FIG. 1

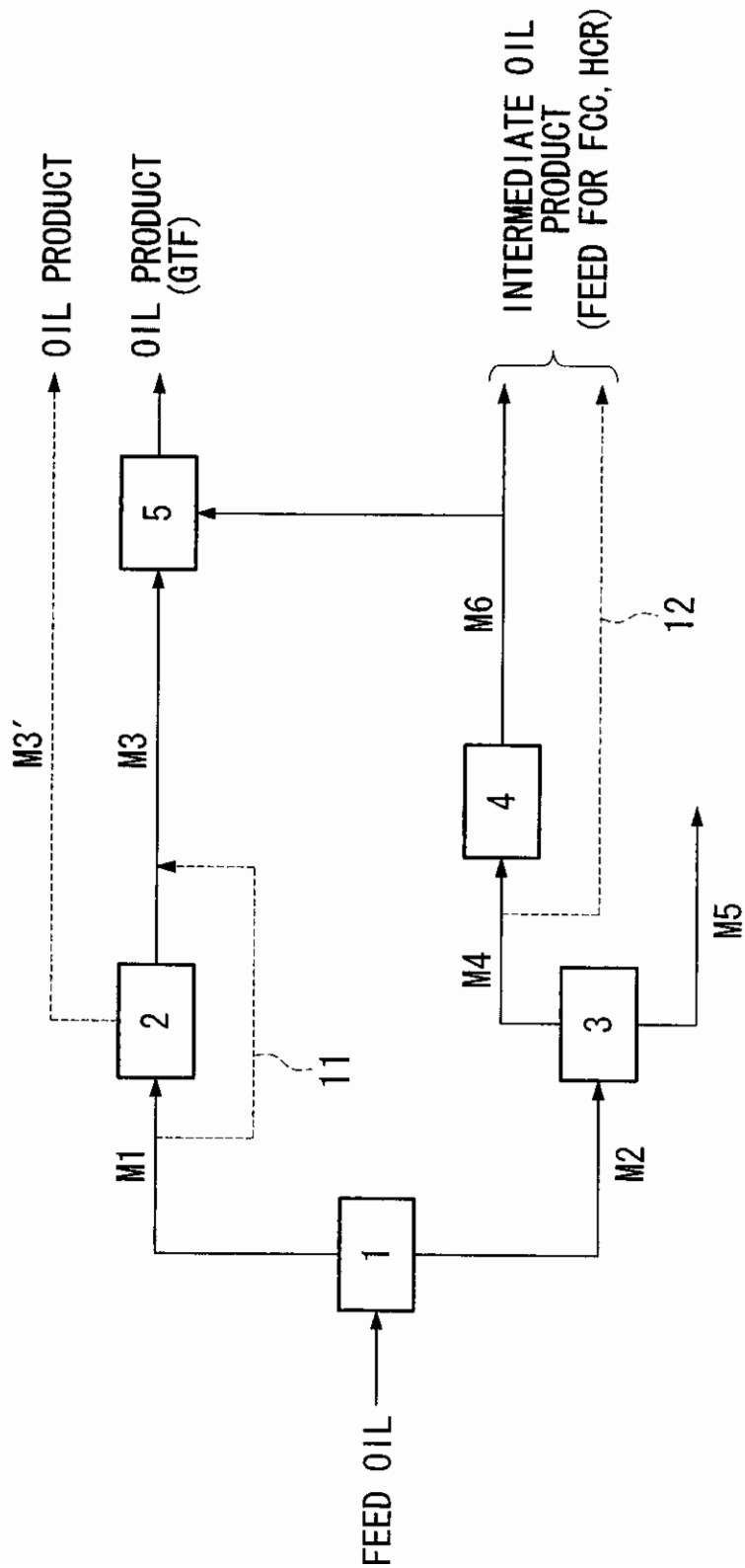

FEED OIL
1
M1
M2
2
3
11
M3'
M3
4
M4
M5
M6
12
5
OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)

FIG. 2

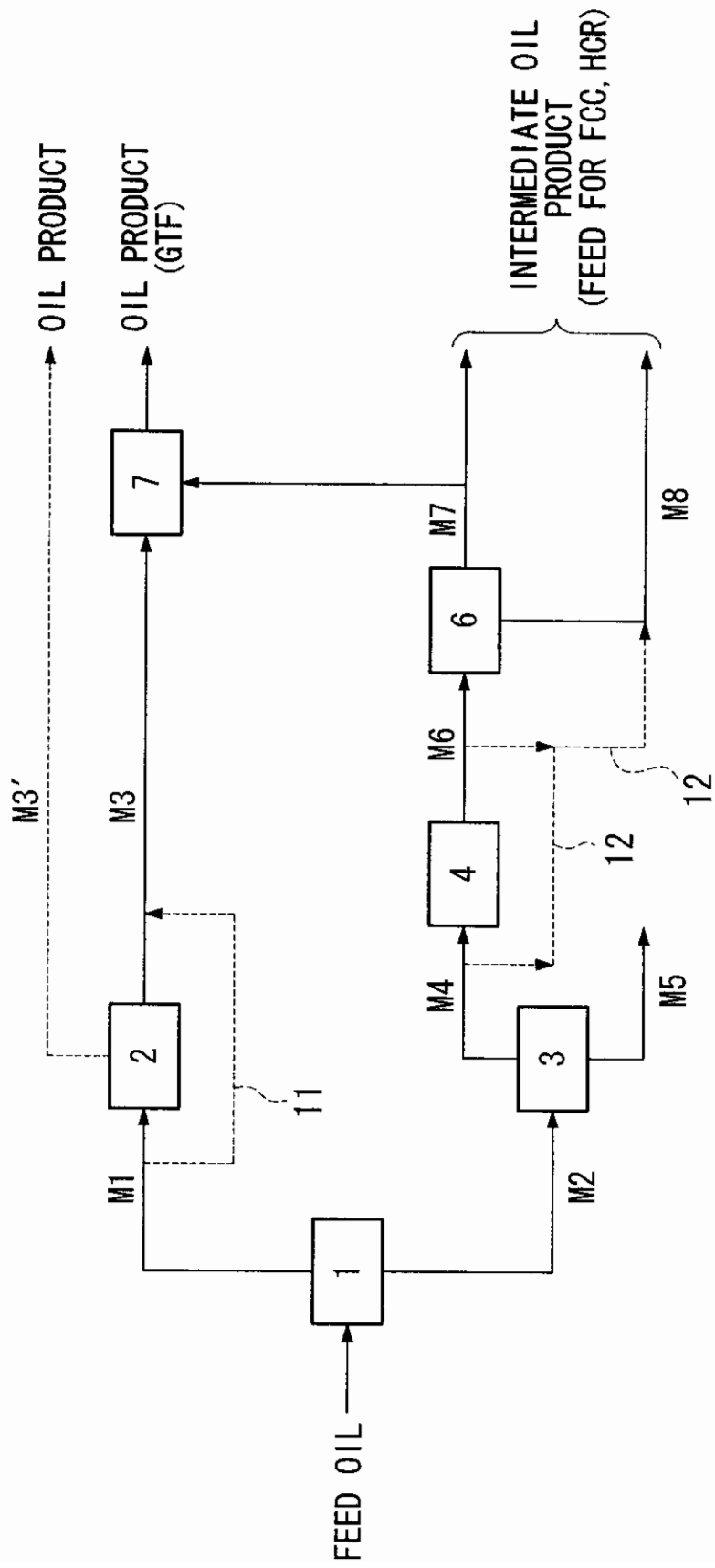

FEED OIL
1
M1
M2
2
3
11
M3'
M3
M4
M5
4
12
M6
12
6
M7
M8
7
OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)

FIG. 3

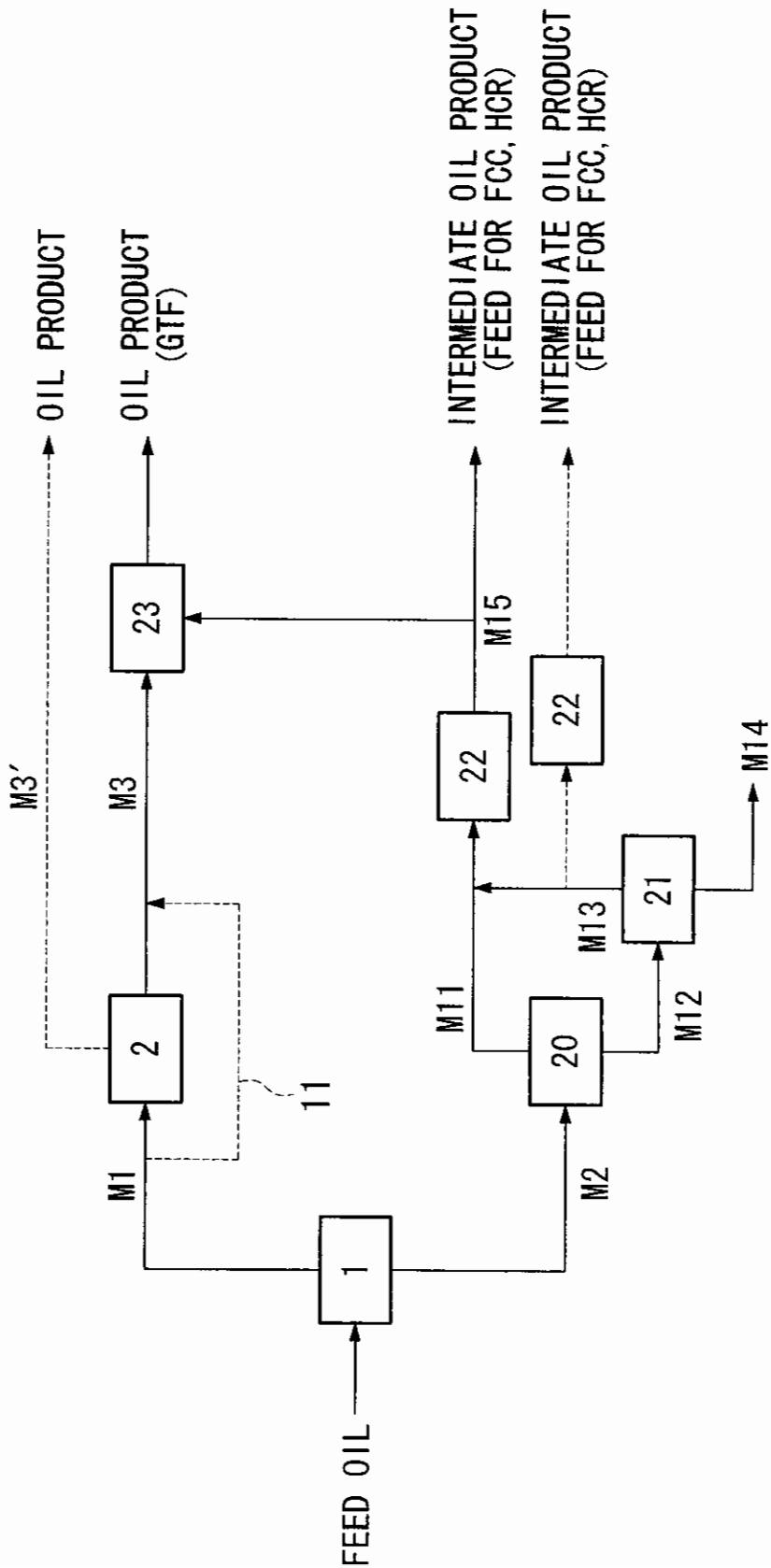

FEED OIL
1
2
20
21
22
22
23
11
M1
M2
M3
M3′
M11
M12
M13
M14
M15
OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)

FIG. 4

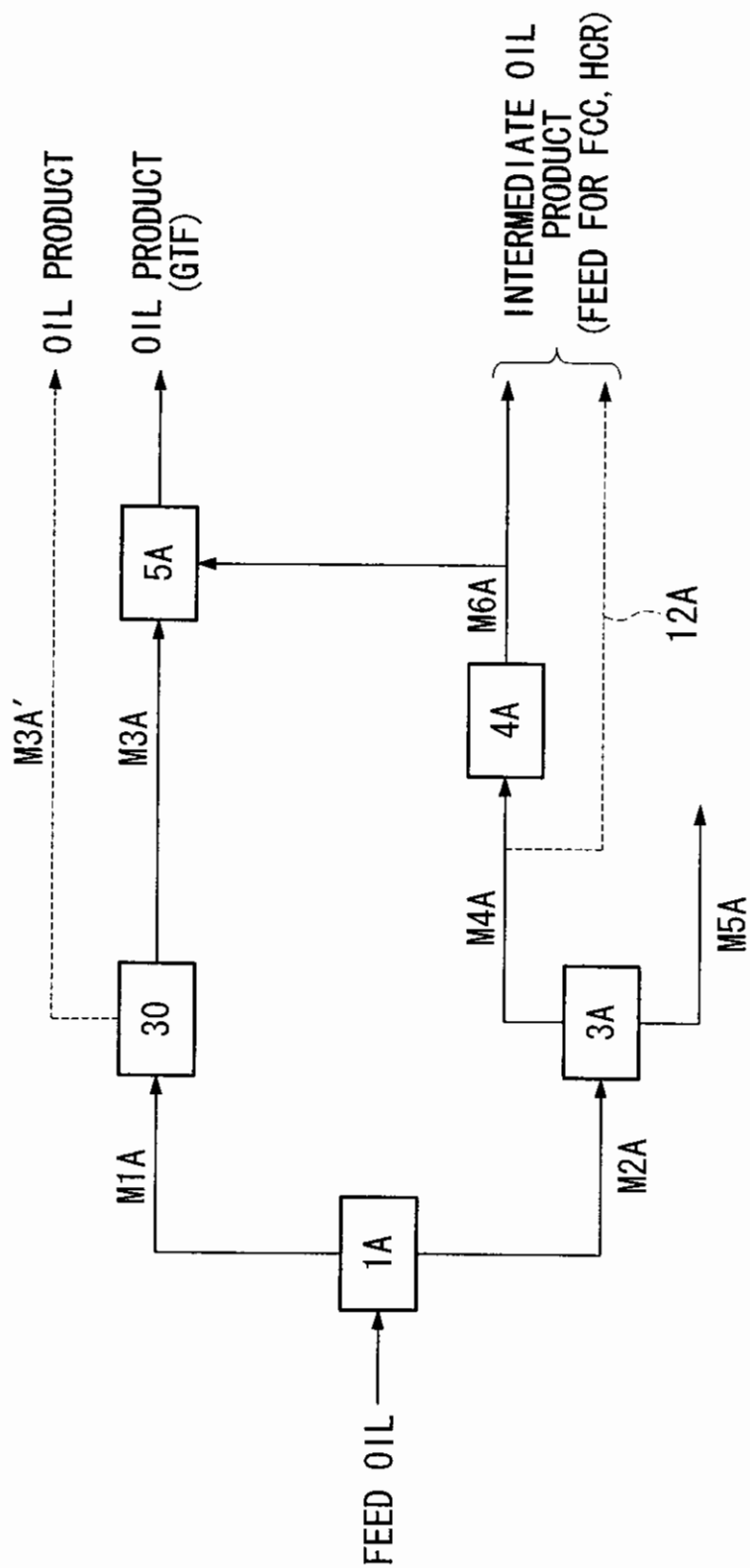

FEED OIL
1A
M1A
M2A
30
3A
M3A'
M3A
M4A
M5A
4A
5A
M6A
12A
OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)

FIG. 5

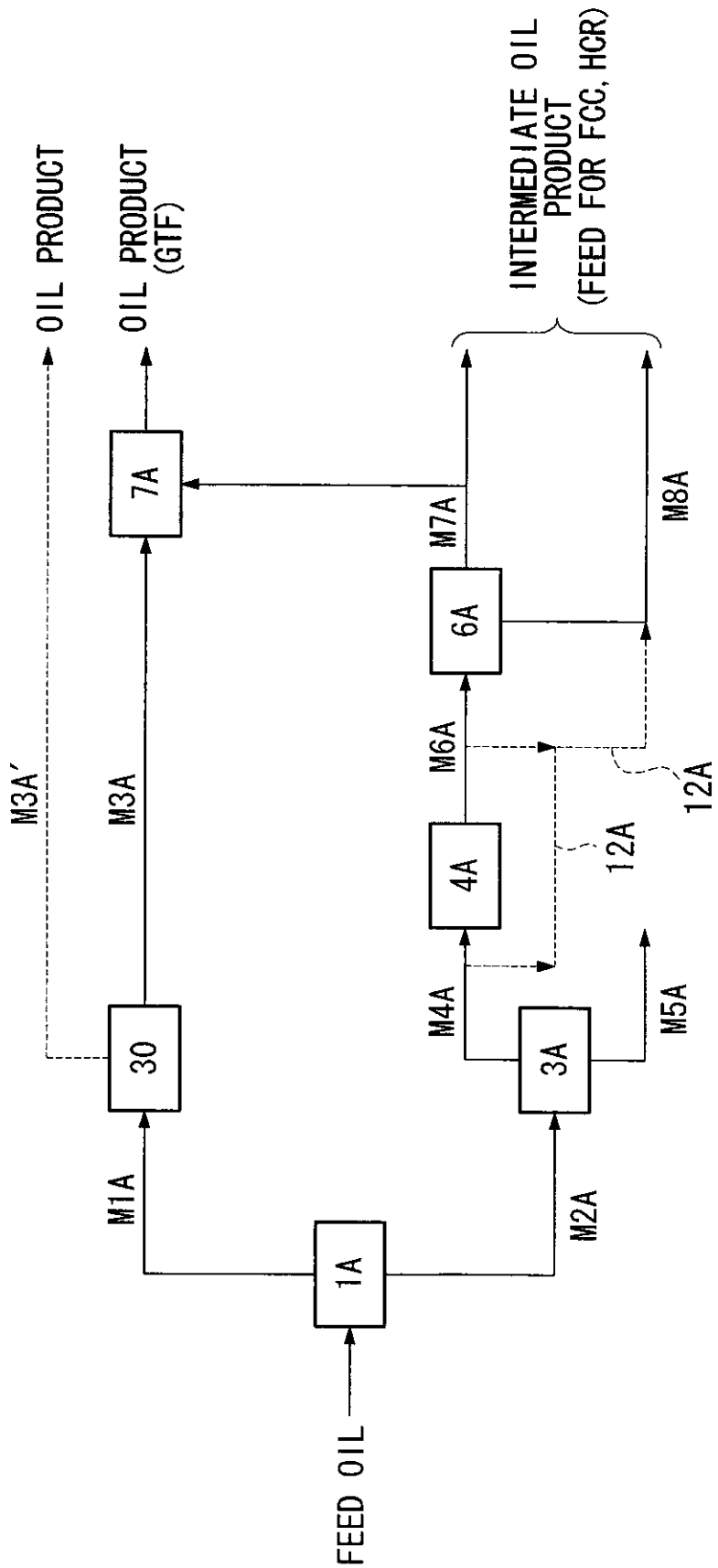

OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)
M3A'
M3A
M1A
M2A
M4A
M5A
M6A
M7A
M8A
12A
12A
FEED OIL
1A
30
3A
4A
6A
7A

FIG. 6

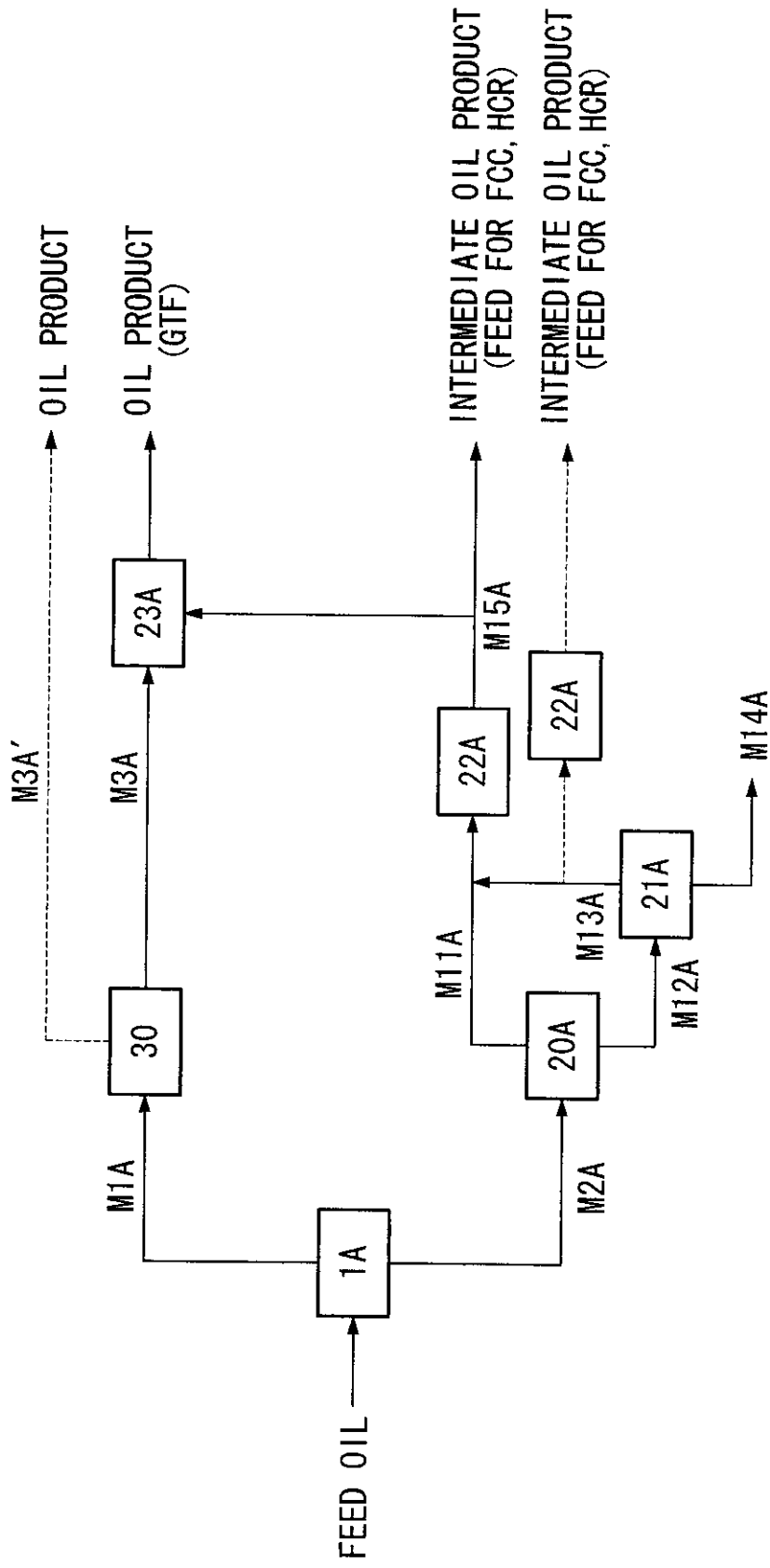

FEED OIL
1A
M1A
M2A
30
20A
M3A'
M3A
M11A
M13A
M12A
23A
22A
22A
21A
M15A
M14A
OIL PRODUCT
OIL PRODUCT (GTF)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)
INTERMEDIATE OIL PRODUCT (FEED FOR FCC, HCR)

FIG. 7

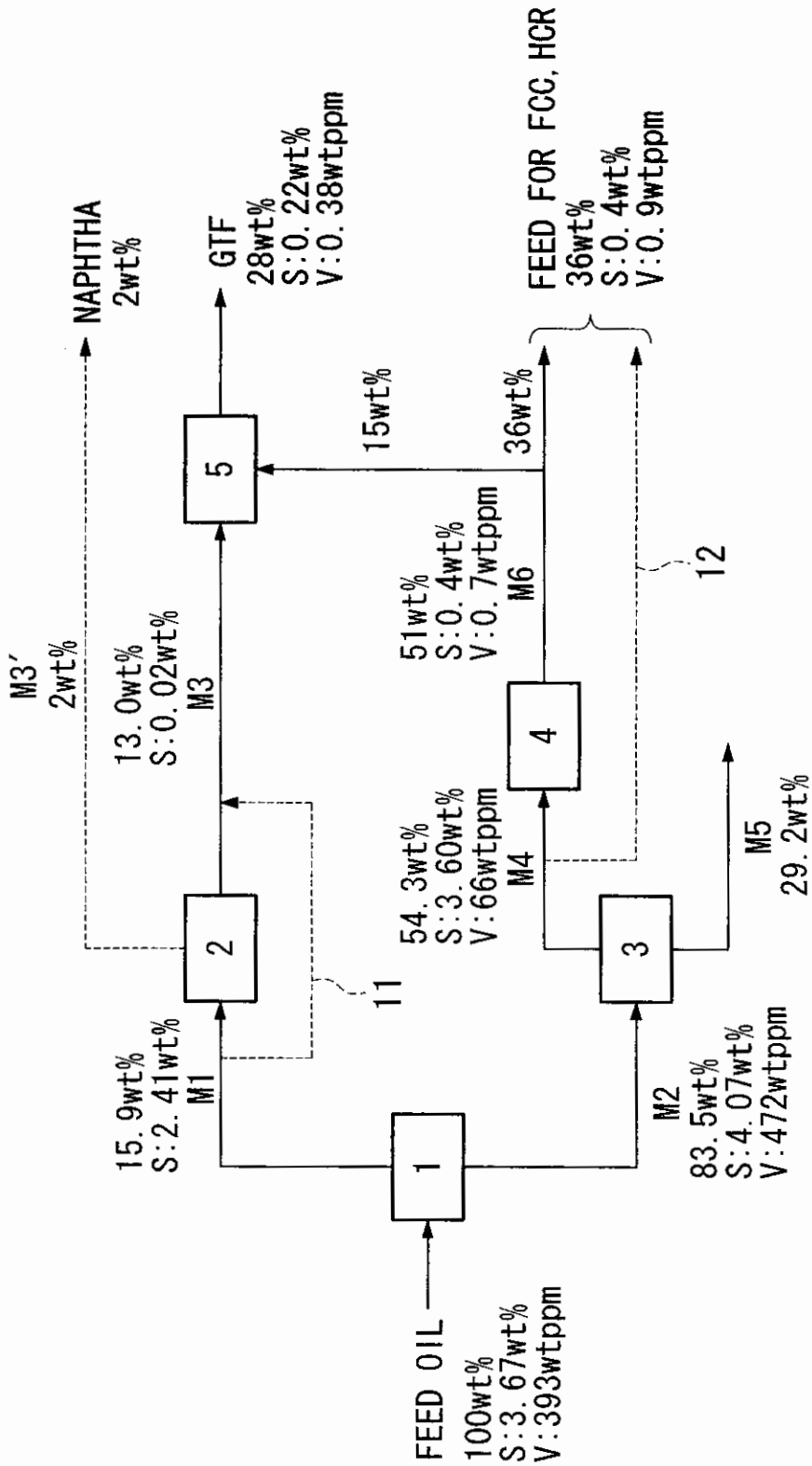

FEED OIL
100wt%
S:3.67wt%
V:393wtppm
1
15.9wt%
S:2.41wt%
M1
2
M3'
2wt%
NAPHTHA
2wt%
13.0wt%
S:0.02wt%
M3
5
GTF
28wt%
S:0.22wt%
V:0.38wtppm
15wt%
11
54.3wt%
S:3.60wt%
V:66wtppm
M4
4
51wt%
S:0.4wt%
V:0.7wtppm
M6
36wt%
FEED FOR FCC, HCR
36wt%
S:0.4wt%
V:0.9wtppm
12
M2
83.5wt%
S:4.07wt%
V:472wtppm
3
M5
29.2wt%

FIG. 8

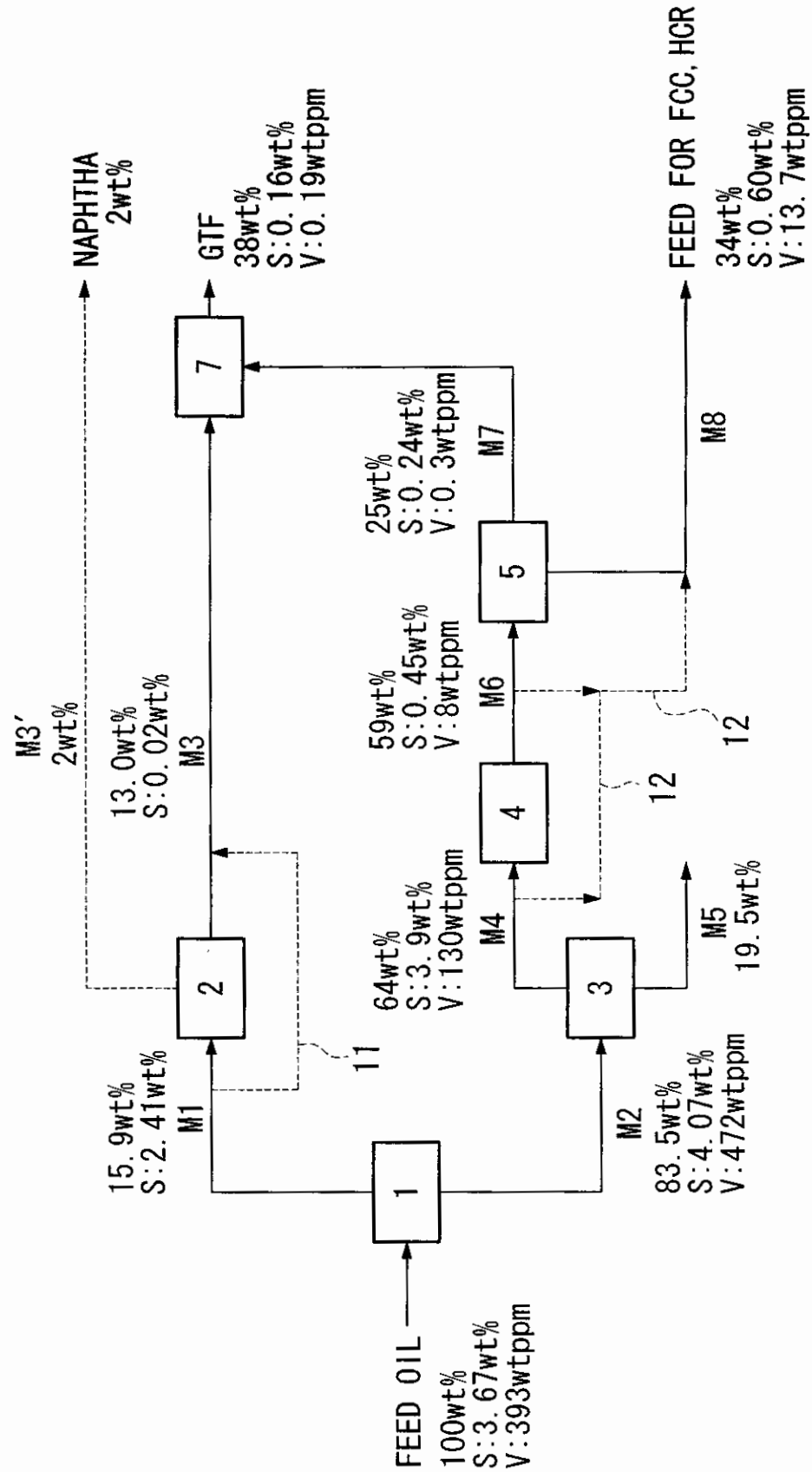

FEED OIL
100wt%
S:3.67wt%
V:393wtppm
1
M1
15.9wt%
S:2.41wt%
M2
83.5wt%
S:4.07wt%
V:472wtppm
2
M3'
2wt%
NAPHTHA
2wt%
M3
13.0wt%
S:0.02wt%
7
GTF
38wt%
S:0.16wt%
V:0.19wtppm
11
64wt%
S:3.9wt%
V:130wtppm
M4
3
M5
19.5wt%
4
59wt%
S:0.45wt%
V:8wtppm
M6
5
25wt%
S:0.24wt%
V:0.3wtppm
M7
12
12
M8
FEED FOR FCC, HCR
34wt%
S:0.60wt%
V:13.7wtppm

FIG. 9

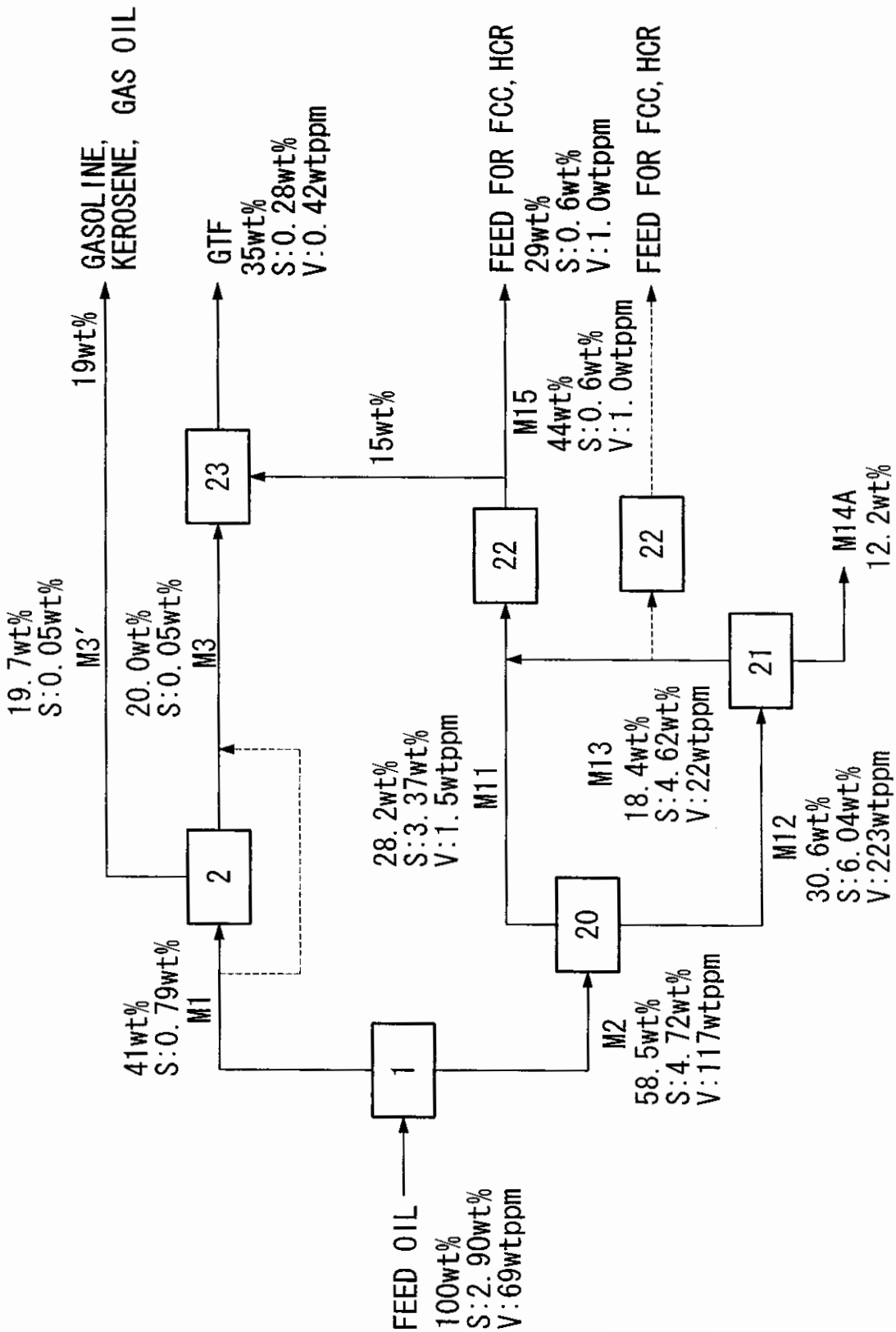

FEED OIL
100wt%
S:2.90wt%
V:69wtppm
1
41wt%
S:0.79wt%
M1
2
19.7wt%
S:0.05wt%
M3'
GASOLINE,
KEROSENE, GAS OIL
20.0wt%
S:0.05wt%
M3
23
GTF
35wt%
S:0.28wt%
V:0.42wtppm
15wt%
M2
58.5wt%
S:4.72wt%
V:117wtppm
20
28.2wt%
S:3.37wt%
V:1.5wtppm
M11
22
M15
44wt%
S:0.6wt%
V:1.0wtppm
FEED FOR FCC, HCR
M13
18.4wt%
S:4.62wt%
V:22wtppm
22
FEED FOR FCC, HCR
M12
30.6wt%
S:6.04wt%
V:223wtppm
21
M14A
12.2wt%

FIG. 10

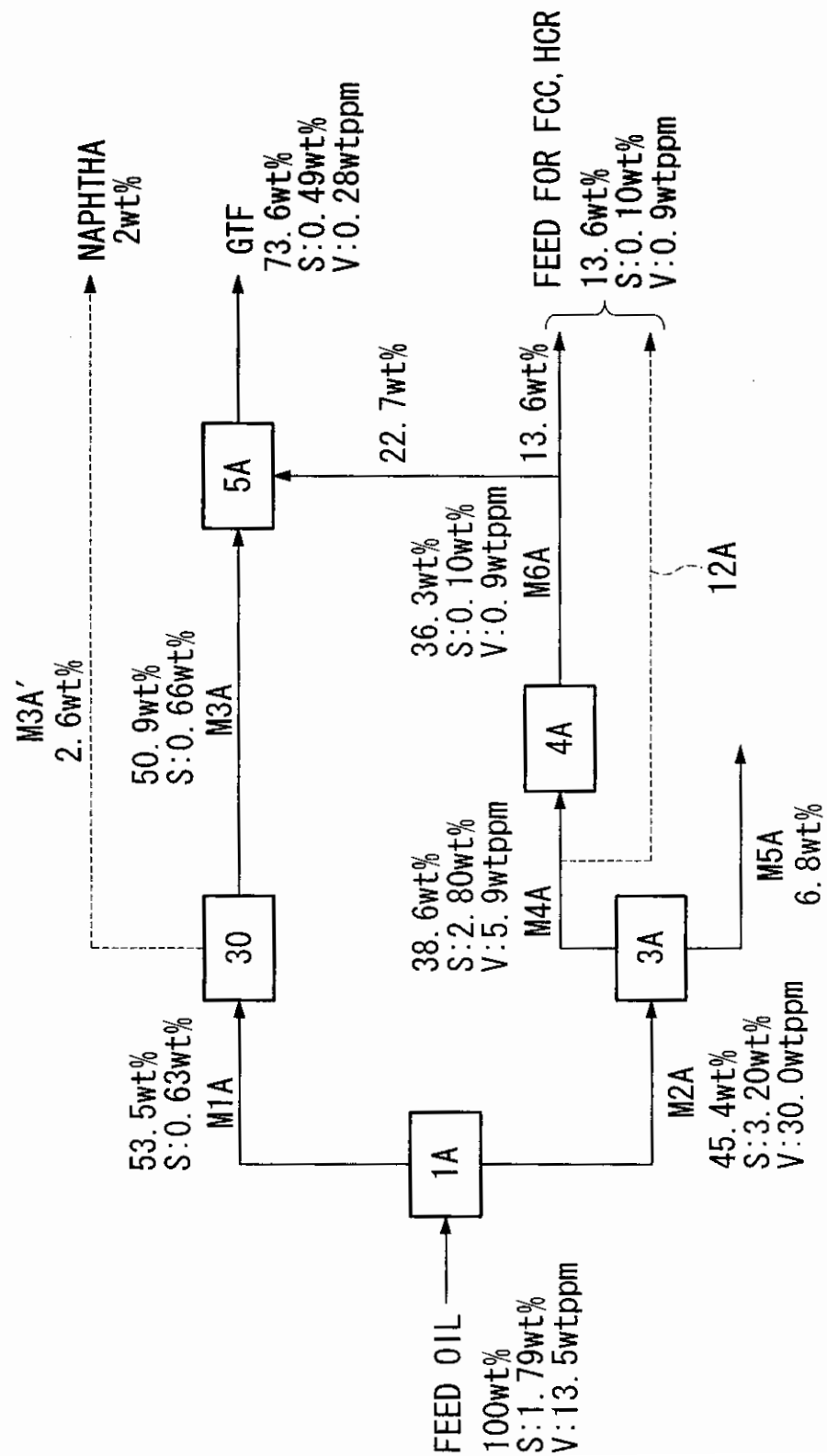

FEED OIL
100wt%
S:1.79wt%
V:13.5wtppm
1A
M1A
53.5wt%
S:0.63wt%
30
M3A'
2.6wt%
NAPHTHA
2wt%
M3A
50.9wt%
S:0.66wt%
5A
GTF
73.6wt%
S:0.49wt%
V:0.28wtppm
22.7wt%
M2A
45.4wt%
S:3.20wt%
V:30.0wtppm
3A
M4A
38.6wt%
S:2.80wt%
V:5.9wtppm
4A
M6A
36.3wt%
S:0.10wt%
V:0.9wtppm
13.6wt%
FEED FOR FCC, HCR
13.6wt%
S:0.10wt%
V:0.9wtppm
12A
M5A
6.8wt%

FIG. 11

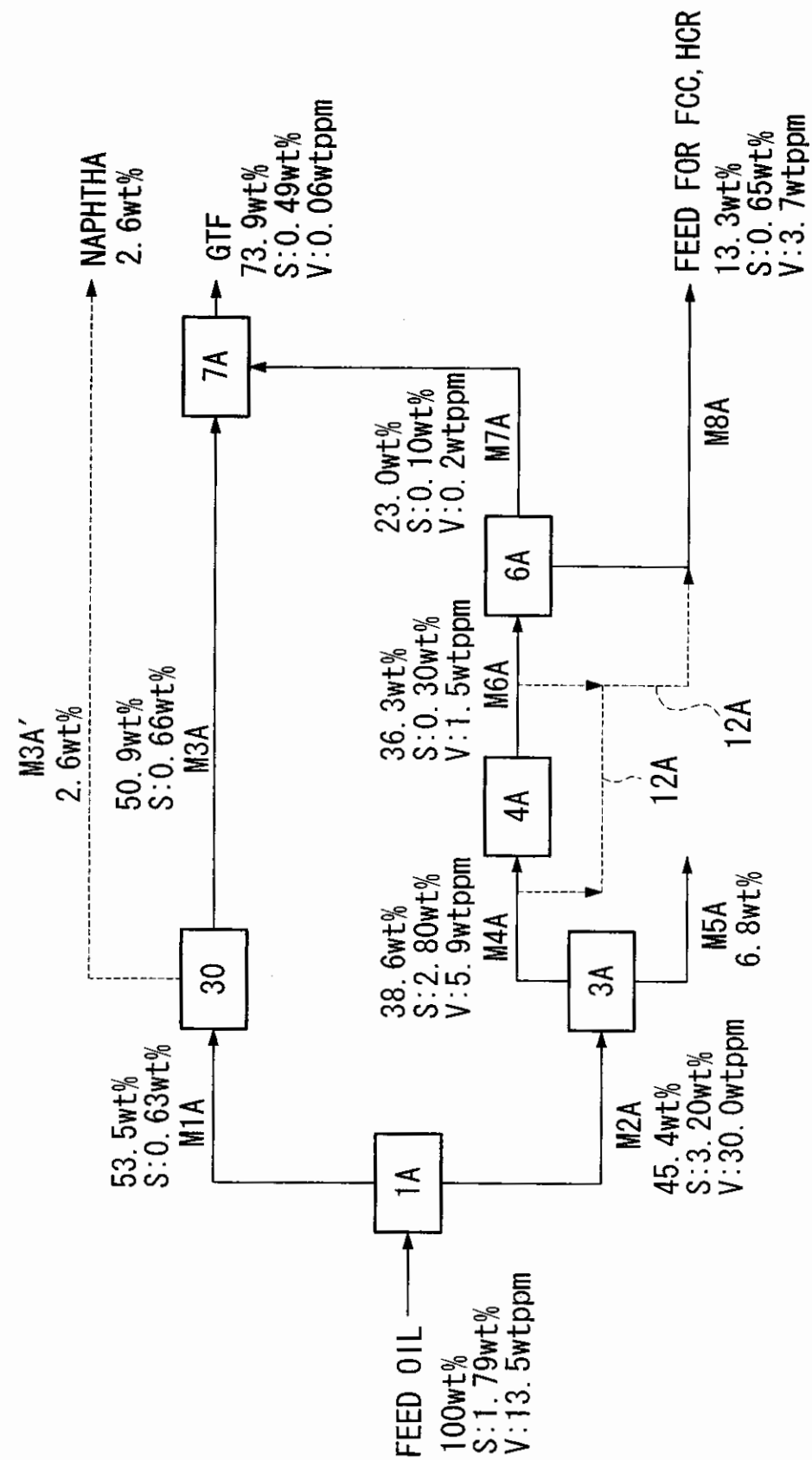
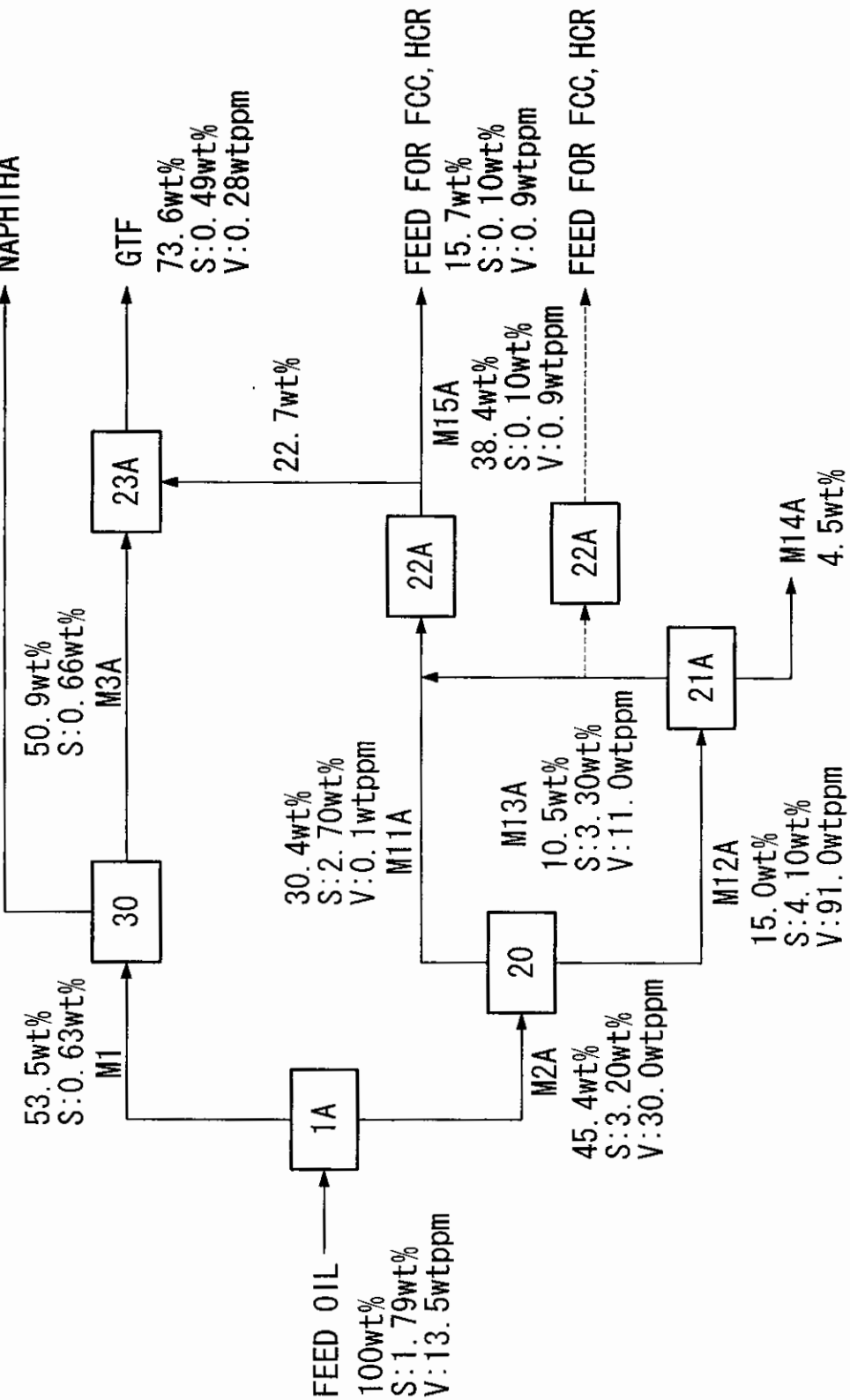

FEED OIL
100wt%
S:1.79wt%
V:13.5wtppm
1A
53.5wt%
S:0.63wt%
M1A
30
NAPHTHA
2.6wt%
M3A'
2.6wt%
50.9wt%
S:0.66wt%
M3A
7A
GTF
73.9wt%
S:0.49wt%
V:0.06wtppm
M2A
45.4wt%
S:3.20wt%
V:30.0wtppm
3A
38.6wt%
S:2.80wt%
V:5.9wtppm
M4A
4A
36.3wt%
S:0.30wt%
V:1.5wtppm
M6A
6A
23.0wt%
S:0.10wt%
V:0.2wtppm
M7A
12A
M5A
6.8wt%
12A
M8A
FEED FOR FCC, HCR
13.3wt%
S:0.65wt%
V:3.7wtppm

FIG. 12


FEED OIL
100wt%
S:1.79wt%
V:13.5wtppm
1A
53.5wt%
S:0.63wt%
M1
30
M3A'
2.6wt%
NAPHTHA
50.9wt%
S:0.66wt%
M3A
23A
GTF
73.6wt%
S:0.49wt%
V:0.28wtppm
22.7wt%
M2A
45.4wt%
S:3.20wt%
V:30.0wtppm
20
30.4wt%
S:2.70wt%
V:0.1wtppm
M11A
M13A
10.5wt%
S:3.30wt%
V:11.0wtppm
22A
M15A
38.4wt%
S:0.10wt%
V:0.9wtppm
FEED FOR FCC, HCR
15.7wt%
S:0.10wt%
V:0.9wtppm
FEED FOR FCC, HCR
22A
21A
M12A
15.0wt%
S:4.10wt%
V:91.0wtppm
M14A
4.5wt%