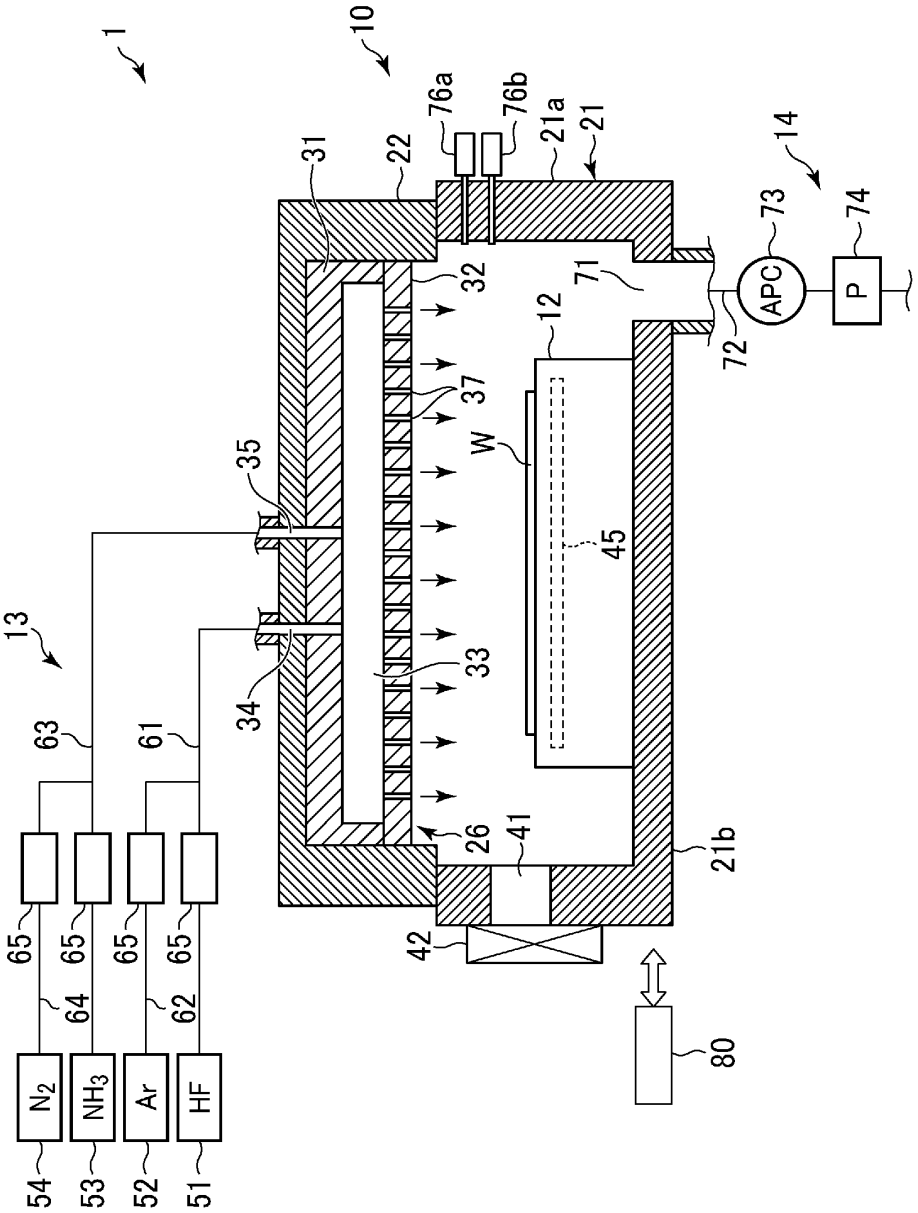
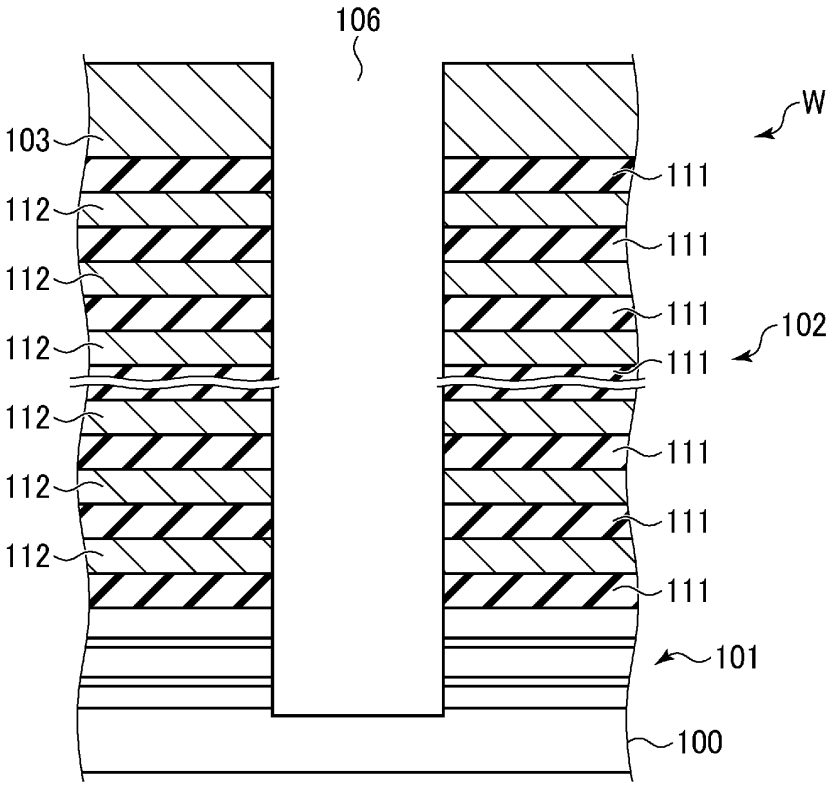
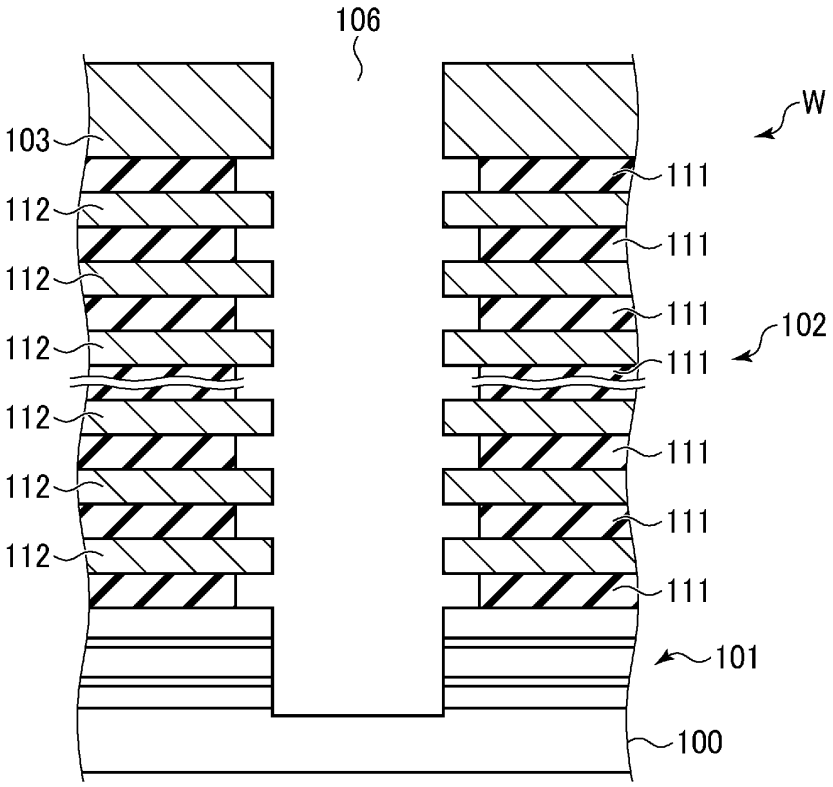
[図1]


1
10
76a
76b
21a
21
31
22
14
73
74
APC
P
71
72
32
12
37
W
35
45
13
33
34
63
61
41
21b
26
42
65
64
62
80
N_2
NH_3
Ar
HF
54
53
52
51

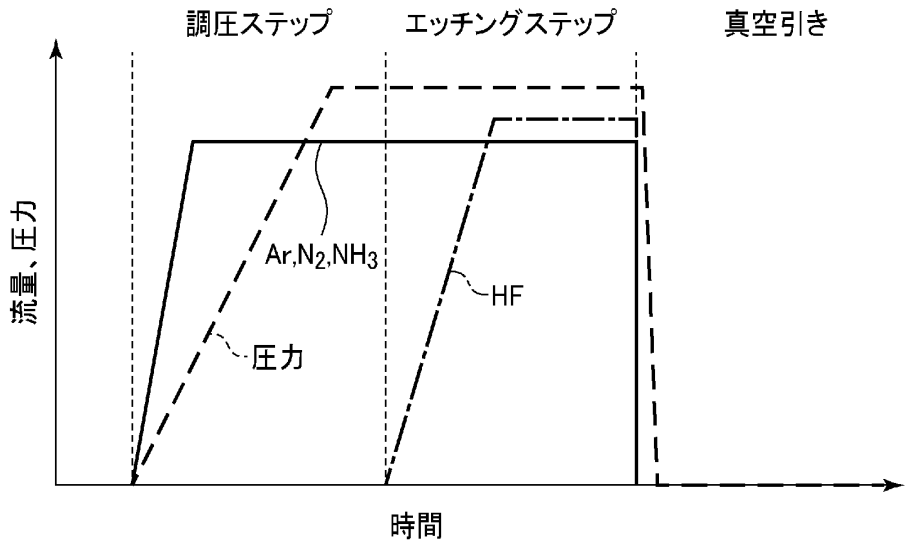
[図2]


106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

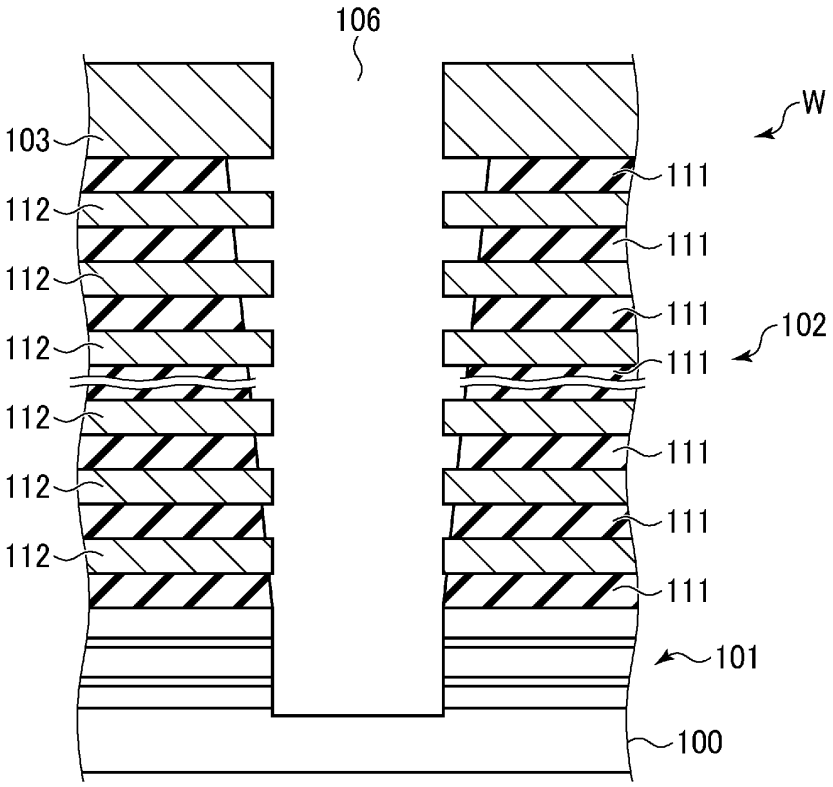
[図3]


106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

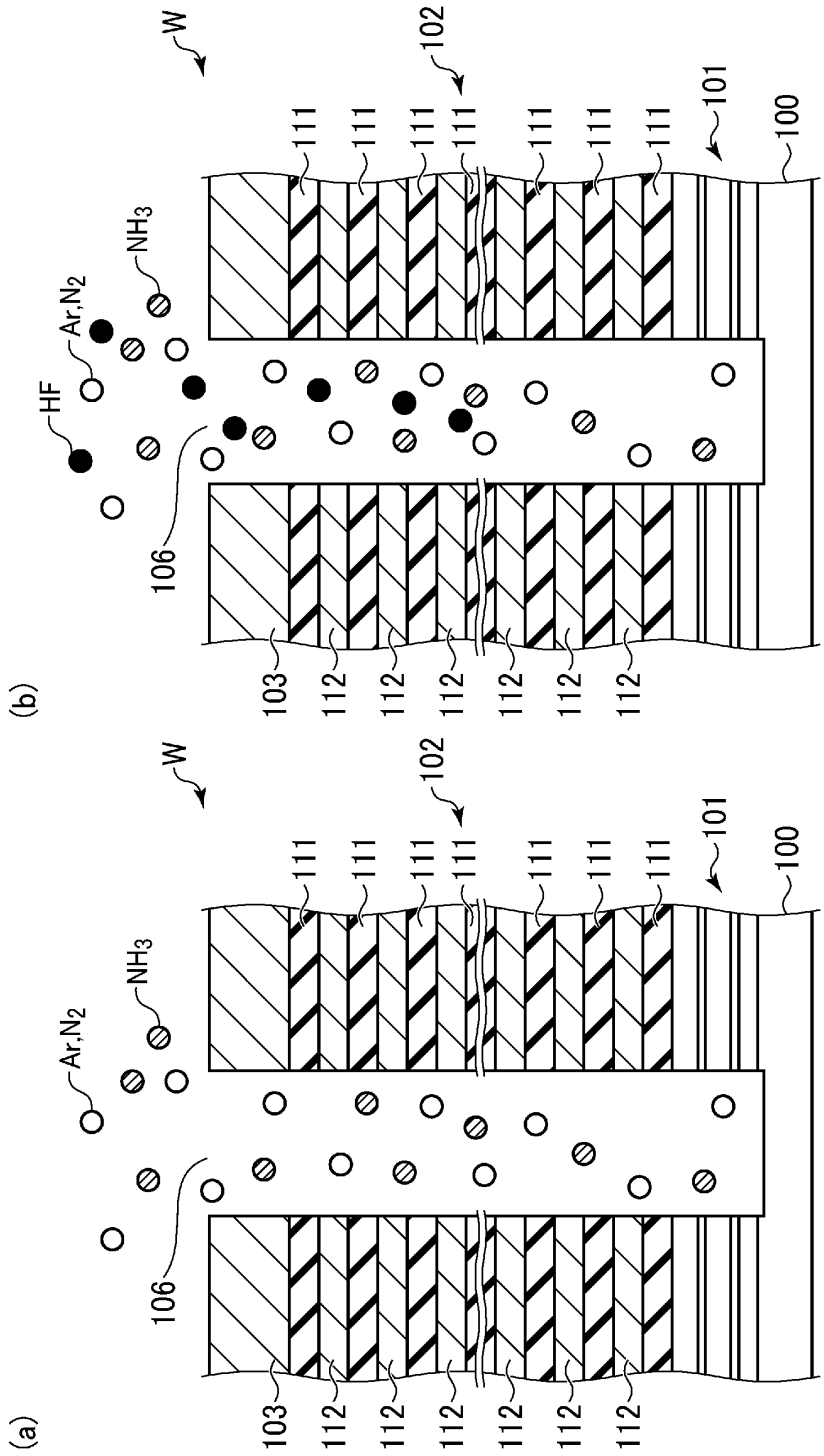
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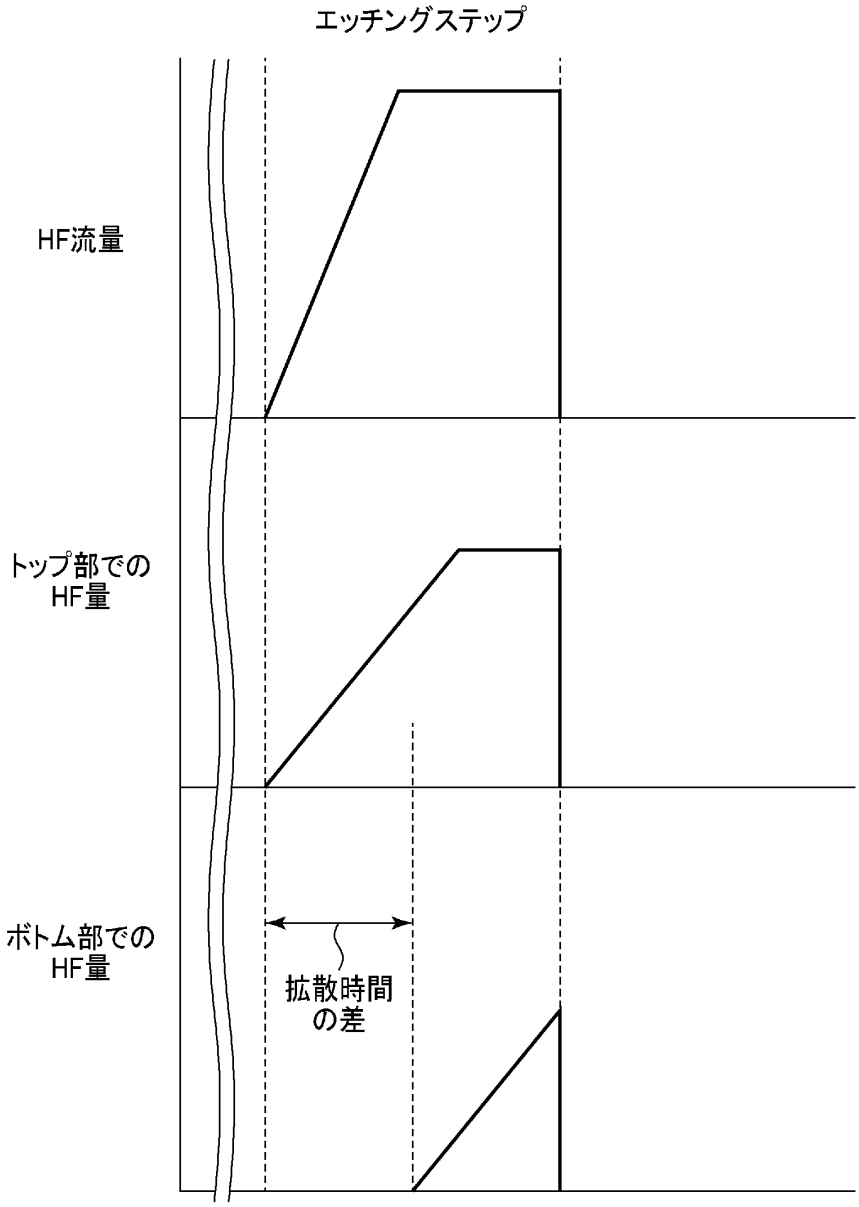
[図5]


106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

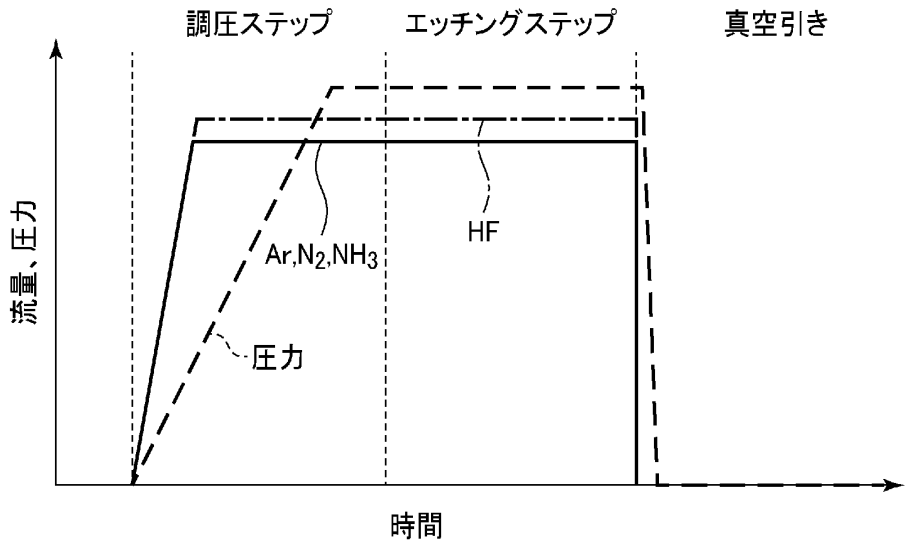
[図6]


(a)
W
102
101
100
111
103
112
106
HF
Ar,N2
NH3
(b)
W
102
101
100
111
103
112
106
HF
Ar,N2
NH3

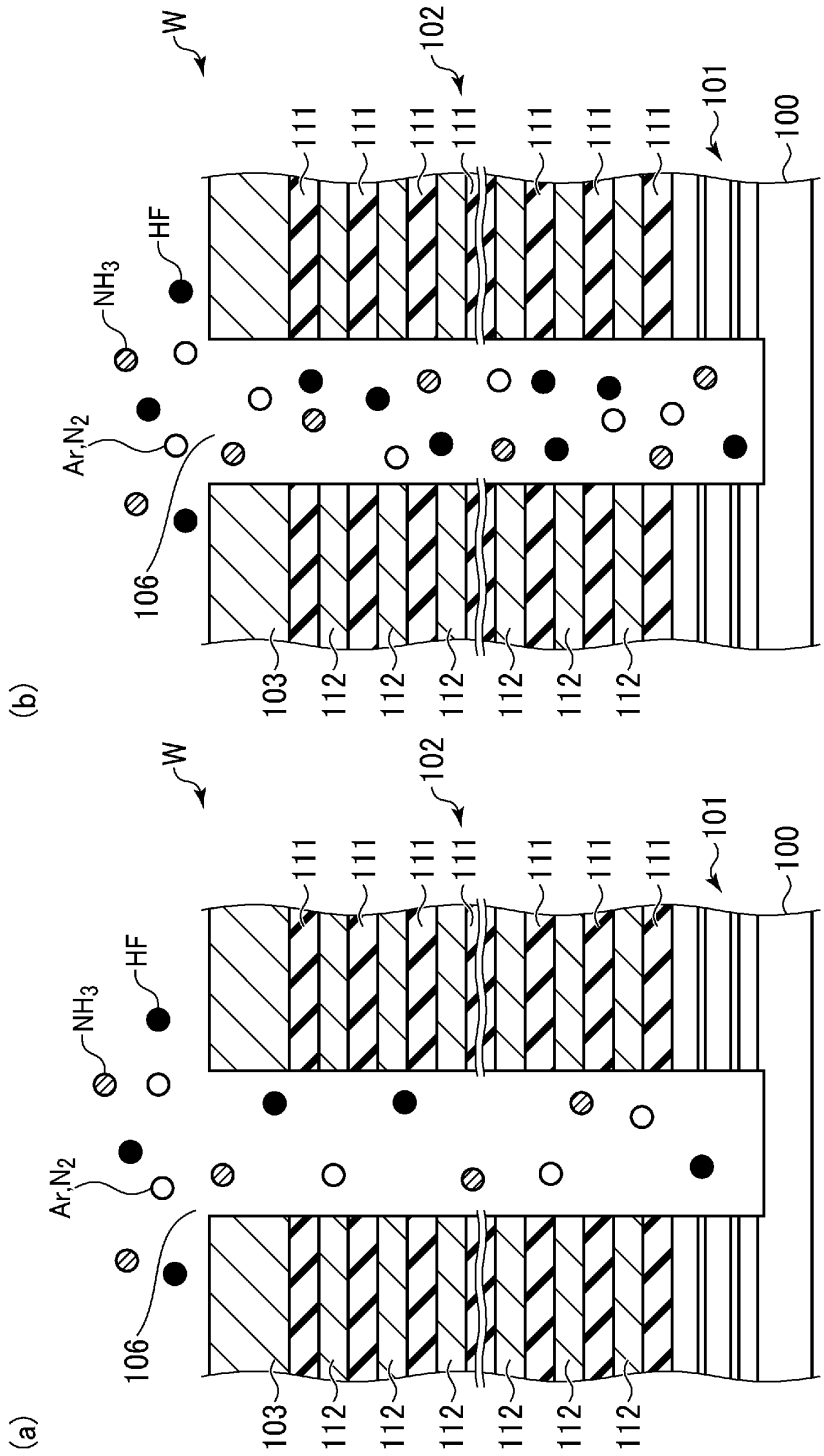
[図7]



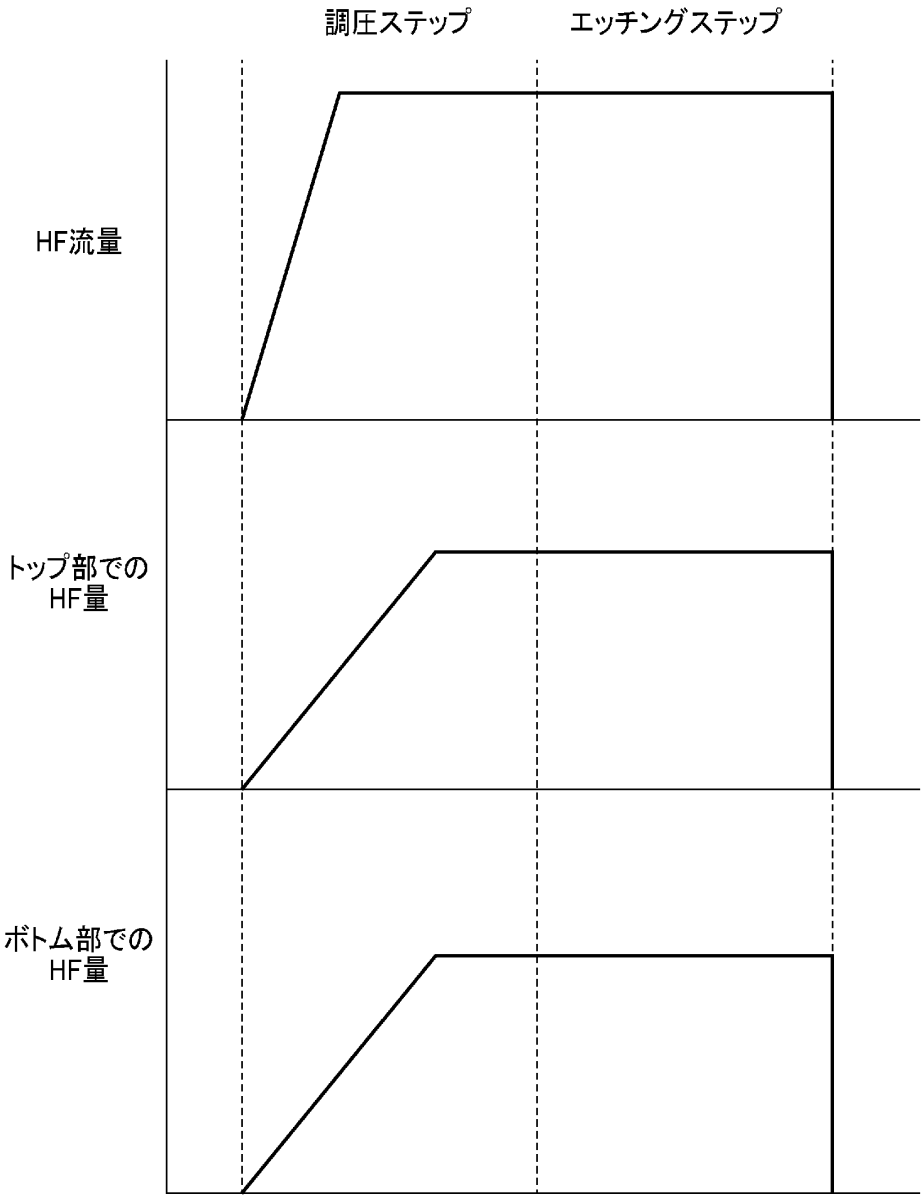
[図8]



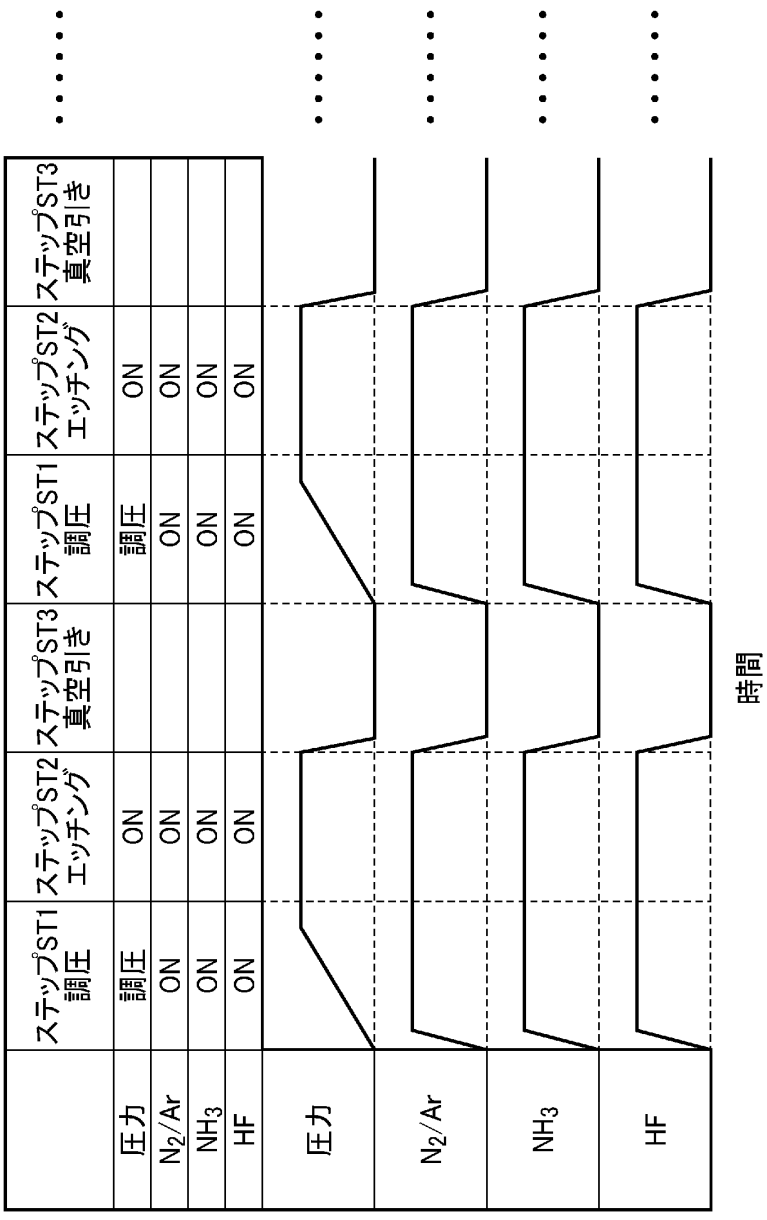
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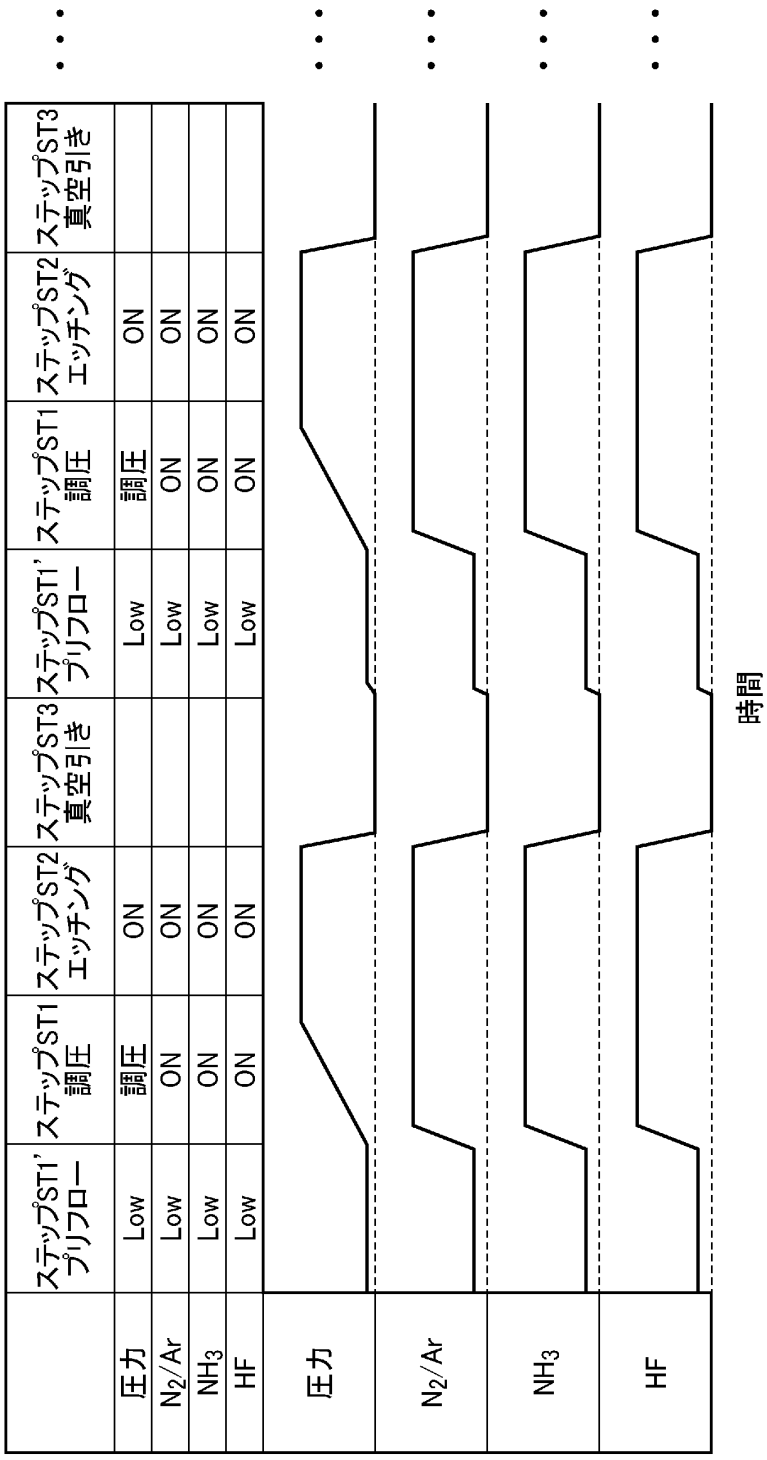
[図10]



[図11]



[図12]


ステップST1'
プリフロー
ステップST1
調圧
ステップST2
エッチング
ステップST3
真空引き
ステップST1'
プリフロー
ステップST1
調圧
ステップST2
エッチング
ステップST3
真空引き
圧力 Low 調圧 ON
N2/Ar Low ON ON
NH3 Low ON ON
HF Low ON ON
圧力
N2/Ar
NH3
HF
時間