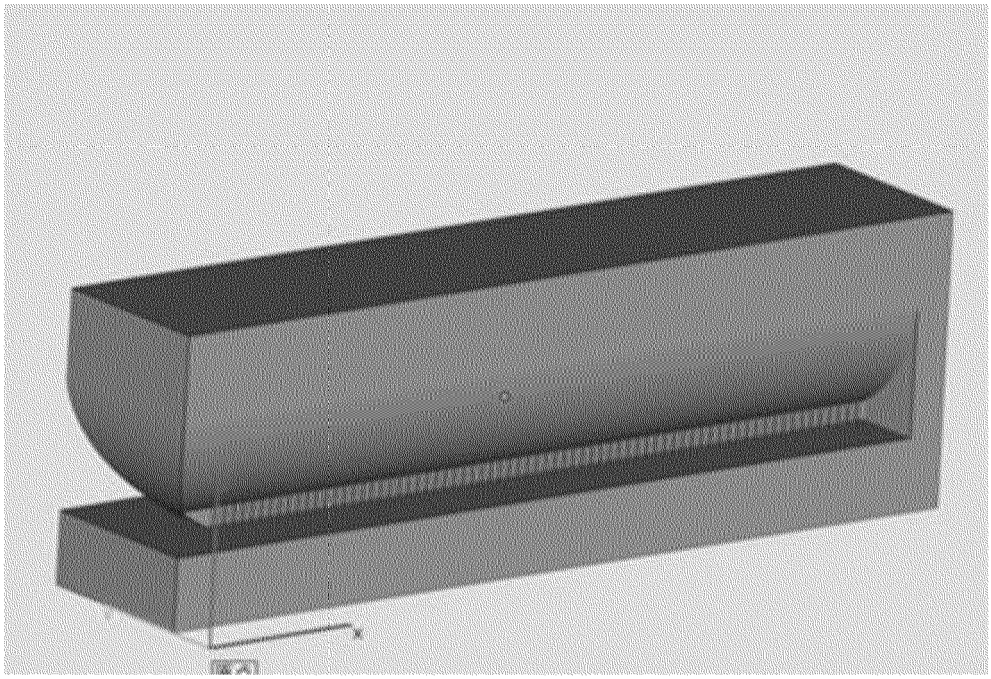

FIG. 1

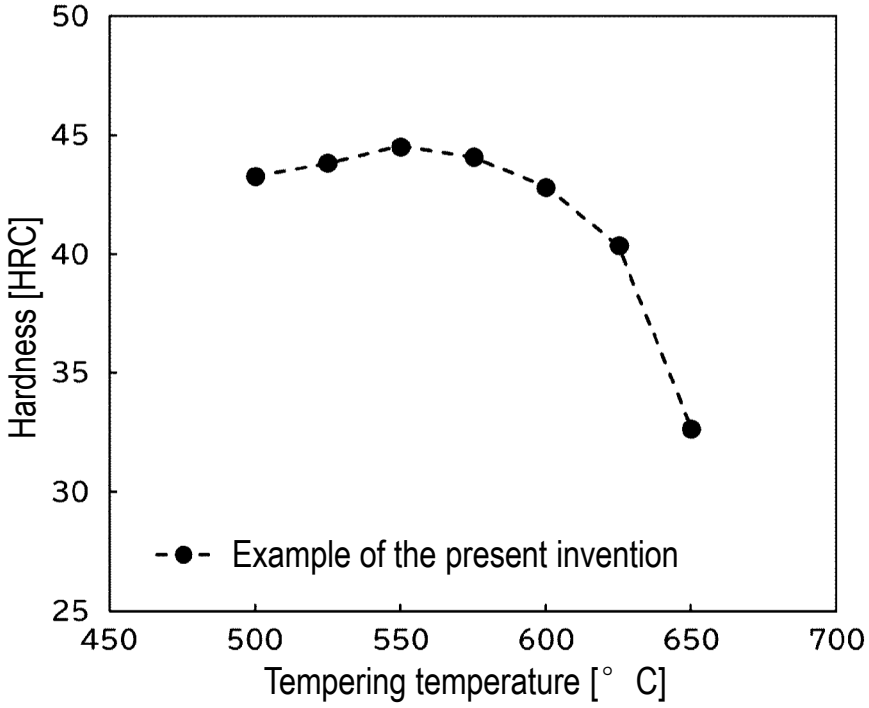
50
45
40
35
30
25
Hardness [HRC]
450
500
550
600
650
700
Tempering temperature [° C]
Example of the present invention

FIG. 2

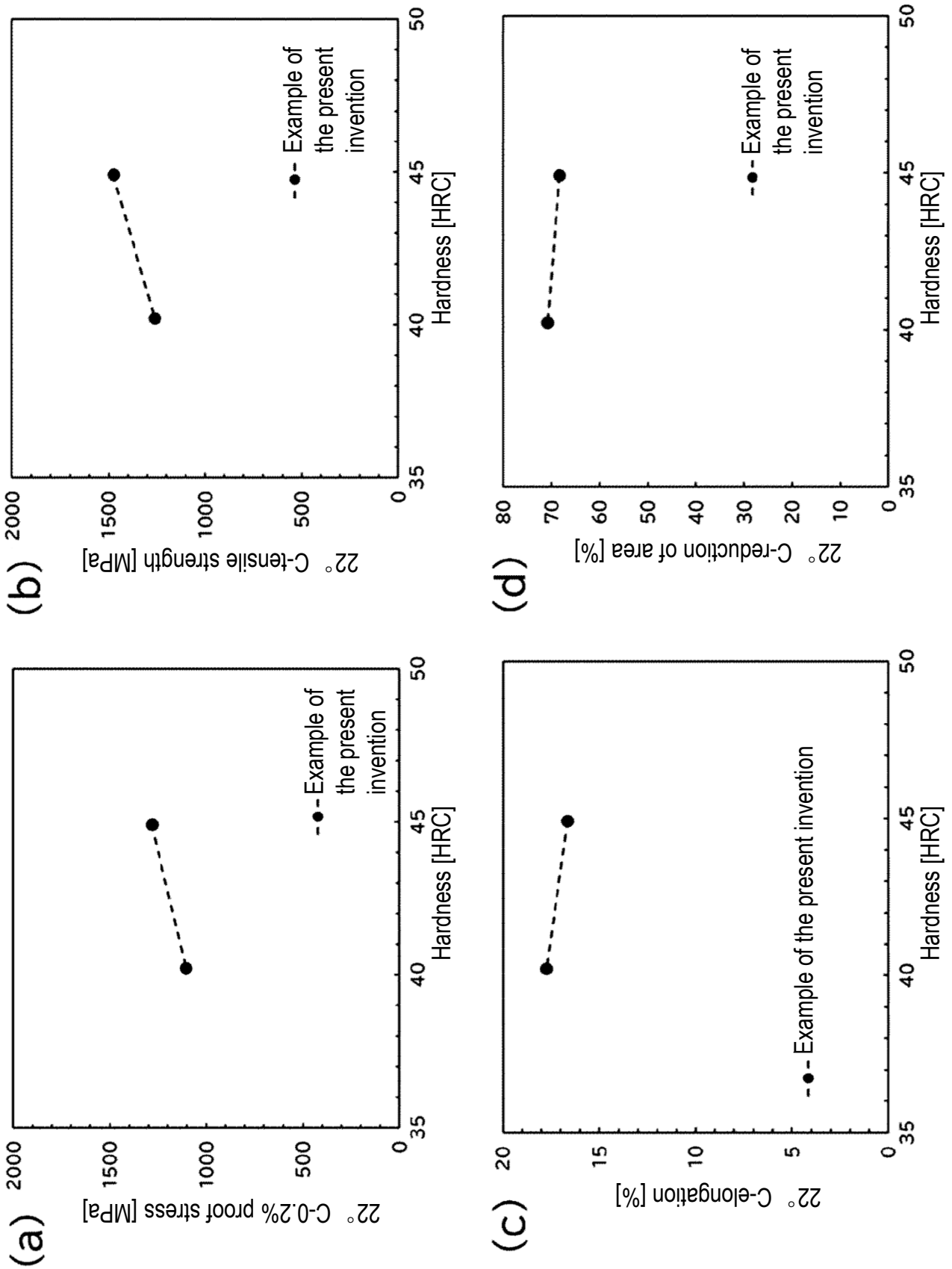
(a)
22° C-0.2% proof stress [MPa]
2000
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(b)
22° C-tensile strength [MPa]
2000
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(c)
22° C-elongation [%]
20
15
10
5
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(d)
22° C-reduction of area [%]
80
70
60
50
40
30
20
10
0
35
40
45
50
Hardness [HRC]
Example of the present invention

FIG. 3

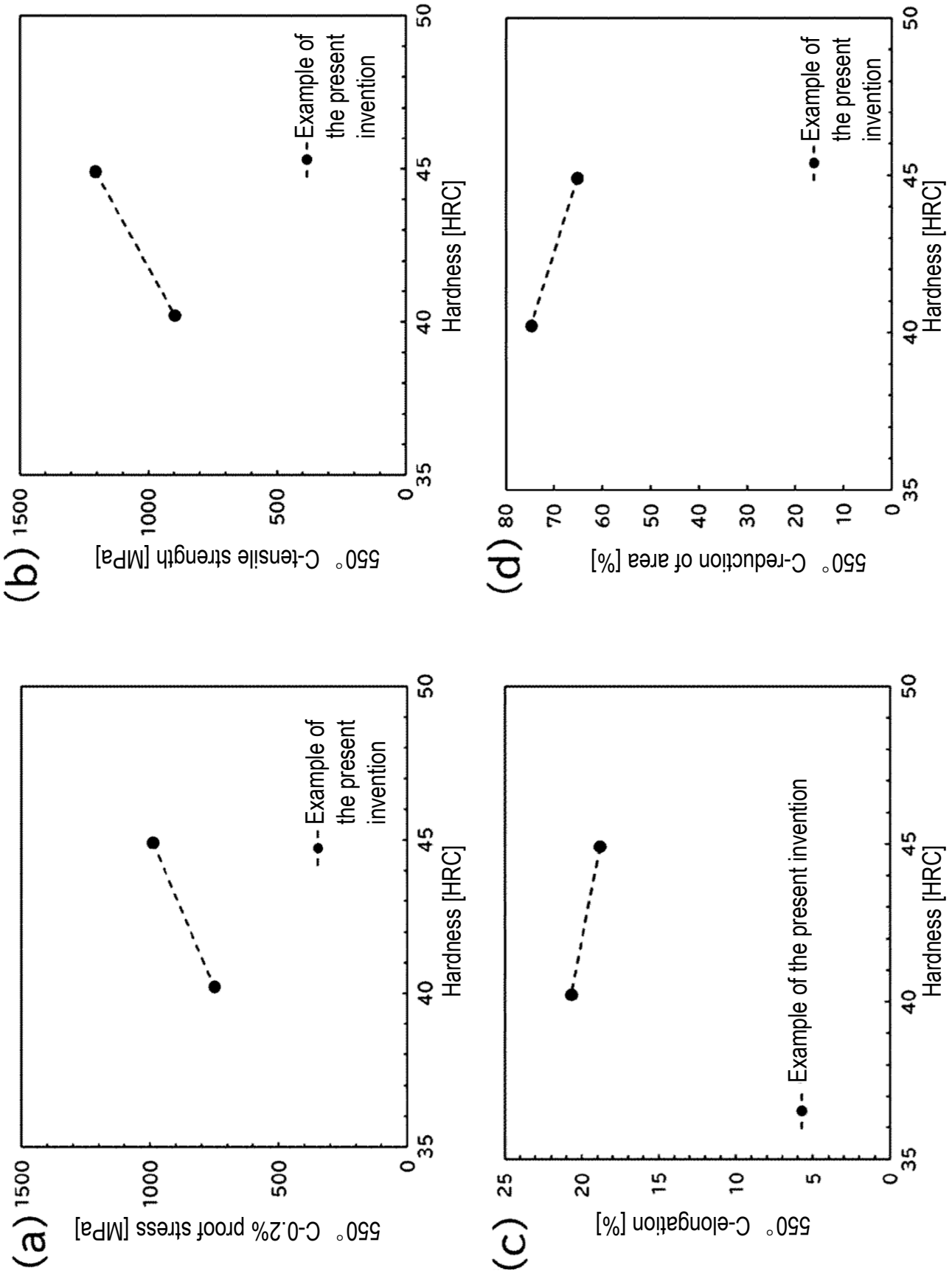
(a)
550° C-0.2% proof stress [MPa]
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(b)
550° C-tensile strength [MPa]
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(c)
550° C-elongation [%]
25
20
15
10
5
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(d)
550° C-reduction of area [%]
80
70
60
50
40
30
20
10
0
35
40
45
50
Hardness [HRC]
Example of the present invention

FIG. 4

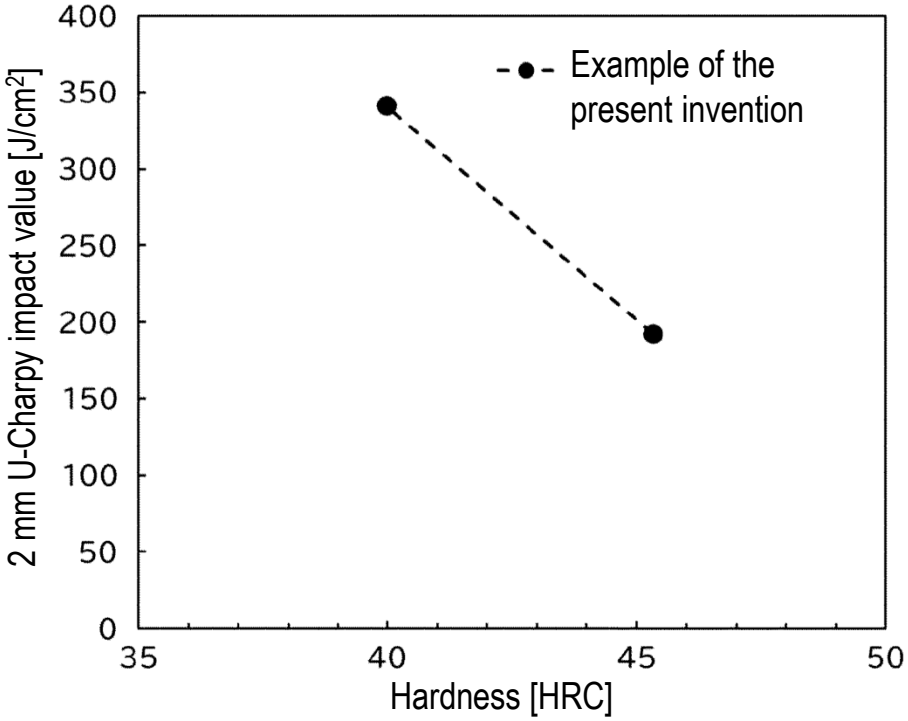
2 mm U-Charpy impact value [J/cm2]
400
350
300
250
200
150
100
50
0
35
40
45
50
Hardness [HRC]
Example of the present invention

FIG. 5

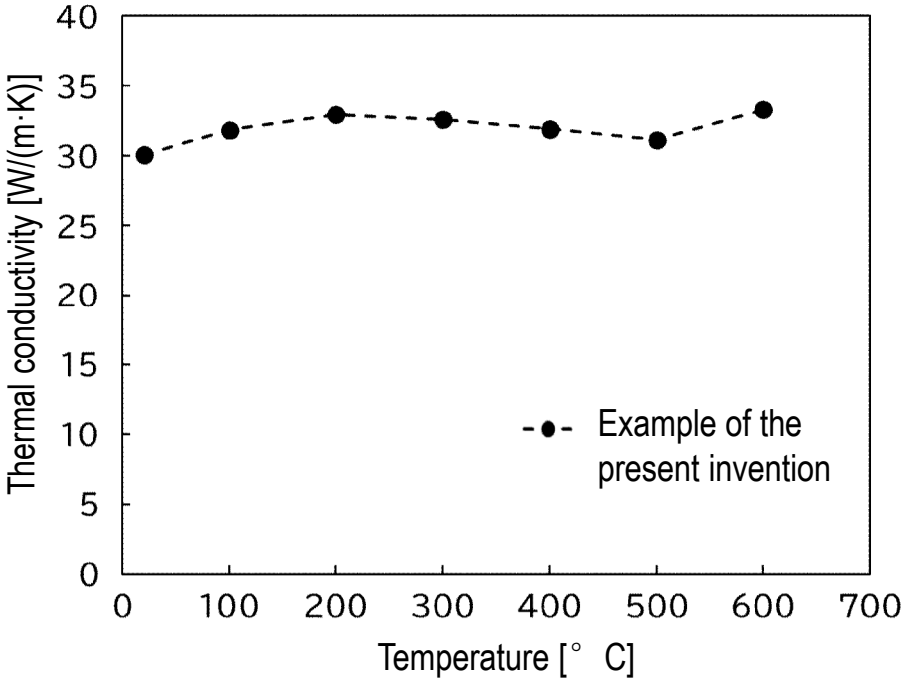
Thermal conductivity [W/(m·K)]
40
35
30
25
20
15
10
5
0
0
100
200
300
400
500
600
700
Temperature [° C]
Example of the present invention

FIG. 6