34
32
1
4(4a)
1b
31
5(5a)
1a
20(20a)
Z1
21
6
CONTROLL-
ING PART
3(3a)
4(4b)
3(3b)
5(5b)
Z2
16
CONTROLL-
ING PART
7
W
20(20b)
4(4c)
5(5c)
3(3c)
Z3
CONTROLL-
ING PART
13b
8
22
20(20c)
23
25
24
15
11
13
12
14
13a
40

FIG. 1

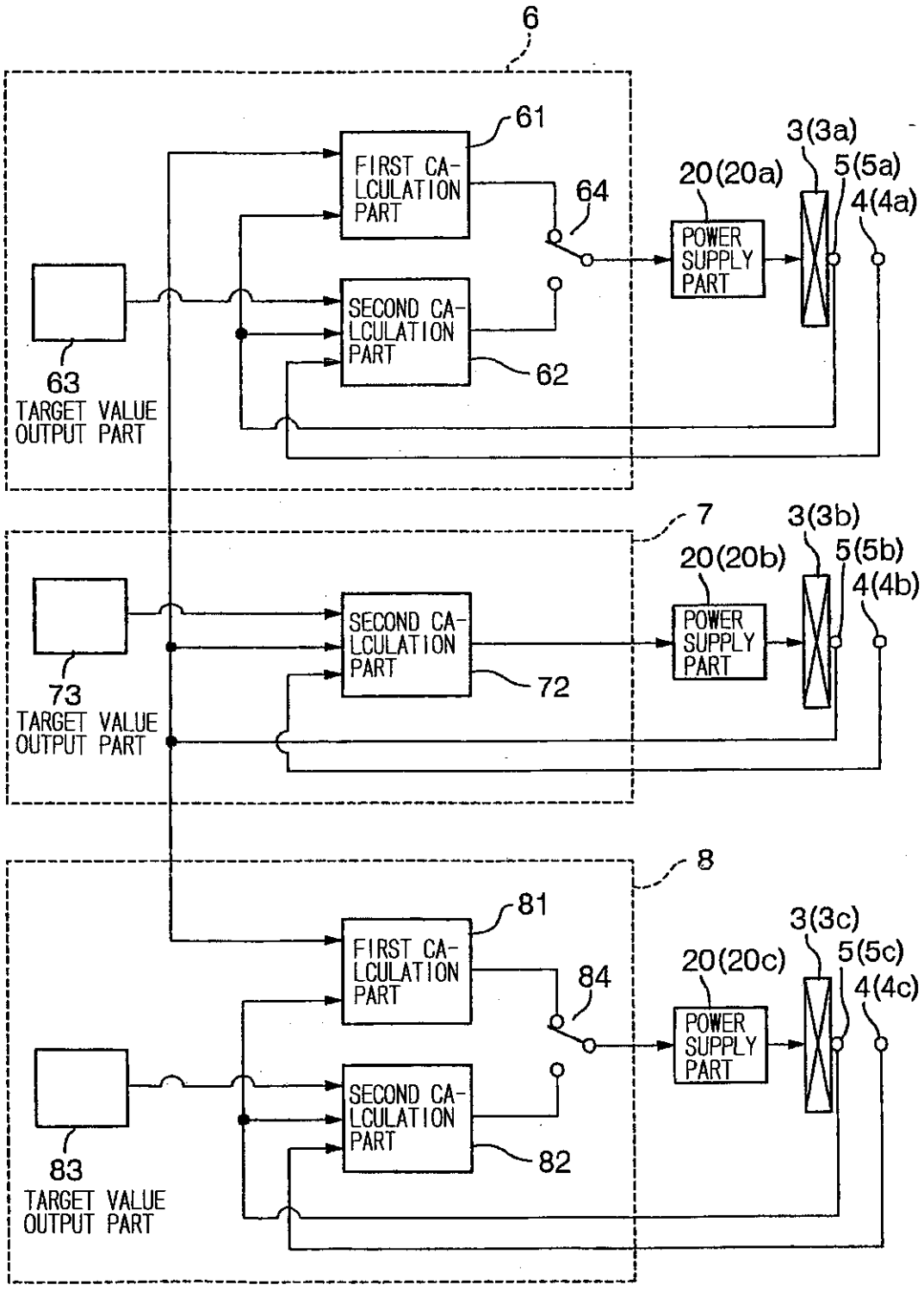

6
61
FIRST CALCULATION PART
64
SECOND CALCULATION PART
62
63
TARGET VALUE OUTPUT PART
20(20a)
POWER SUPPLY PART
3(3a)
5(5a)
4(4a)
7
73
TARGET VALUE OUTPUT PART
SECOND CALCULATION PART
72
20(20b)
POWER SUPPLY PART
3(3b)
5(5b)
4(4b)
8
81
FIRST CALCULATION PART
84
SECOND CALCULATION PART
82
83
TARGET VALUE OUTPUT PART
20(20c)
POWER SUPPLY PART
3(3c)
5(5c)
4(4c)

FIG. 2

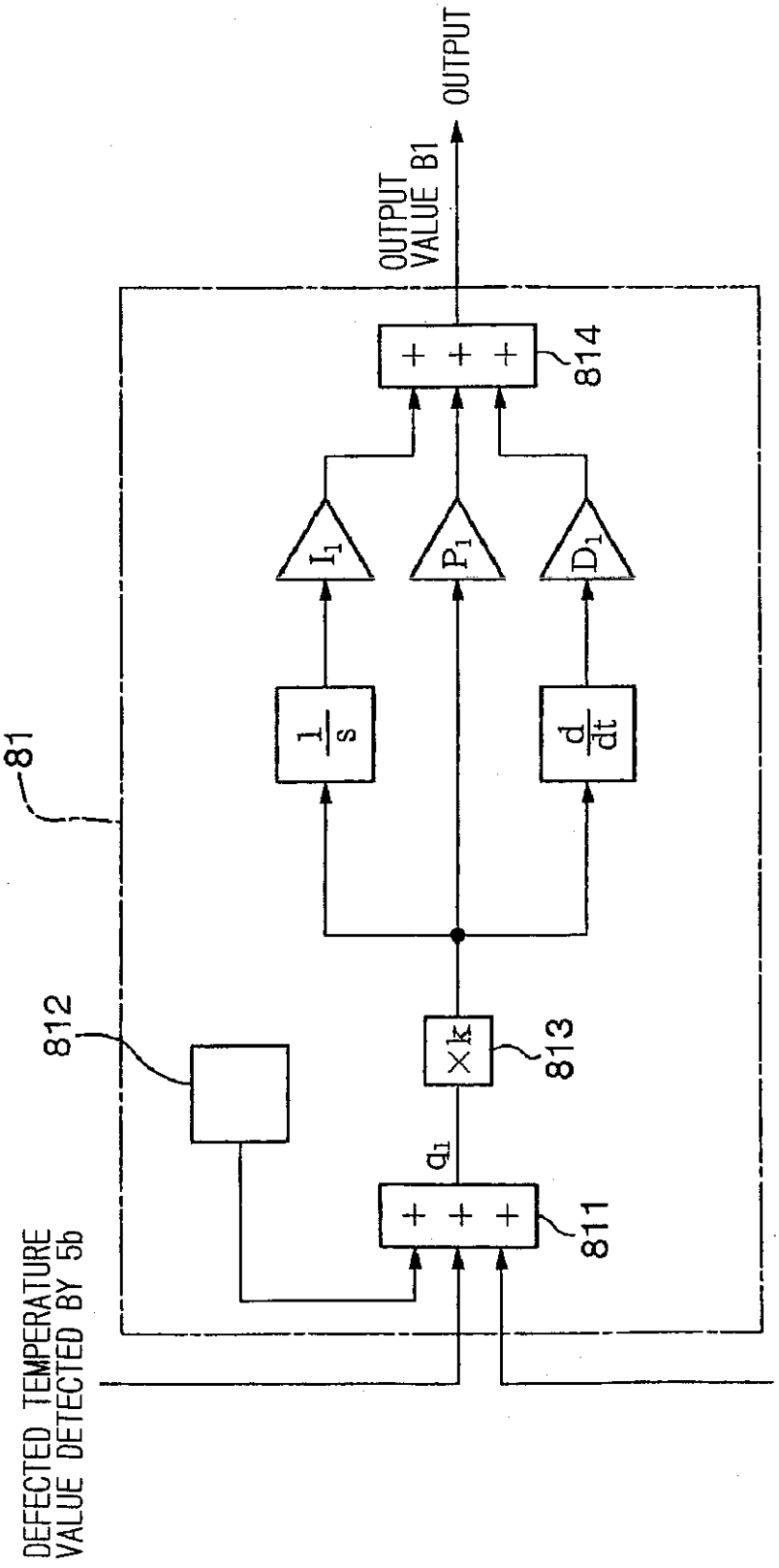

DEFECTED TEMPERATURE VALUE DETECTED BY 5b
DEFECTED TEMPERATURE VALUE DETECTED BY 5c
81
812
811
813
814
q_1
×k
$\frac{1}{s}$
$\frac{d}{dt}$
I_1
P_1
D_1
+ + +
OUTPUT VALUE B1
OUTPUT

FIG. 3

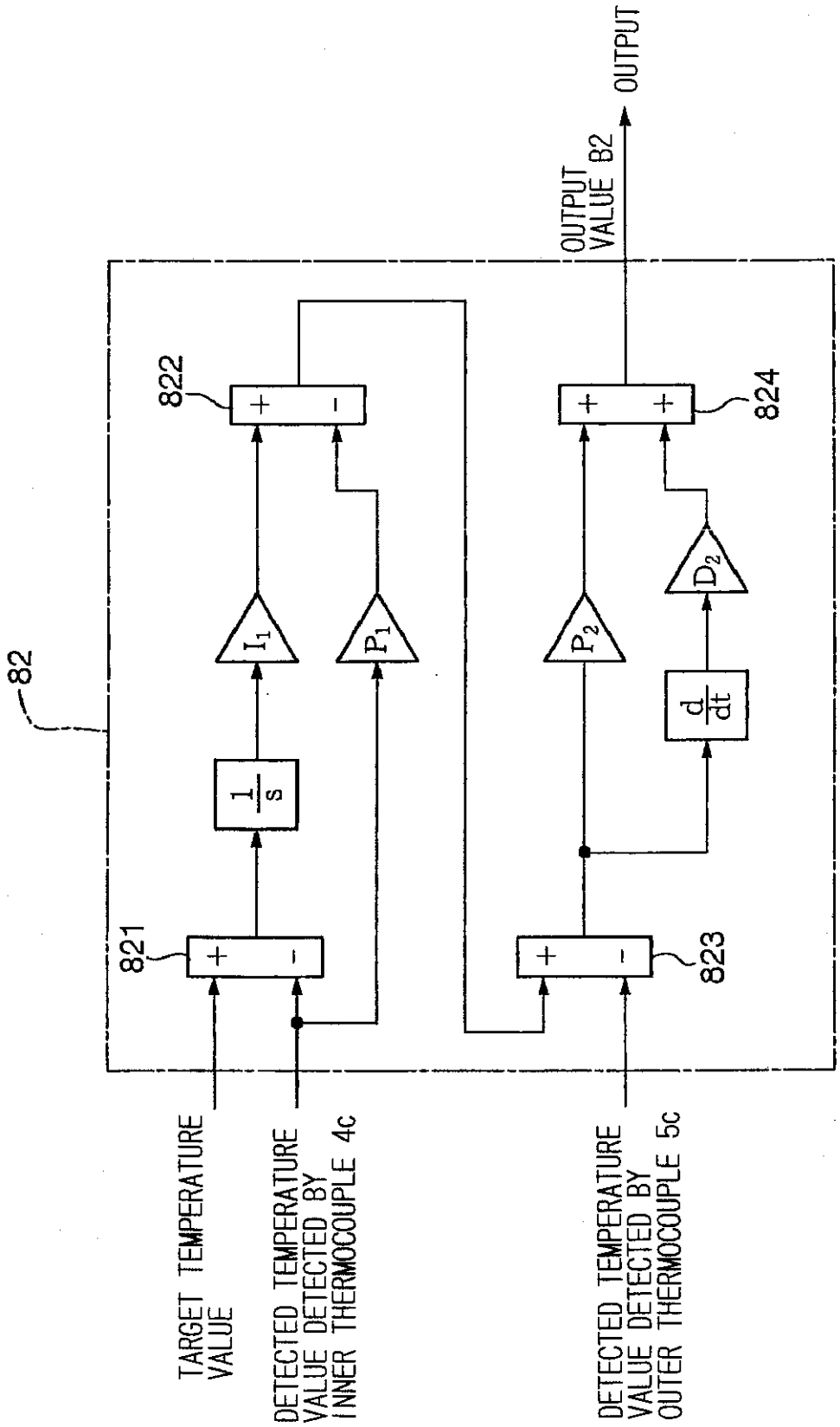

82
821
822
823
824
+
-
1/s
I_1
P_1
P_2
D_2
d/dt
OUTPUT VALUE B2
OUTPUT
TARGET TEMPERATURE VALUE
DETECTED TEMPERATURE VALUE DETECTED BY INNER THERMOCOUPLE 4c
DETECTED TEMPERATURE VALUE DETECTED BY OUTER THERMOCOUPLE 5c

FIG. 4

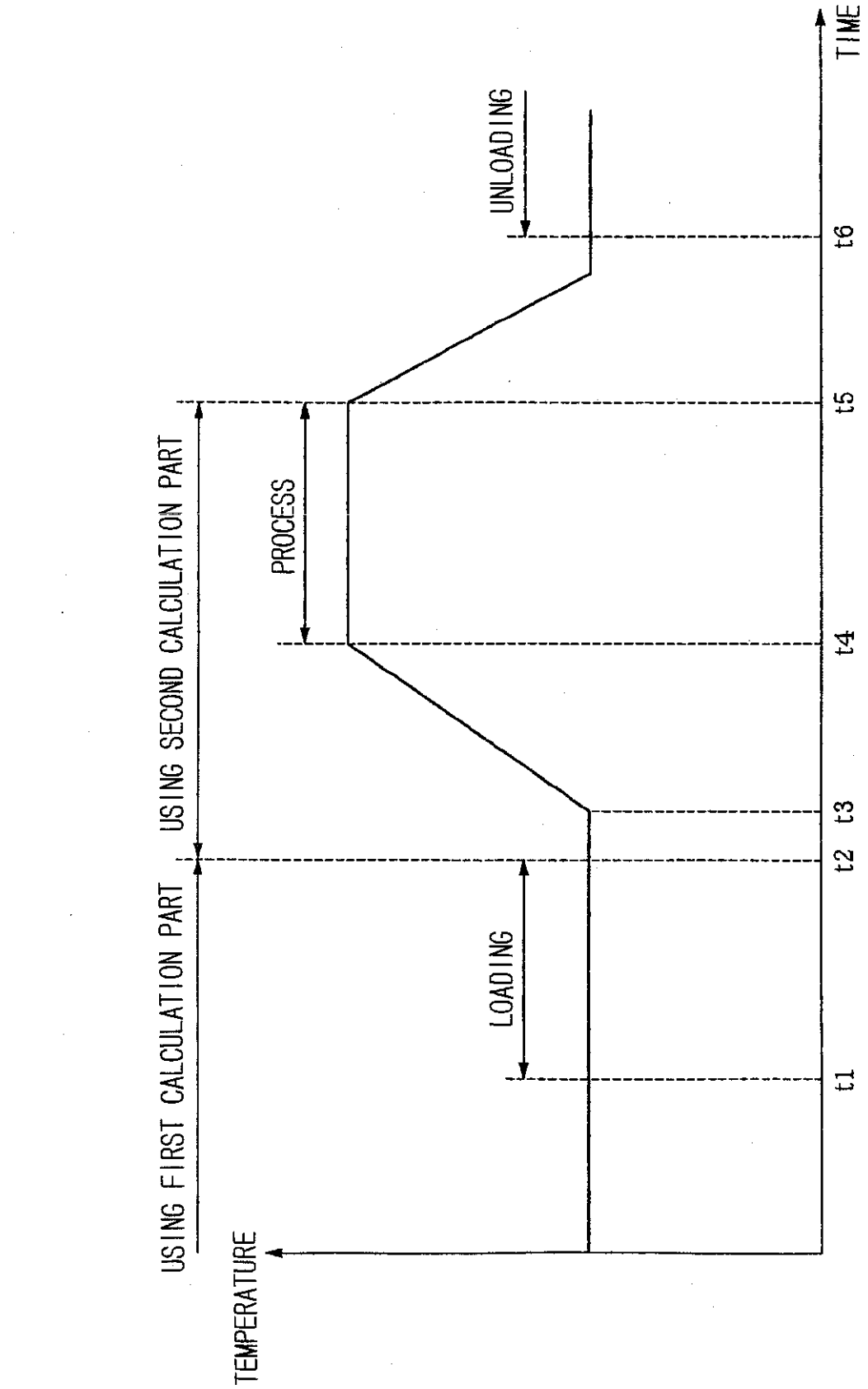

TEMPERATURE
TIME
USING FIRST CALCULATION PART
USING SECOND CALCULATION PART
LOADING
PROCESS
UNLOADING
t1
t2
t3
t4
t5
t6

FIG. 5

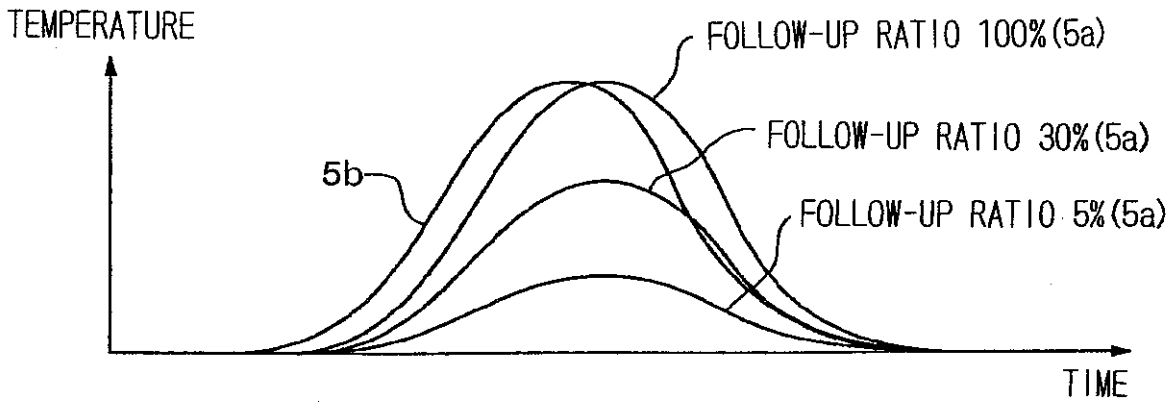

TEMPERATURE
FOLLOW-UP RATIO 100%(5a)
FOLLOW-UP RATIO 30%(5a)
FOLLOW-UP RATIO 5%(5a)
5b
TIME

FIG. 6

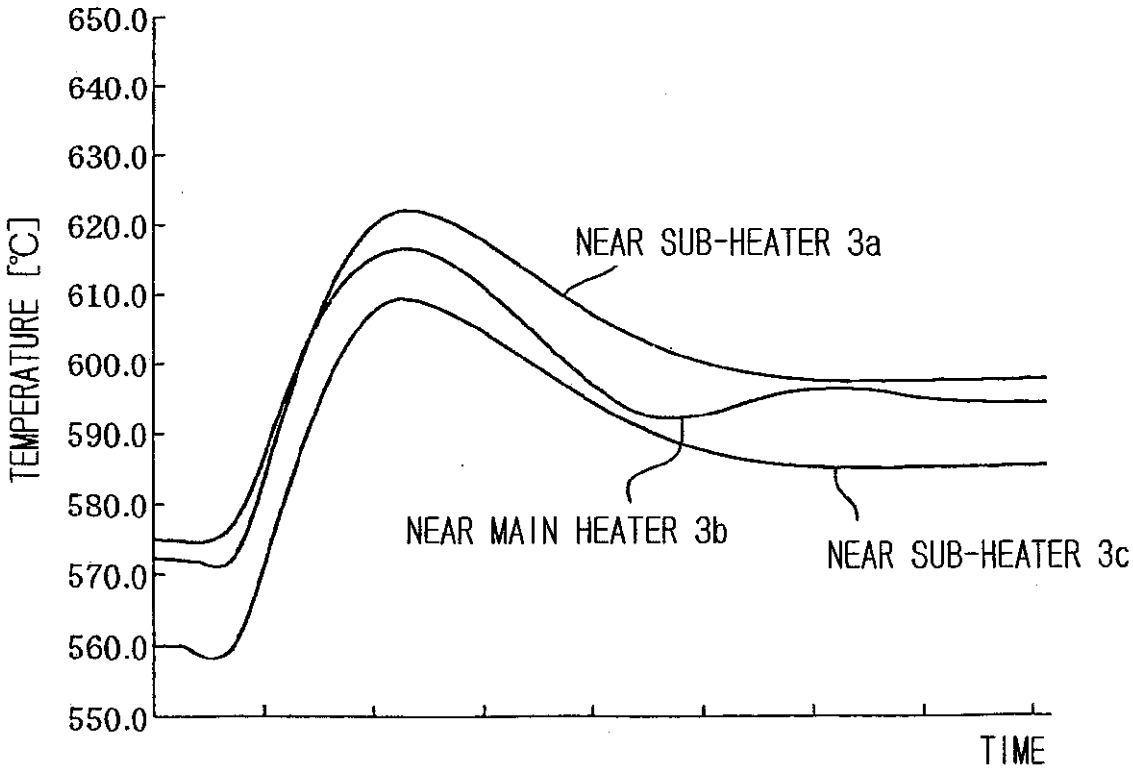

650.0
640.0
630.0
620.0
610.0
600.0
590.0
580.0
570.0
560.0
550.0
TEMPERATURE [°C]
NEAR SUB-HEATER 3a
NEAR MAIN HEATER 3b
NEAR SUB-HEATER 3c
TIME

FIG. 7

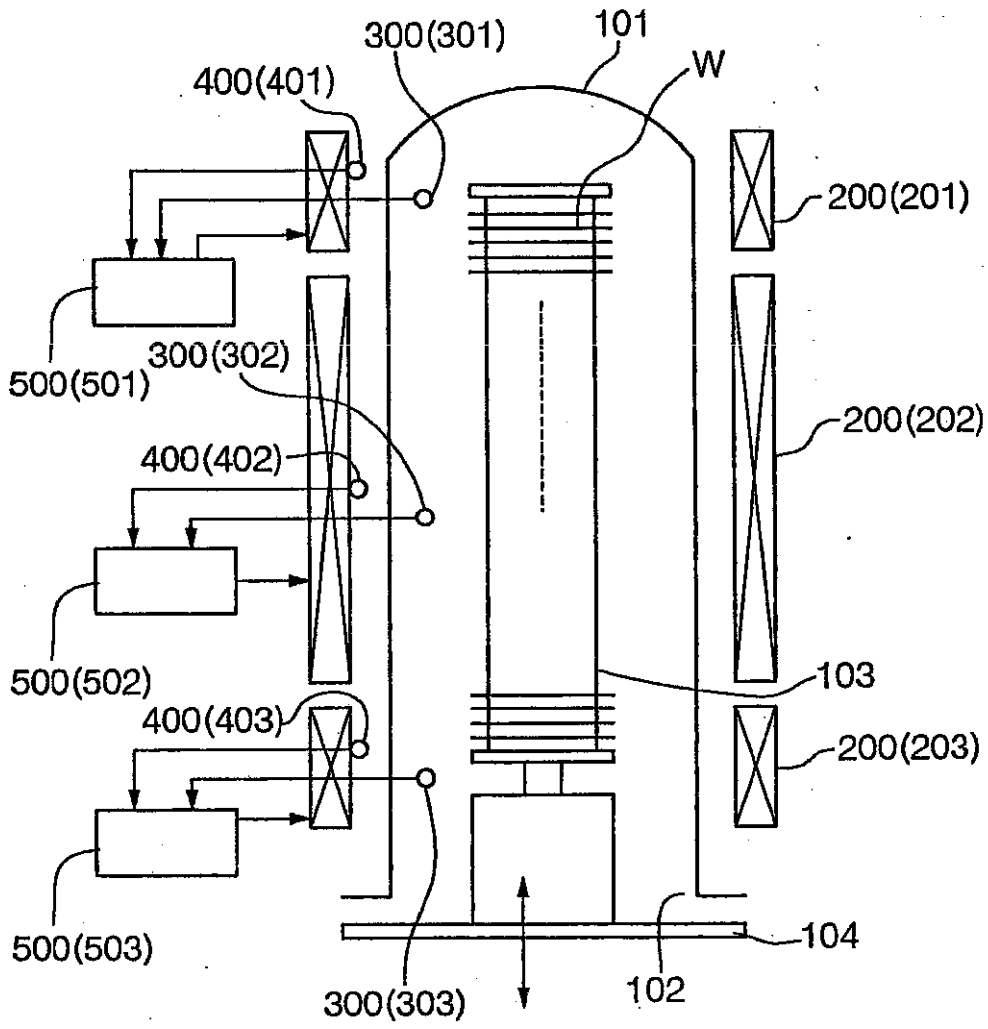

300(301)
101
W
400(401)
200(201)
500(501)
300(302)
200(202)
400(402)
500(502)
103
400(403)
200(203)
500(503)
104
300(303)
102

FIG. 8