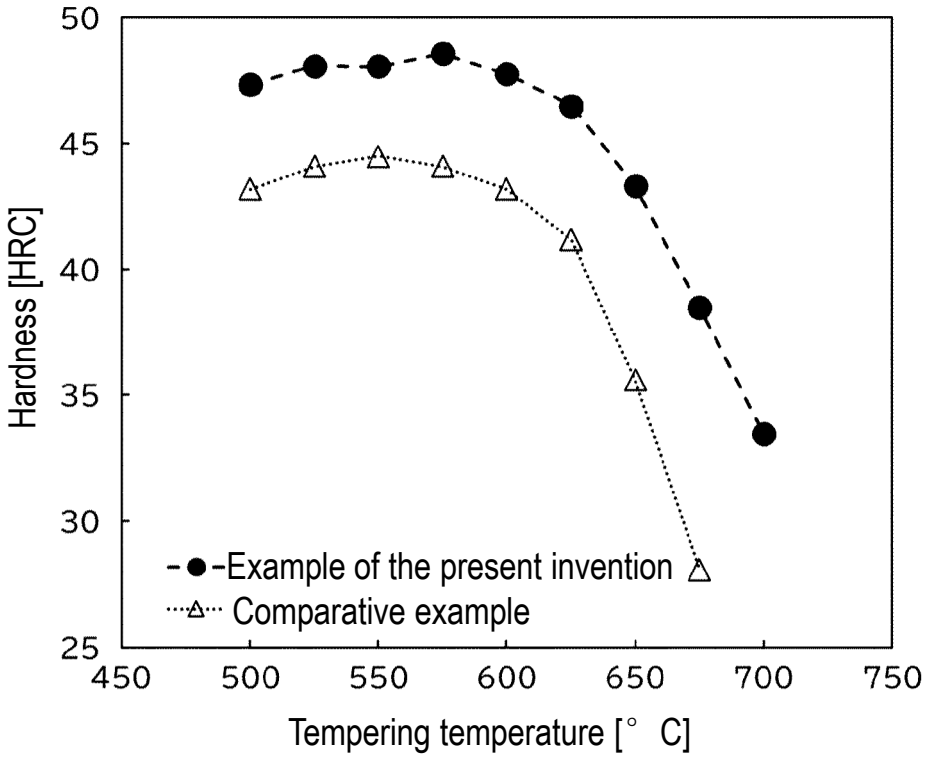

50
45
40
35
30
25
Hardness [HRC]
450
500
550
600
650
700
750
Example of the present invention
Comparative example
Tempering temperature [° C]

FIG. 1

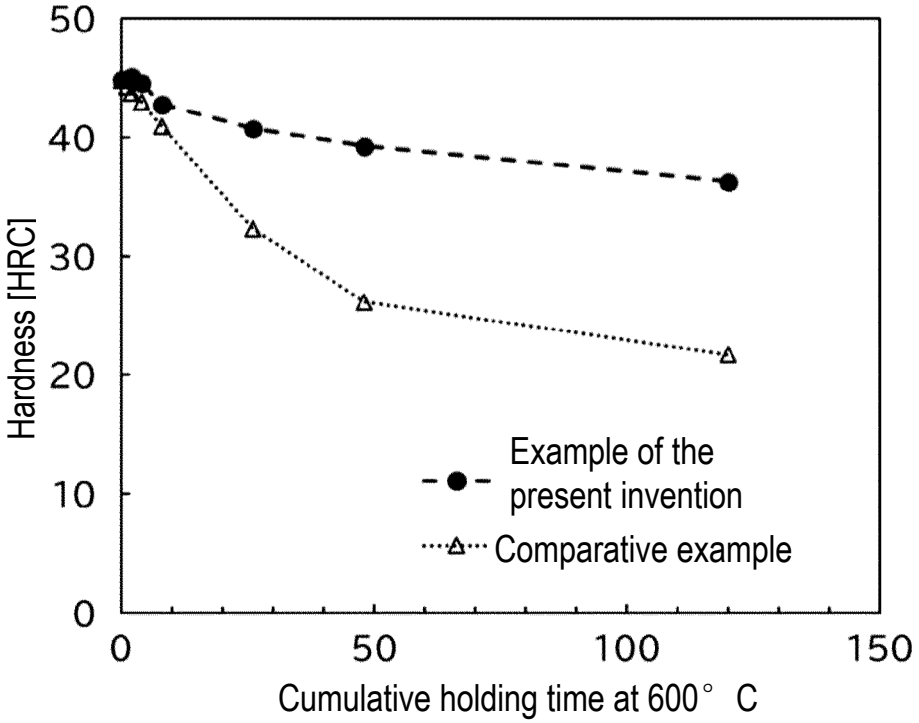

50
40
30
20
10
0
Hardness [HRC]
0
50
100
150
Example of the present invention
Comparative example
Cumulative holding time at 600° C

FIG. 2

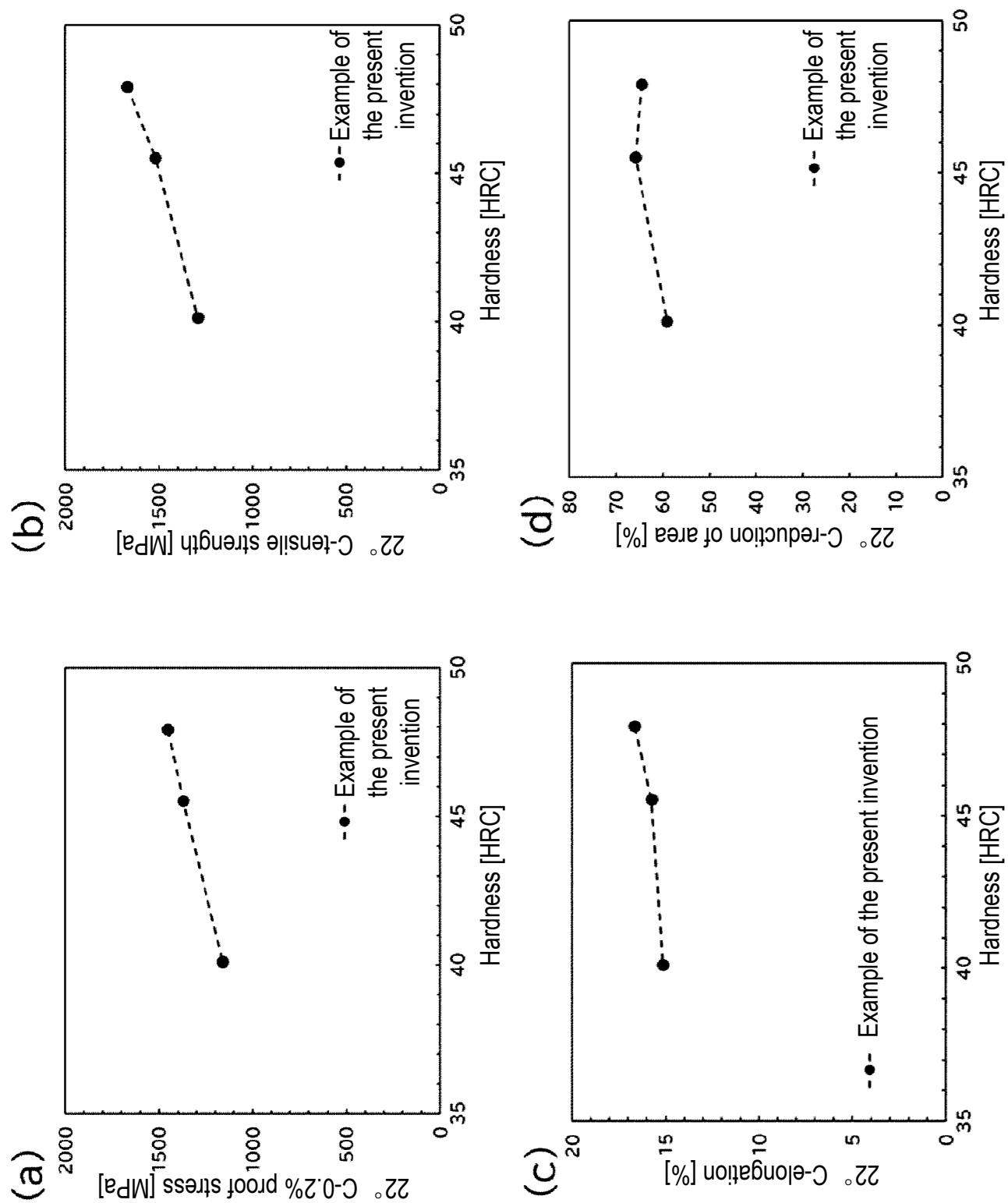

(a)
22° C-0.2% proof stress [MPa]
2000
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(b)
22° C-tensile strength [MPa]
2000
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(c)
22° C-elongation [%]
20
15
10
5
0
35
40
45
50
Hardness [HRC]
Example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

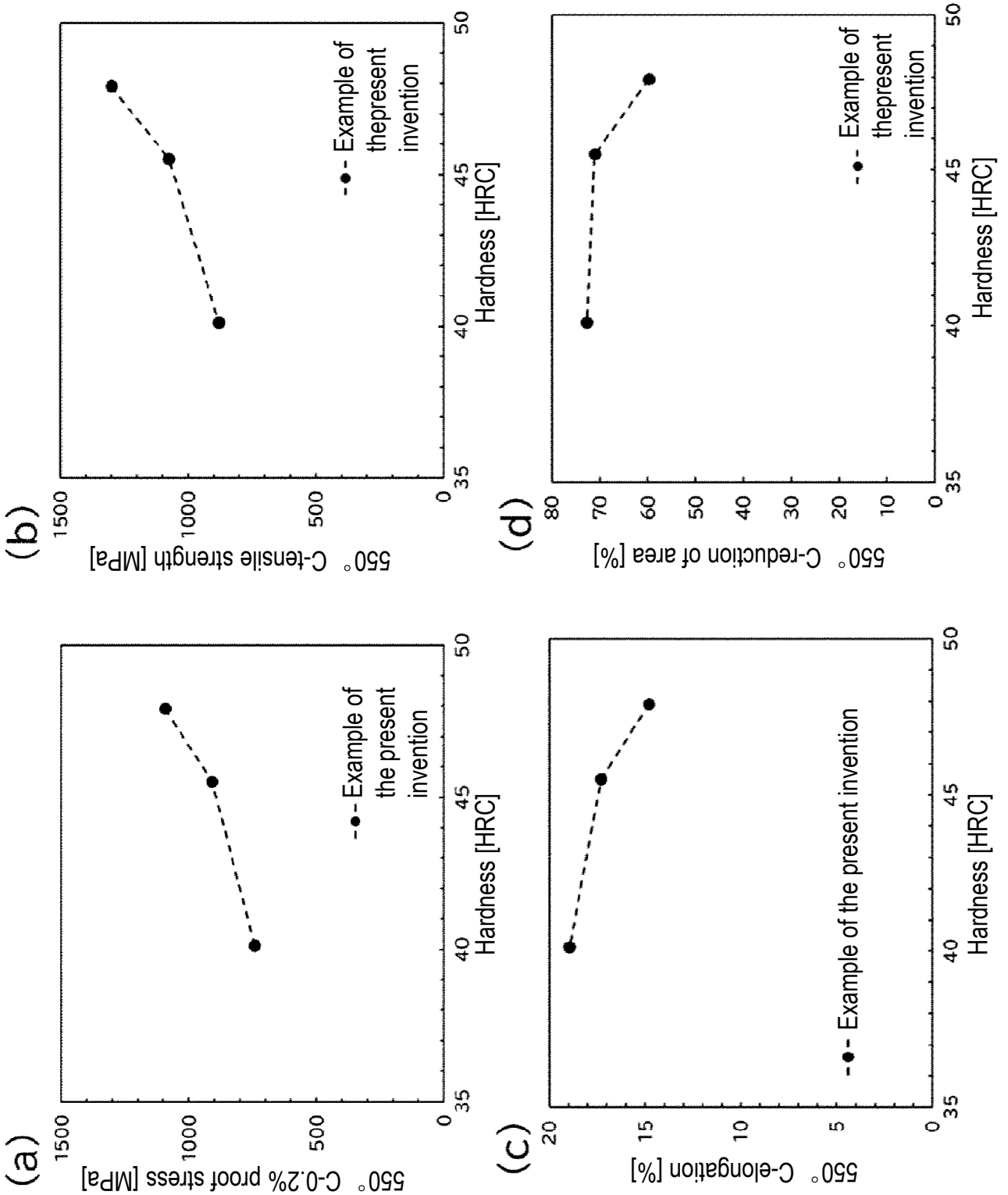

(a)
550° C-0.2% proof stress [MPa]
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of the present invention
(b)
550° C-tensile strength [MPa]
1500
1000
500
0
35
40
45
50
Hardness [HRC]
Example of thepresent invention
(c)
550° C-elongation [%]
20
15
10
5
0
35
40
45
50
Hardness [HRC]
Example of the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

FIG. 4

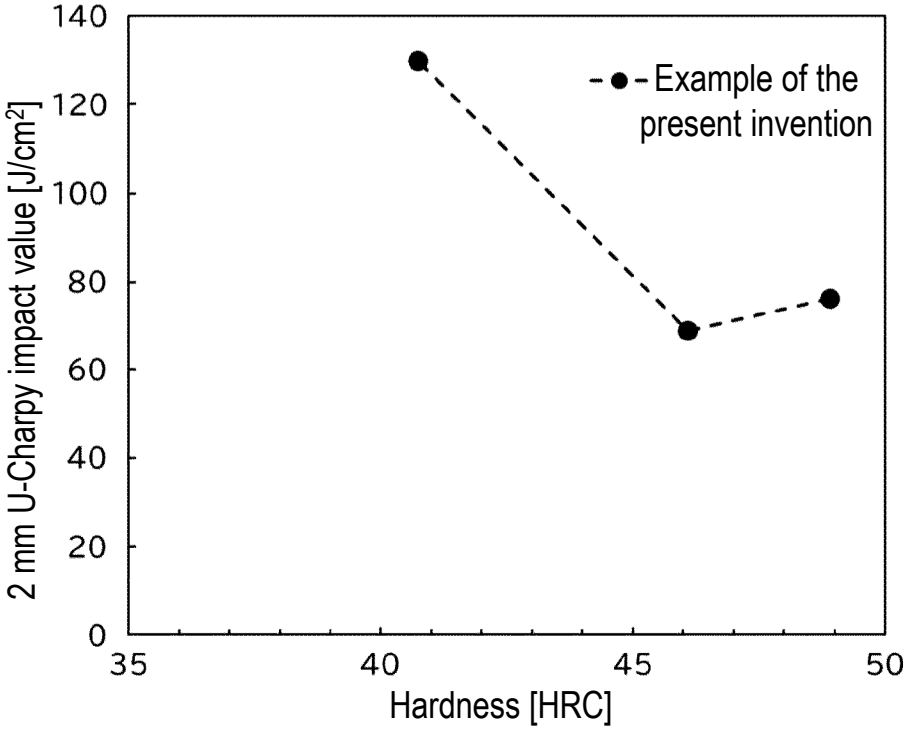

140
120
100
80
60
40
20
0
35
40
45
50
2 mm U-Charpy impact value [J/cm²]
Hardness [HRC]
Example of the present invention

FIG. 5

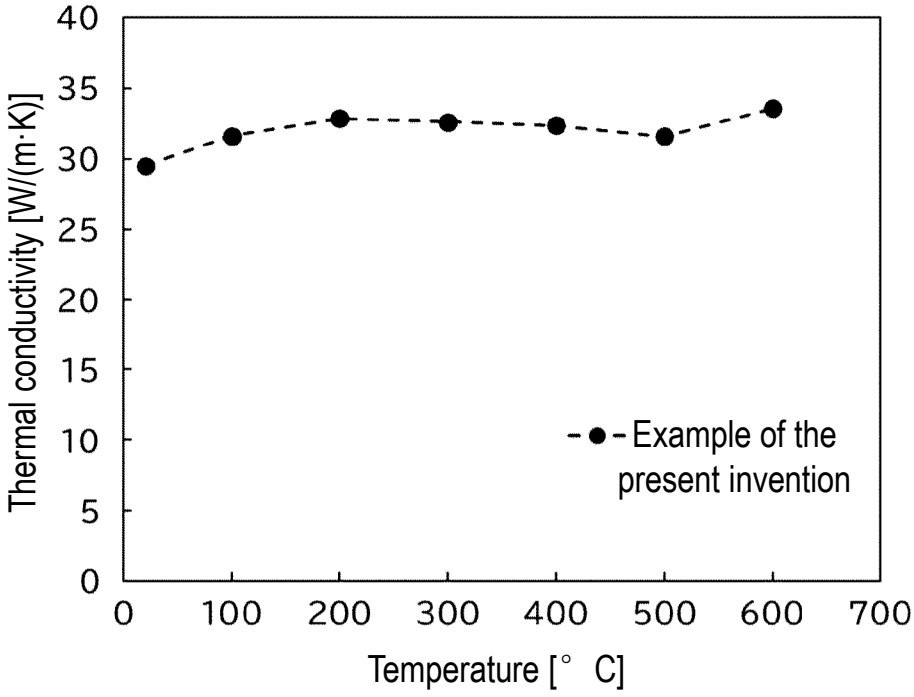

40
35
30
25
20
15
10
5
0
0
100
200
300
400
500
600
700
Thermal conductivity [W/(m·K)]
Temperature [° C]
Example of the present invention

FIG. 6