FIG. 1

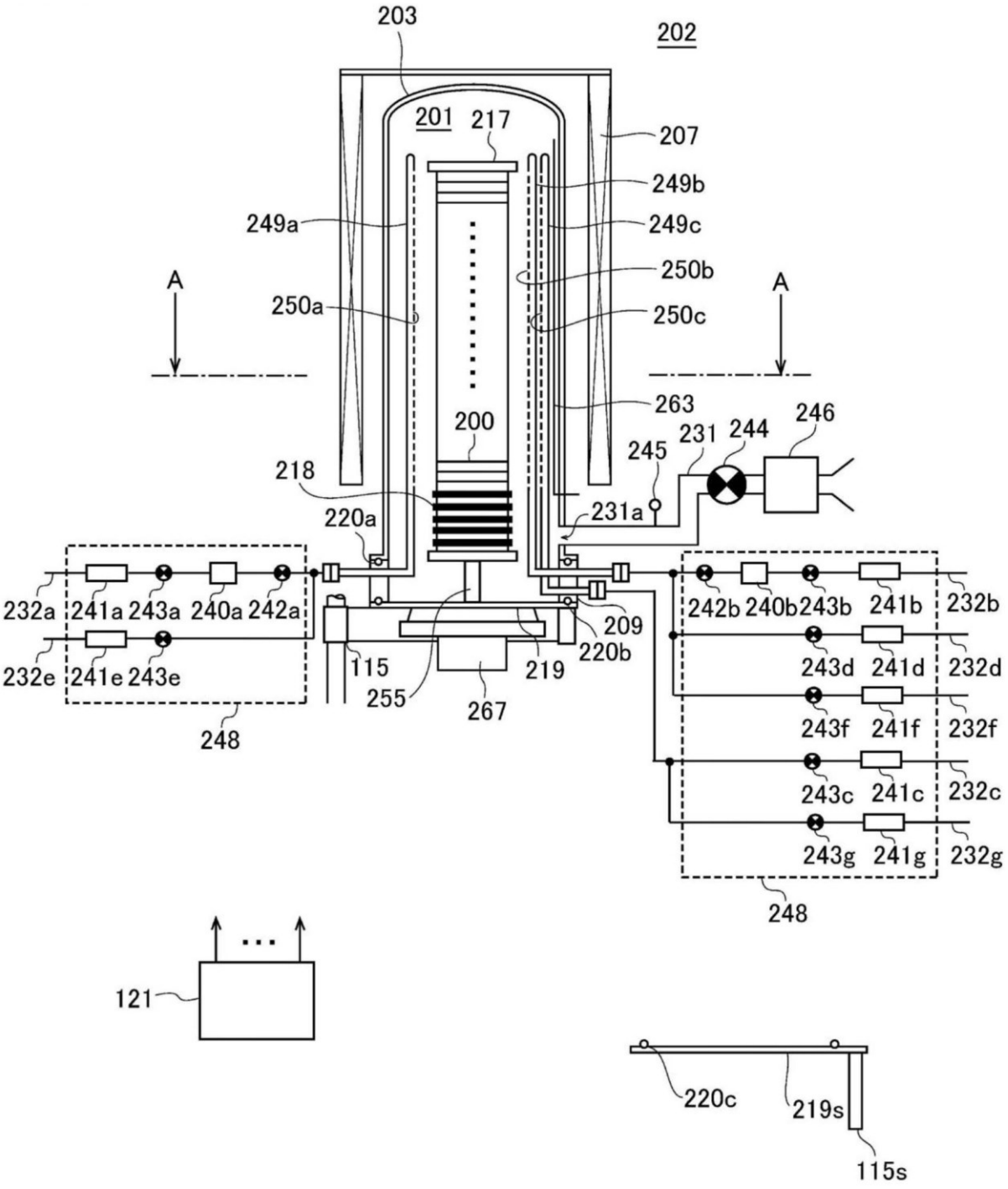

203
202
201
217
207
249b
249a
249c
250b
250a
250c
A
A
263
200
246
231
244
245
218
231a
220a
232a
241a
243a
240a
242a
232e
241e
243e
248
115
255
267
219
209
220b
242b
240b
243b
241b
232b
243d
241d
232d
243f
241f
232f
243c
241c
232c
243g
241g
232g
248
121
220c
219s
115s

FIG. 2

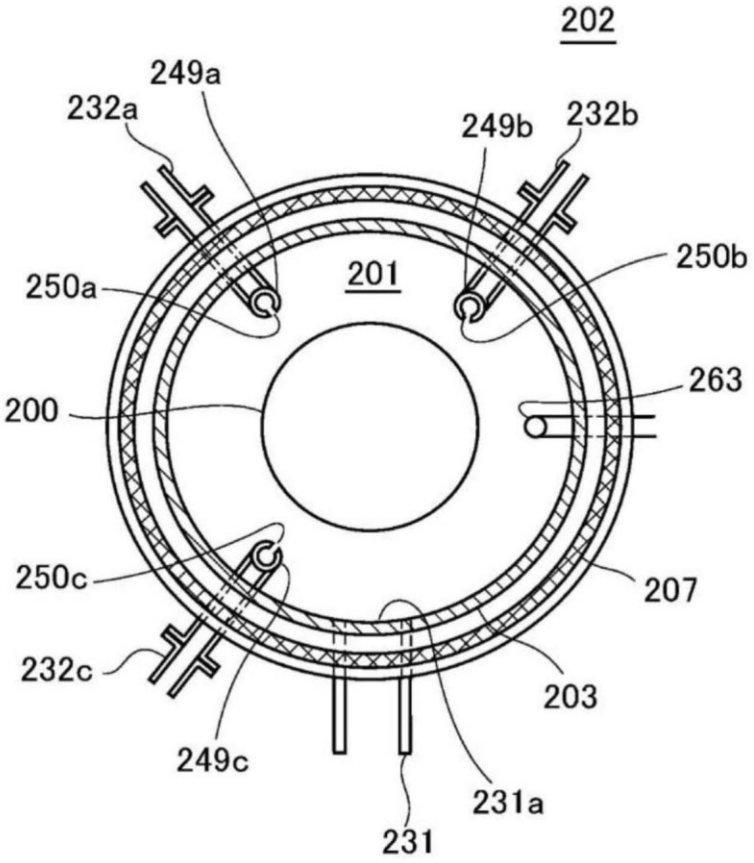

202
249a
232a
249b
232b
250b
201
250a
263
200
250c
207
232c
203
249c
231a
231

FIG. 3

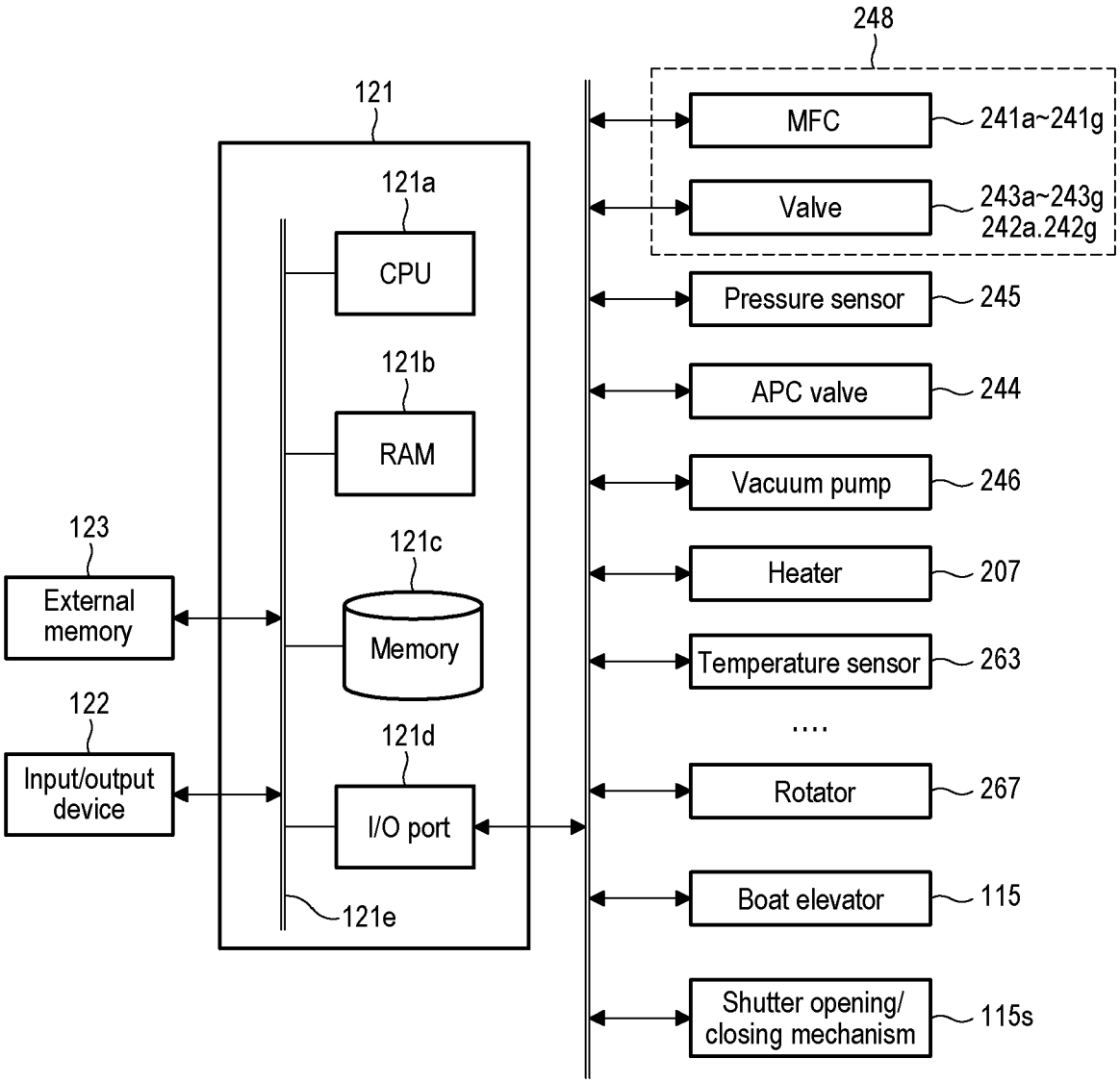

248
121
121a
CPU
121b
RAM
121c
Memory
121d
I/O port
121e
123
External memory
122
Input/output device
MFC
241a~241g
Valve
243a~243g
242a.242g
Pressure sensor
245
APC valve
244
Vacuum pump
246
Heater
207
Temperature sensor
263
....
Rotator
267
Boat elevator
115
Shutter opening/ closing mechanism
115s

FIG. 4

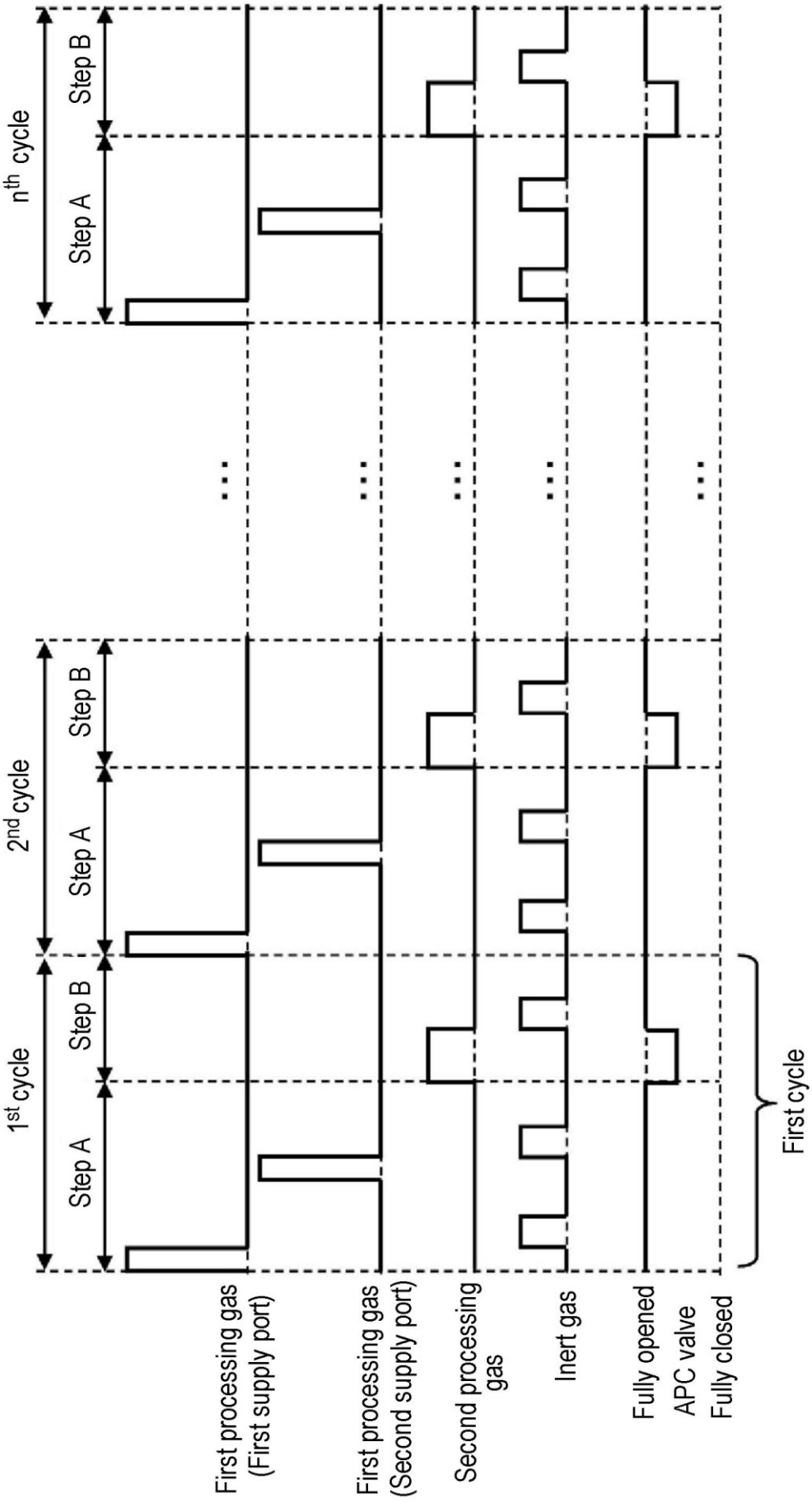

1st cycle
Step A
Step B
2nd cycle
Step A
Step B
nth cycle
Step A
Step B
First cycle
First processing gas (First supply port)
First processing gas (Second supply port)
Second processing gas
Inert gas
Fully opened
APC valve
Fully closed

FIG. 5

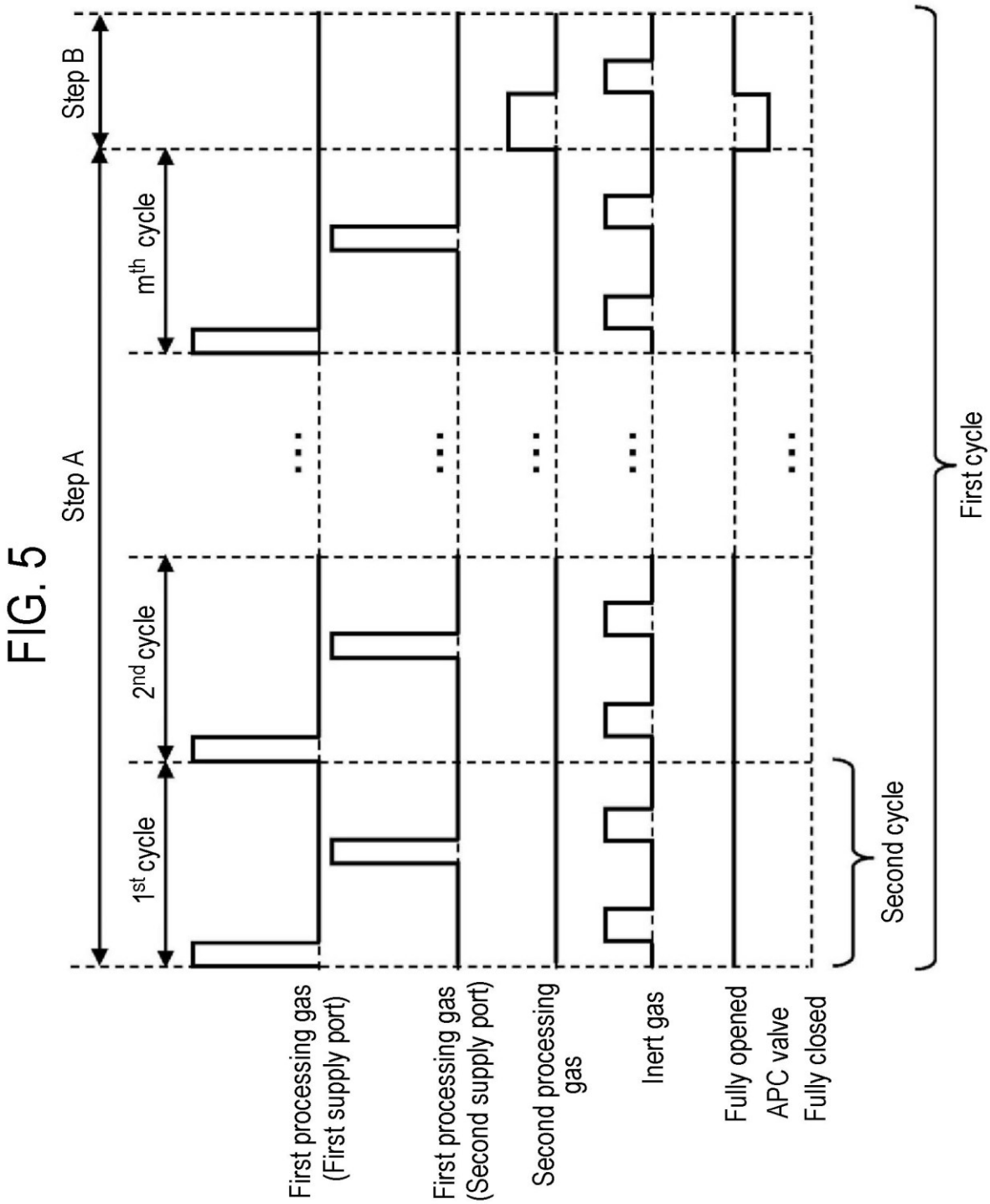

Step B
Step A
m^th cycle
2nd cycle
1st cycle
First processing gas (First supply port)
First processing gas (Second supply port)
Second processing gas
Inert gas
Fully opened
APC valve
Fully closed
Second cycle
First cycle

FIG. 6

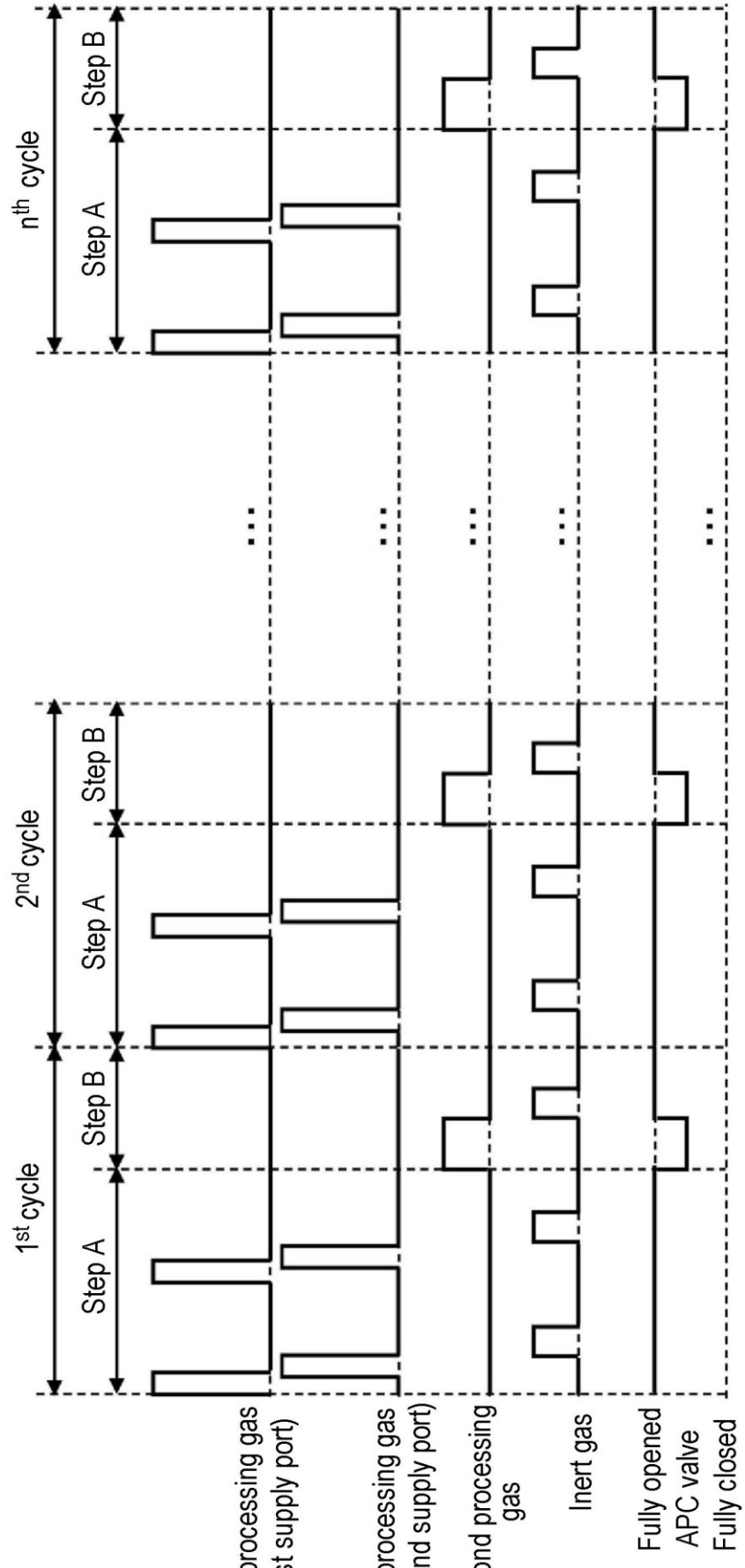
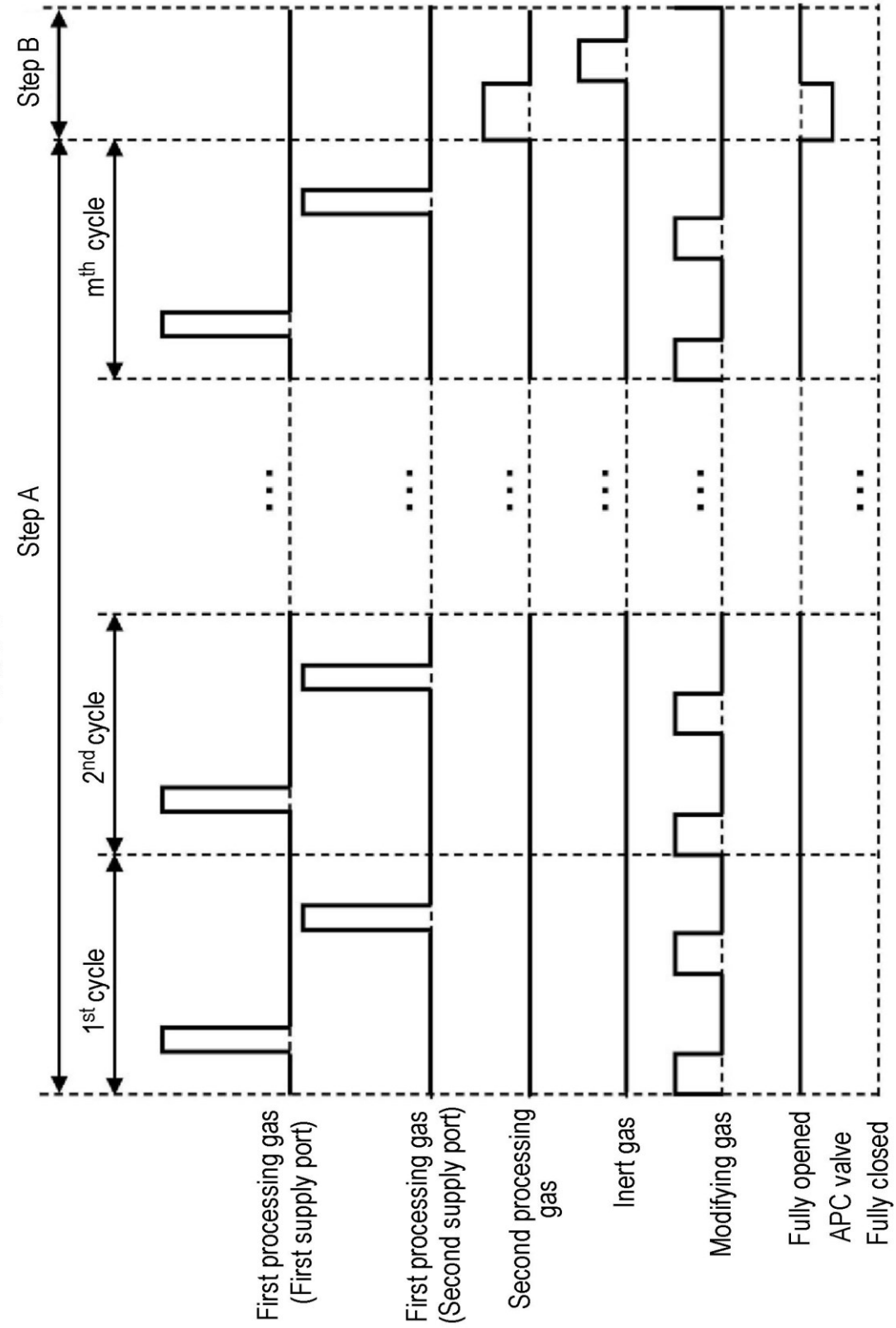

1st cycle
Step A
Step B
2nd cycle
Step A
Step B
nth cycle
Step A
Step B
First processing gas (First supply port)
First processing gas (Second supply port)
Second processing gas
Inert gas
Fully opened APC valve Fully closed

FIG. 7


Step A
Step B
1st cycle
2nd cycle
mth cycle
First processing gas (First supply port)
First processing gas (Second supply port)
Second processing gas
Inert gas
Modifying gas
Fully opened
APC valve
Fully closed