FIG. 1A
(PRIOR ART)

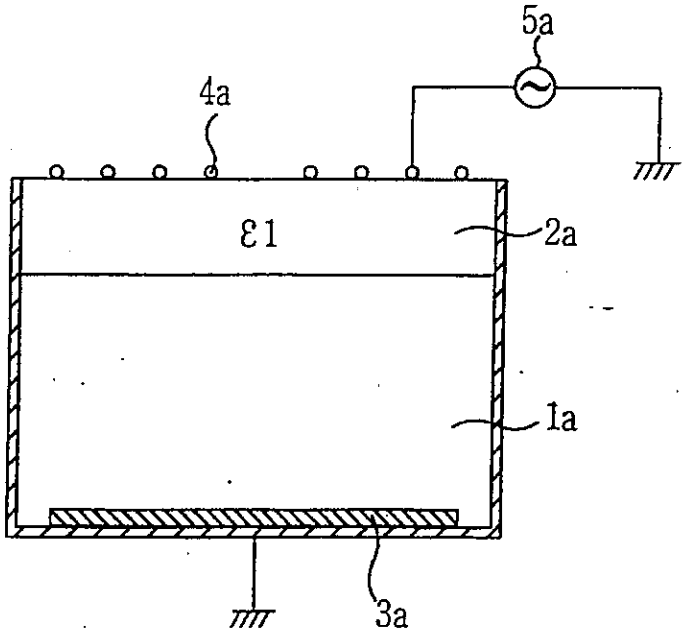


FIG. 1B
(PRIOR ART)

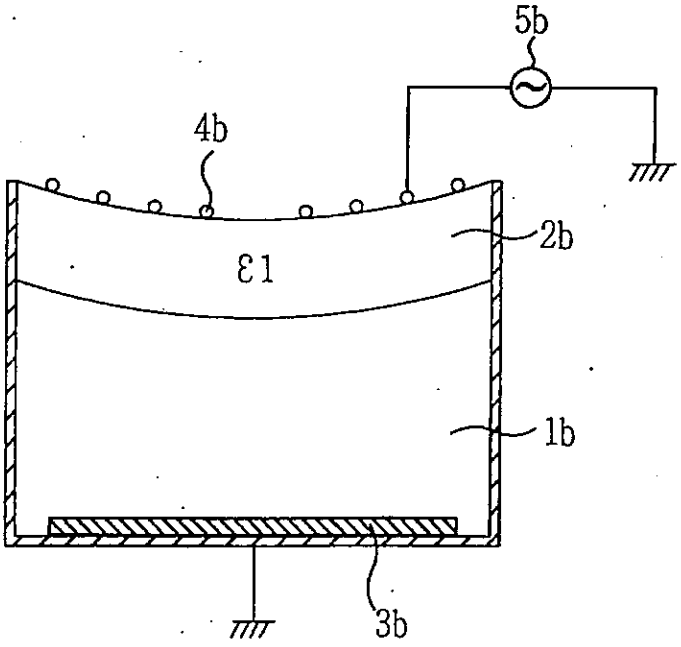


FIG. 2A
(PRIOR ART)

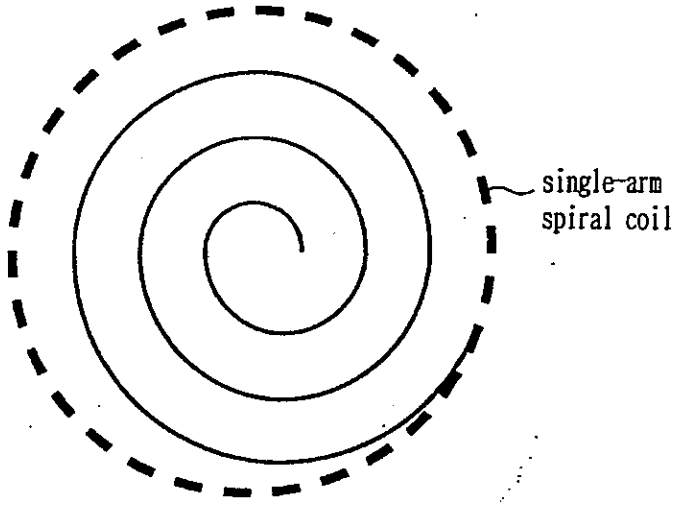


FIG. 2B
(PRIOR ART)

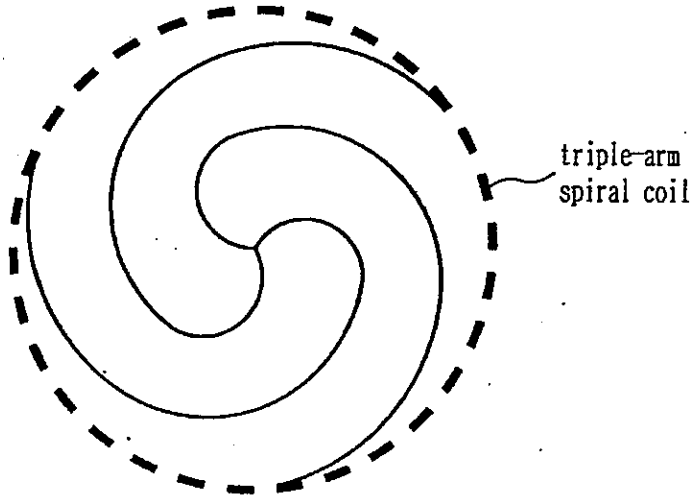


FIG. 3
(PRIOR ART)

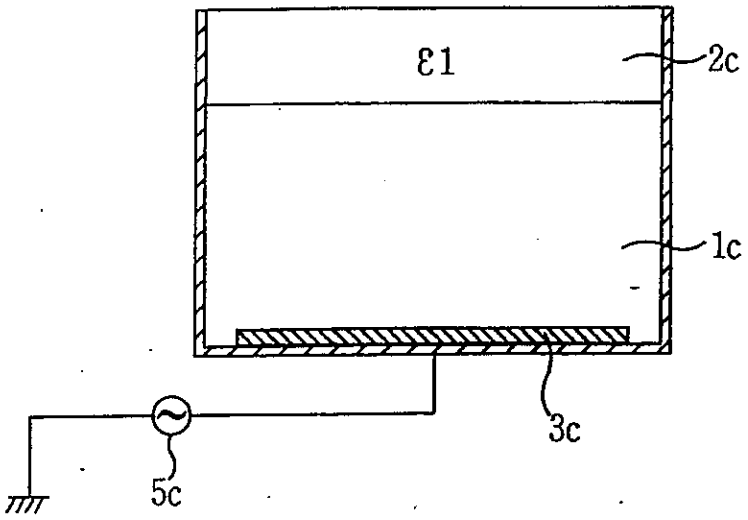


FIG. 4

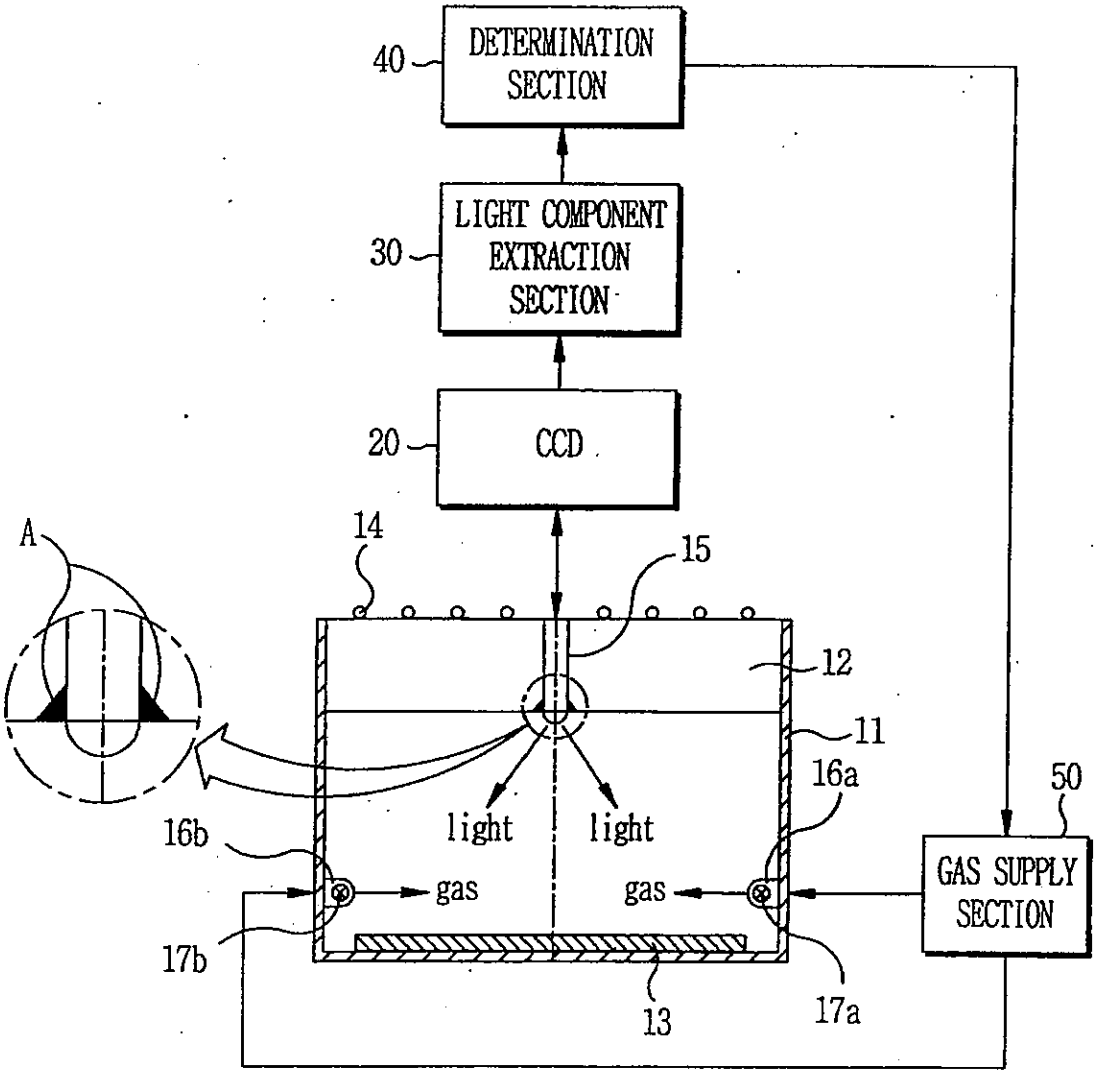

40
DETERMINATION SECTION
30
LIGHT COMPONENT EXTRACTION SECTION
20
CCD
A
14
15
12
11
16a
50
16b
light
light
gas
gas
GAS SUPPLY SECTION
17b
13
17a

FIG. 5A

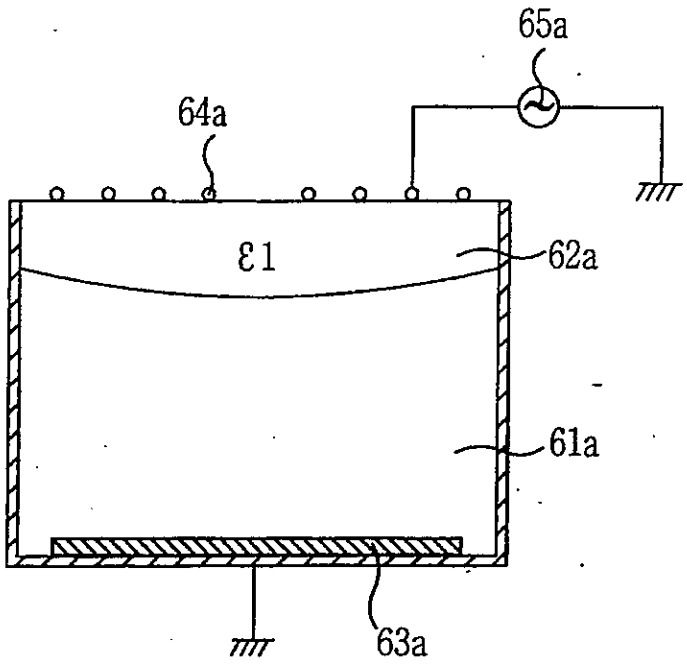


FIG. 5B

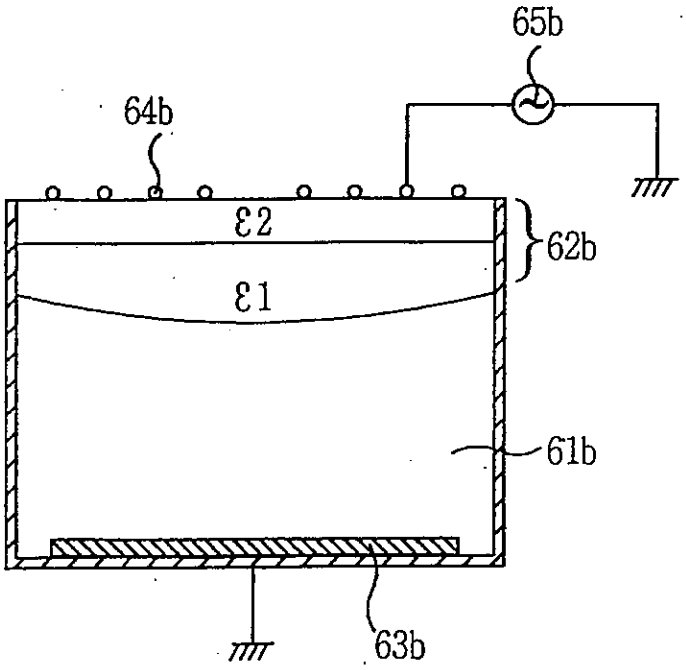


FIG. 6

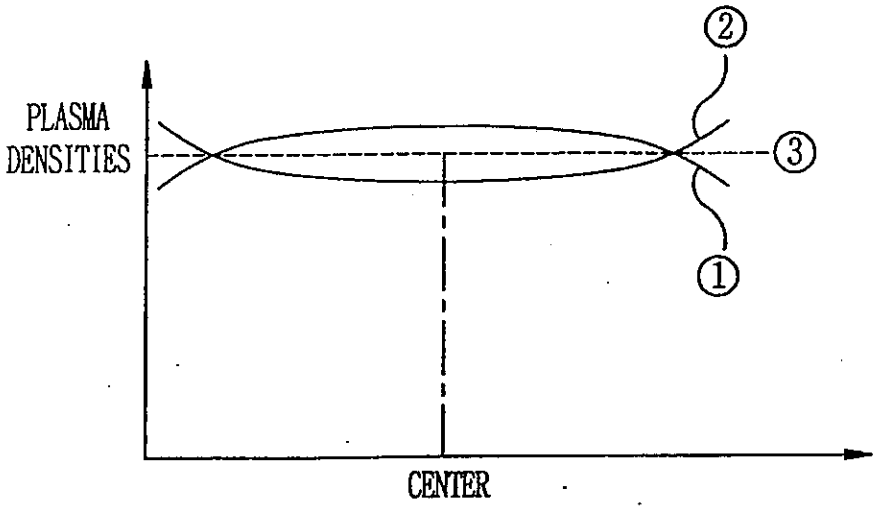


FIG. 7

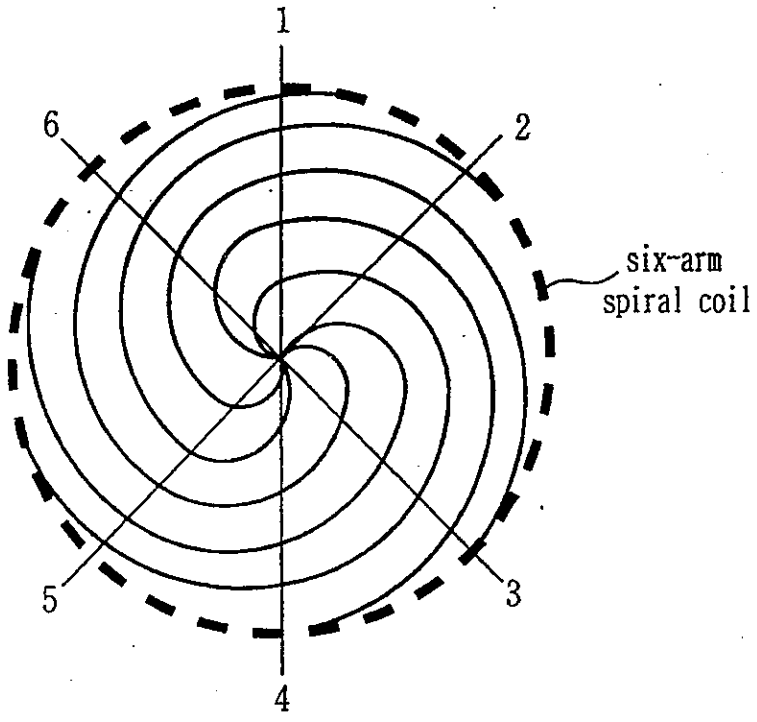


FIG. 8A

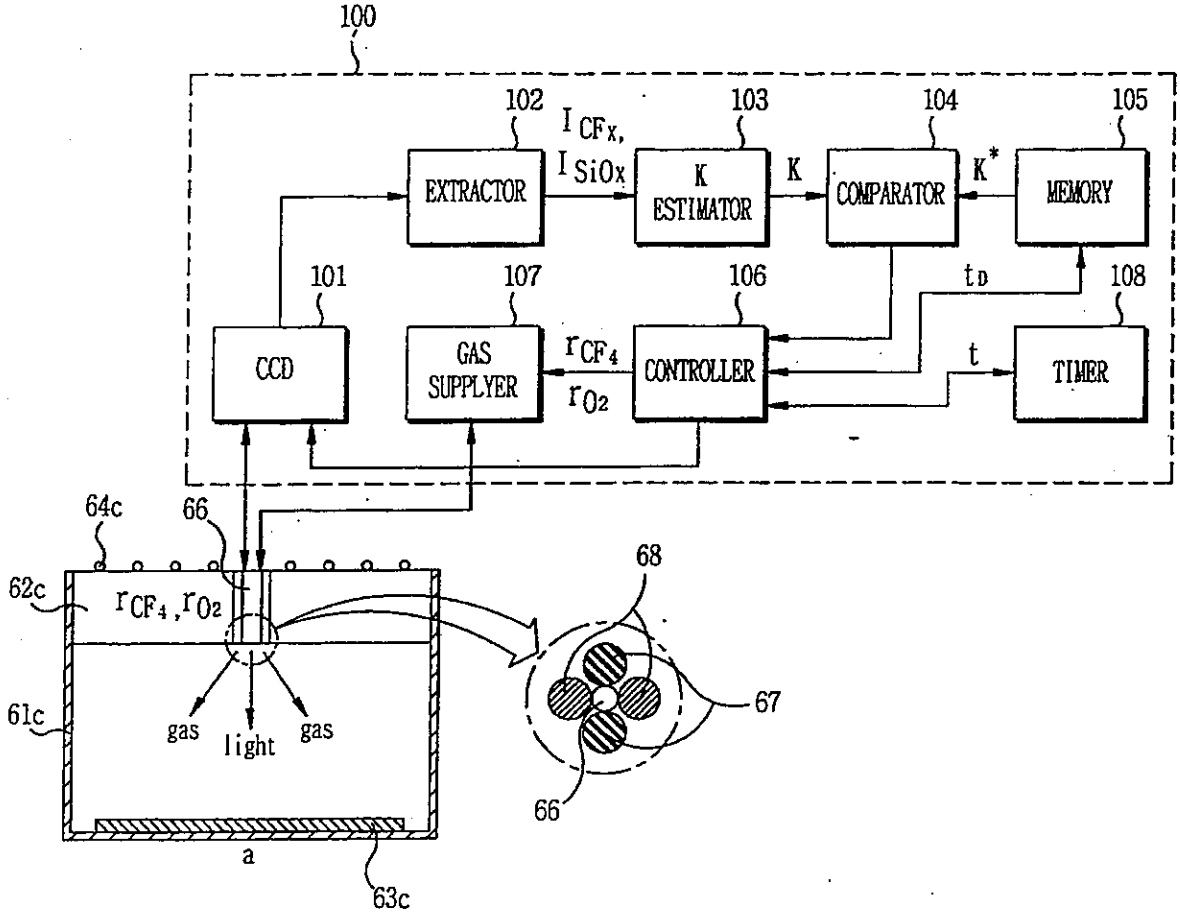

100
102
I_{CFx},
I_{SiOx}
103
104
105
EXTRACTOR
K ESTIMATOR
K
COMPARATOR
K*
MEMORY
101
107
106
t_D
108
CCD
GAS SUPPLYER
r_{CF4}
r_{O2}
CONTROLLER
t
TIMER
64c
66
62c
r_{CF4}, r_{O2}
68
67
61c
gas
light
gas
66
a
63c

FIG. 8B

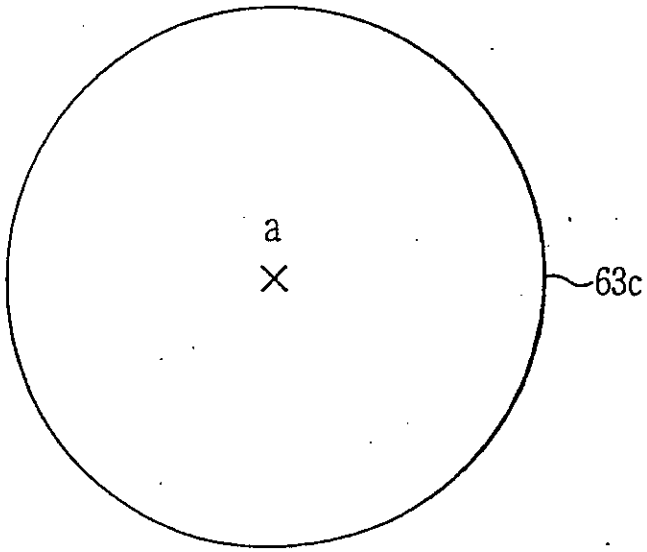

a
63c

FIG. 9

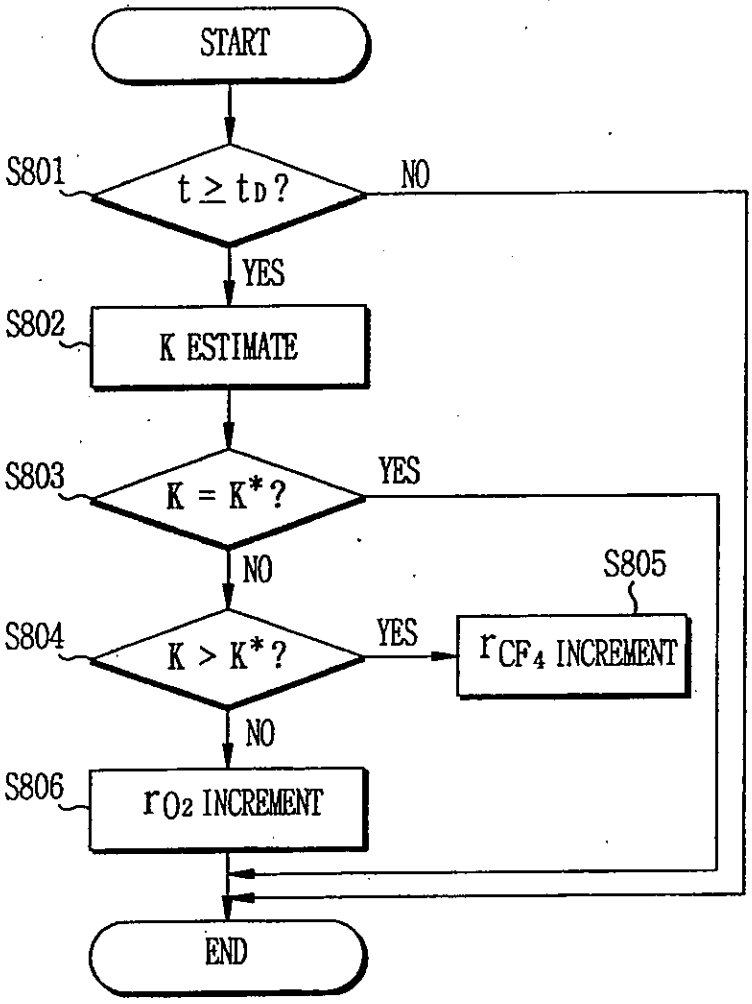

START
S801
t ≥ tD?
NO
YES
S802
K ESTIMATE
S803
K = K*?
YES
NO
S805
S804
K > K*?
YES
rCF4 INCREMENT
NO
S806
rO2 INCREMENT
END

FIG. 10A

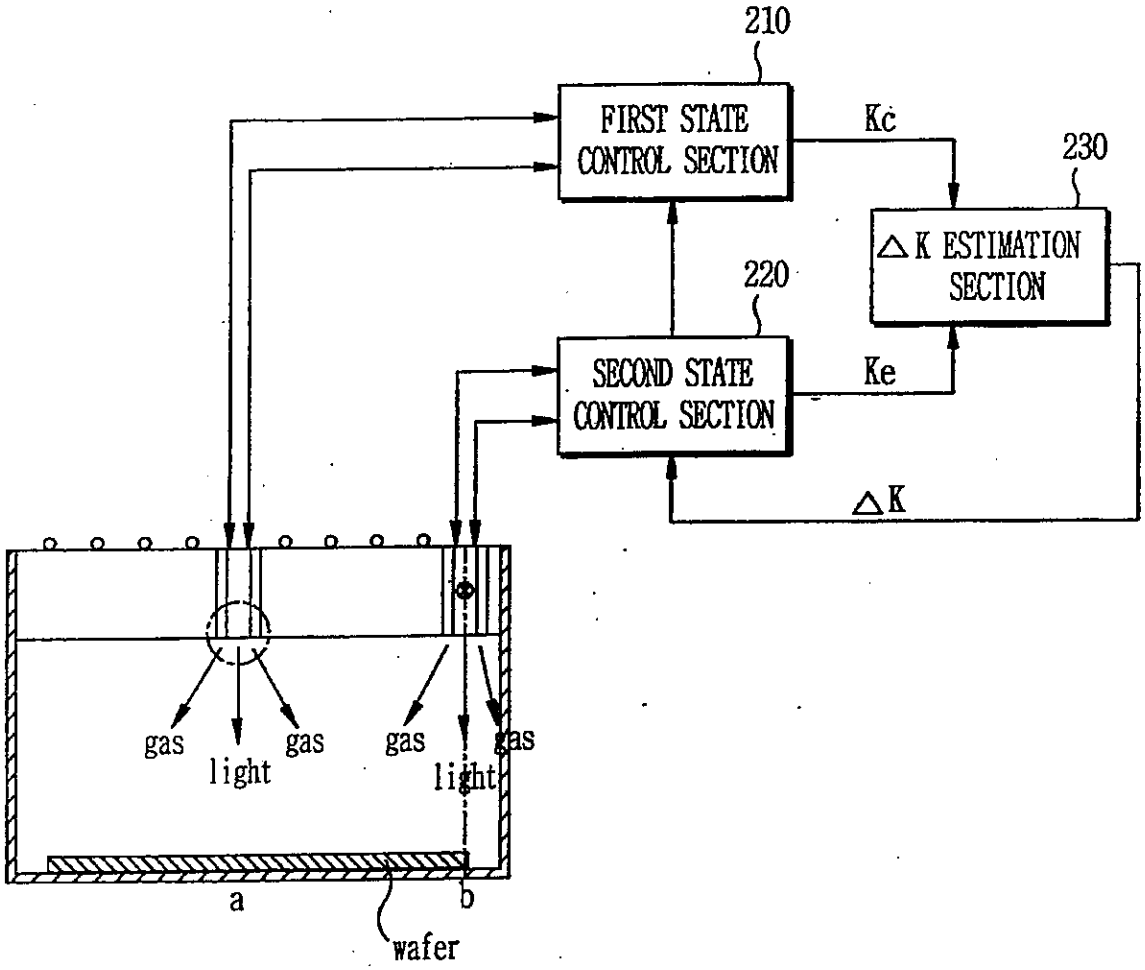


FIG. 10B

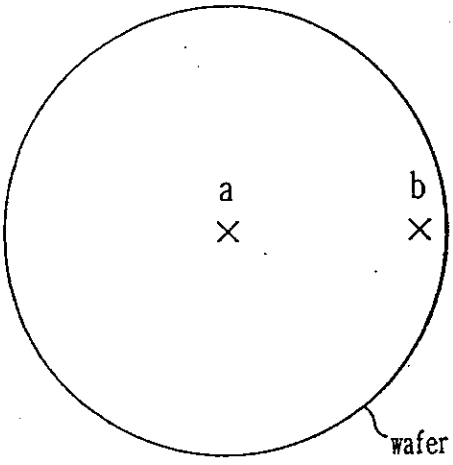


FIG. 10C

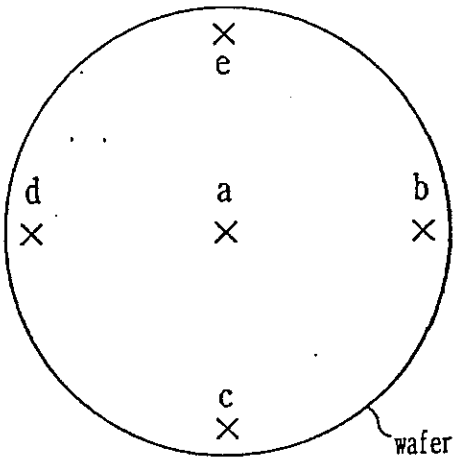


FIG. 11

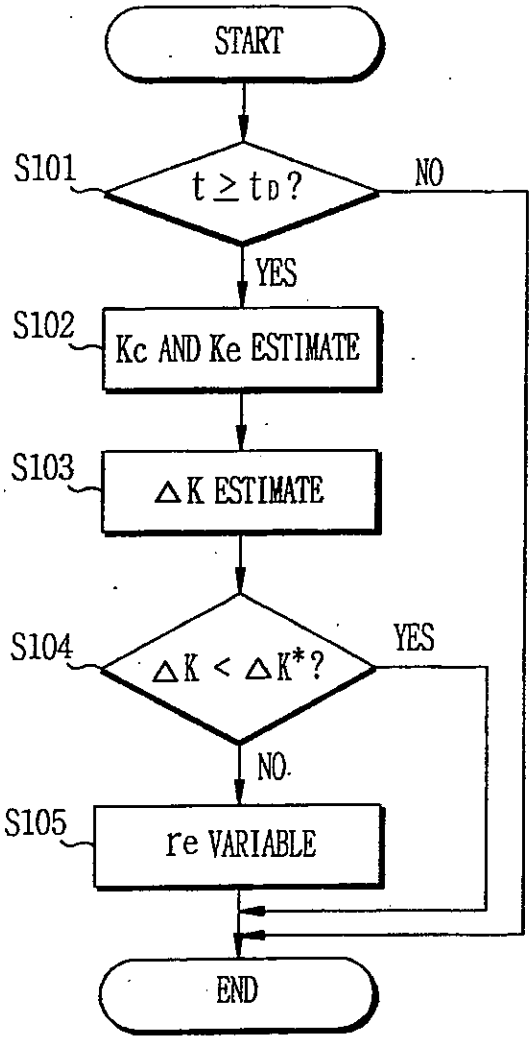

START
S101
t ≥ tD?
NO
YES
S102
Kc AND Ke ESTIMATE
S103
△K ESTIMATE
S104
△K < △K*?
YES
NO
S105
re VARIABLE
END

FIG. 12

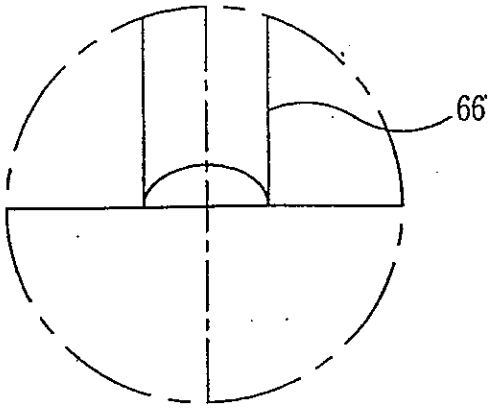

66

FIG. 13

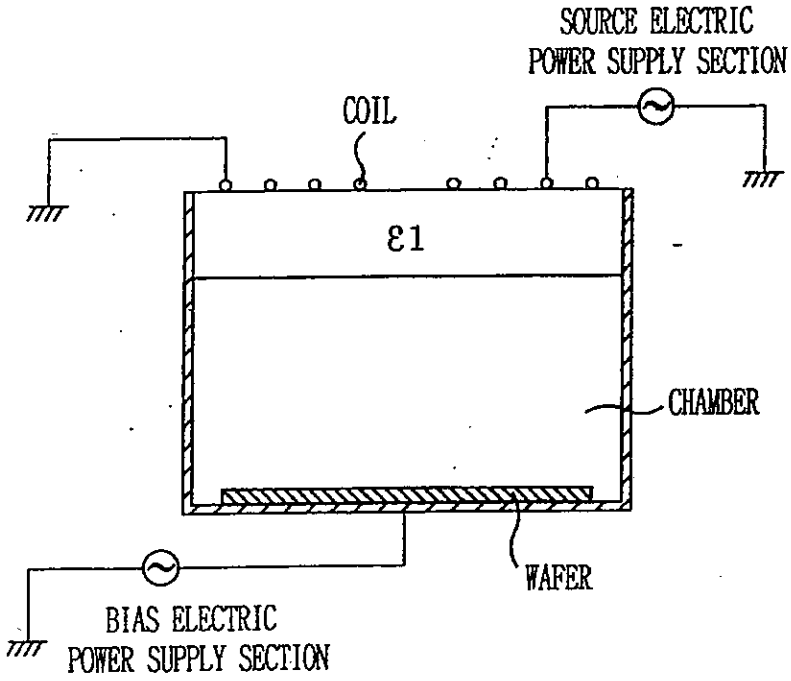

SOURCE ELECTRIC
POWER SUPPLY SECTION
COIL
ε1
CHAMBER
WAFER
BIAS ELECTRIC
POWER SUPPLY SECTION

FIG. 14

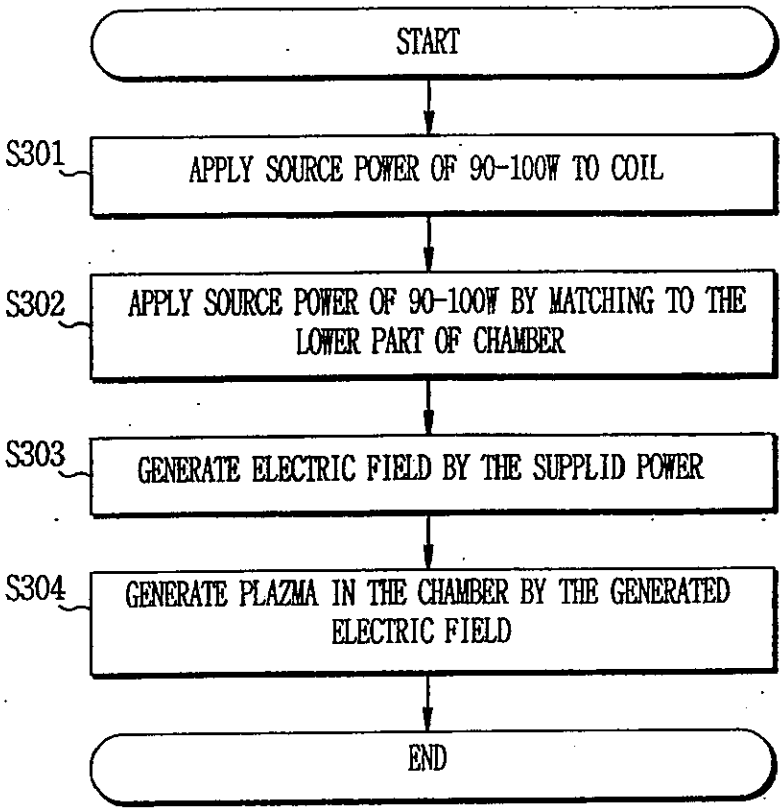

START
S301
APPLY SOURCE POWER OF 90-100W TO COIL
S302
APPLY SOURCE POWER OF 90-100W BY MATCHING TO THE LOWER PART OF CHAMBER
S303
GENERATE ELECTRIC FIELD BY THE SUPPLID POWER
S304
GENERATE PLAZMA IN THE CHAMBER BY THE GENERATED ELECTRIC FIELD
END

FIG. 15A

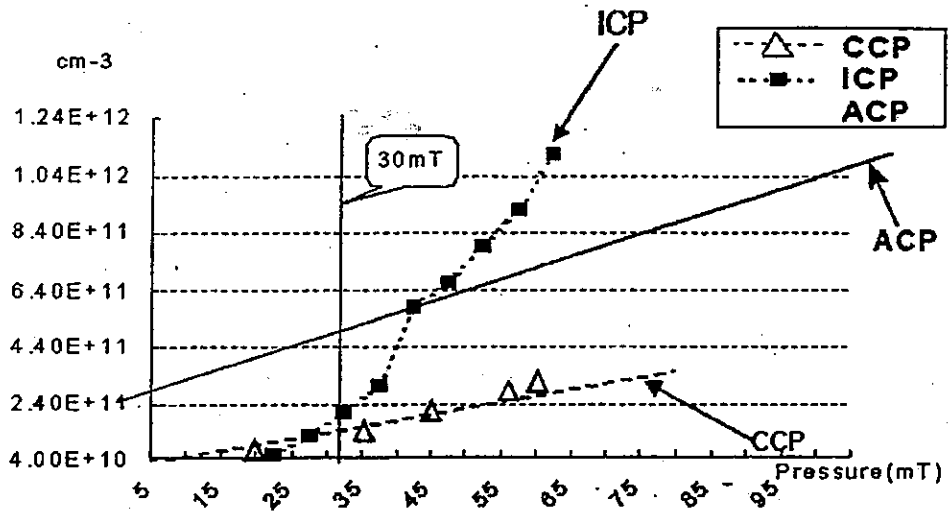


FIG. 15B

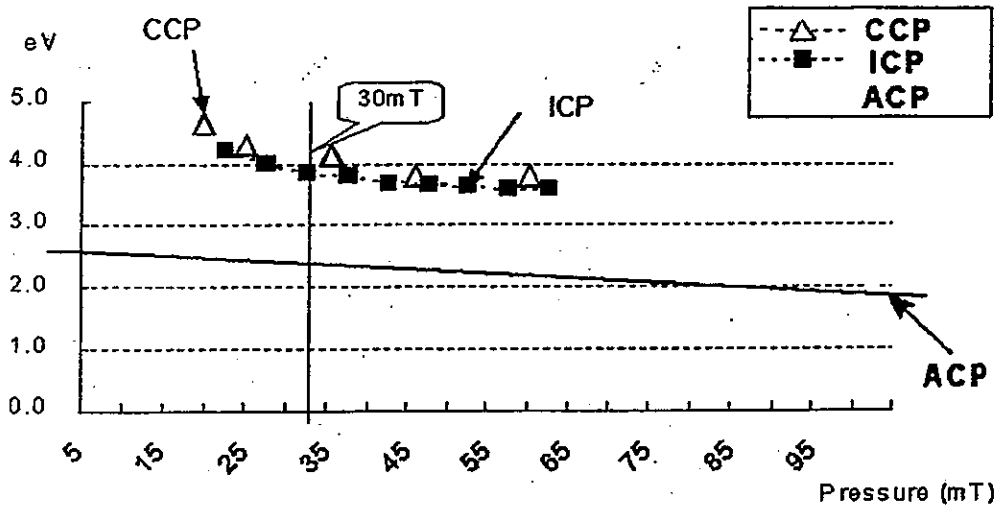


FIG. 15C

