**Fig. 1**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0.051 | 0.033 | 0.028 | 0.048 | | | | |
| | | | 0.043 | 0.021 | 0.022 | 0.018 | 0.018 | 0.048 | | | |
| | | | 0.052 | 0.023 | 0.018 | 0.019 | 0.019 | 0.056 | | | |
| | | 0.055 | 0.022 | 0.021 | 0.015 | 0.020 | 0.018 | 0.022 | 0.050 | | |
| | | 0.054 | 0.026 | 0.020 | 0.033 | 0.015 | 0.016 | 0.025 | 0.056 | | |
| | | 0.038 | 0.018 | 0.019 | 0.022 | 0.014 | 0.014 | 0.018 | 0.039 | | |
| | | 0.031 | 0.016 | 0.019 | 0.017 | 0.015 | 0.017 | 0.016 | 0.030 | | |
| | 0.053 | 0.031 | 0.015 | 0.019 | 0.016 | 0.017 | 0.016 | 0.014 | 0.032 | 0.055 | |
| | 0.049 | 0.018 | 0.019 | 0.018 | 0.013 | 0.015 | 0.015 | 0.022 | 0.023 | 0.050 | |
| | 0.052 | 0.020 | 0.019 | 0.012 | 0.020 | 0.018 | 0.010 | 0.022 | 0.023 | 0.050 | |
| | 0.030 | 0.018 | 0.020 | 0.012 | 0.020 | 0.014 | 0.012 | 0.020 | 0.022 | 0.031 | |
| | 0.030 | 0.016 | 0.017 | 0.014 | 0.022 | 0.011 | 0.016 | 0.017 | 0.019 | 0.034 | |
| | 0.029 | 0.017 | 0.017 | 0.021 | 0.011 | 0.013 | 0.015 | 0.015 | 0.022 | 0.034 | |
| 0.053 | 0.026 | 0.021 | 0.012 | 0.021 | 0.017 | 0.015 | 0.011 | 0.018 | 0.021 | 0.031 | 0.049 |
| 0.053 | 0.027 | 0.022 | 0.011 | 0.018 | 0.018 | 0.013 | 0.014 | 0.020 | 0.024 | 0.024 | 0.049 |
| 0.054 | 0.024 | 0.021 | 0.015 | 0.019 | 0.017 | 0.014 | 0.016 | 0.020 | 0.023 | 0.027 | 0.050 |
| 0.048 | 0.022 | 0.021 | 0.013 | 0.018 | 0.017 | 0.014 | 0.014 | 0.017 | 0.023 | 0.023 | 0.041 |
| 0.048 | 0.021 | 0.021 | 0.021 | 0.015 | 0.015 | 0.020 | 0.016 | 0.020 | 0.021 | 0.022 | 0.049 |
| 0.054 | 0.018 | 0.019 | 0.021 | 0.015 | 0.017 | 0.018 | 0.018 | 0.016 | 0.020 | 0.021 | 0.051 |
| 0.045 | 0.022 | 0.021 | 0.021 | 0.014 | 0.019 | 0.017 | 0.025 | 0.017 | 0.019 | 0.022 | 0.046 |
| 0.052 | 0.027 | 0.024 | 0.019 | 0.016 | 0.017 | 0.014 | 0.017 | 0.018 | 0.023 | 0.028 | 0.049 |
| 0.048 | 0.028 | 0.023 | 0.018 | 0.017 | 0.010 | 0.015 | 0.012 | 0.014 | 0.026 | 0.030 | 0.046 |
| 0.055 | 0.030 | 0.022 | 0.017 | 0.016 | 0.015 | 0.013 | 0.016 | 0.013 | 0.025 | 0.031 | 0.050 |
| | 0.029 | 0.019 | 0.023 | 0.014 | 0.013 | 0.014 | 0.016 | 0.015 | 0.026 | 0.033 | |
| | 0.033 | 0.020 | 0.019 | 0.018 | 0.013 | 0.017 | 0.015 | 0.015 | 0.022 | 0.032 | |
| | 0.030 | 0.018 | 0.021 | 0.018 | 0.011 | 0.016 | 0.015 | 0.021 | 0.021 | 0.037 | |
| | 0.047 | 0.020 | 0.017 | 0.012 | 0.017 | 0.014 | 0.017 | 0.018 | 0.021 | 0.046 | |
| | 0.056 | 0.019 | 0.018 | 0.017 | 0.012 | 0.018 | 0.016 | 0.018 | 0.021 | 0.052 | |
| | 0.050 | 0.028 | 0.015 | 0.018 | 0.018 | 0.017 | 0.018 | 0.022 | 0.014 | 0.030 | |
| | | 0.032 | 0.021 | 0.020 | 0.014 | 0.018 | 0.019 | 0.021 | 0.026 | | |
| | | 0.037 | 0.020 | 0.018 | 0.015 | 0.016 | 0.019 | 0.024 | 0.032 | | |
| | | 0.048 | 0.024 | 0.020 | 0.014 | 0.014 | 0.017 | 0.028 | 0.047 | | |
| | | 0.046 | 0.022 | 0.019 | 0.015 | 0.011 | 0.026 | 0.027 | 0.047 | | |
| | | | 0.053 | 0.021 | 0.018 | 0.017 | 0.021 | 0.055 | | | |
| | | | 0.042 | 0.026 | 0.012 | 0.015 | 0.019 | 0.044 | | | |
| | | | | 0.043 | 0.011 | 0.032 | 0.044 | | | | |

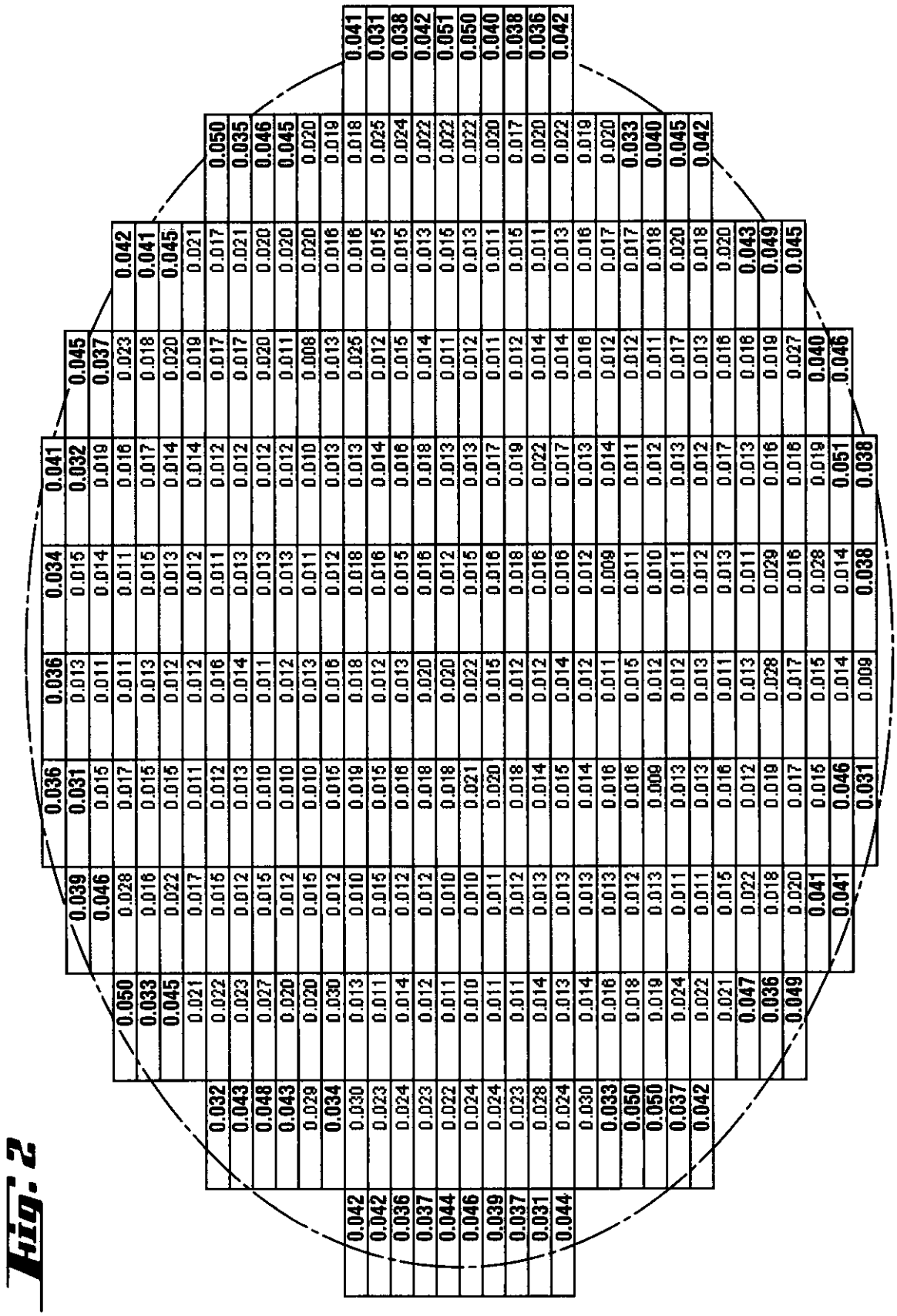

0.036 0.036 0.034 0.041 0.045
0.039 0.031 0.013 0.015 0.032 0.037
0.046 0.015 0.011 0.014 0.019 0.042
0.050 0.028 0.017 0.011 0.011 0.016 0.023 0.050
0.033 0.016 0.015 0.013 0.015 0.017 0.018 0.041
0.045 0.022 0.015 0.012 0.013 0.014 0.020 0.045
0.021 0.017 0.011 0.012 0.012 0.014 0.019 0.021
0.032 0.022 0.015 0.012 0.016 0.011 0.012 0.017 0.017 0.050
0.043 0.023 0.012 0.013 0.014 0.013 0.012 0.017 0.021 0.035
0.048 0.027 0.015 0.010 0.011 0.013 0.012 0.020 0.020 0.046
0.043 0.020 0.012 0.010 0.012 0.013 0.012 0.011 0.020 0.045
0.029 0.020 0.015 0.010 0.013 0.011 0.010 0.008 0.020 0.020
0.034 0.030 0.012 0.015 0.016 0.012 0.013 0.013 0.016 0.019
0.042 0.030 0.013 0.010 0.019 0.018 0.018 0.013 0.025 0.016 0.018 0.041
0.042 0.023 0.011 0.015 0.015 0.012 0.016 0.014 0.012 0.015 0.025 0.031
0.036 0.024 0.014 0.012 0.016 0.013 0.015 0.016 0.015 0.015 0.024 0.038
0.037 0.023 0.012 0.012 0.018 0.020 0.018 0.018 0.014 0.013 0.022 0.042
0.044 0.022 0.011 0.010 0.018 0.020 0.012 0.013 0.011 0.016 0.022 0.051
0.046 0.024 0.010 0.010 0.021 0.022 0.015 0.013 0.012 0.013 0.022 0.050
0.039 0.024 0.011 0.011 0.020 0.015 0.016 0.017 0.011 0.011 0.020 0.040
0.037 0.023 0.011 0.012 0.018 0.012 0.018 0.019 0.012 0.015 0.017 0.038
0.031 0.028 0.014 0.013 0.014 0.012 0.016 0.022 0.014 0.011 0.020 0.036
0.044 0.024 0.013 0.013 0.015 0.014 0.016 0.017 0.014 0.013 0.022 0.042
0.030 0.014 0.013 0.014 0.016 0.012 0.012 0.013 0.016 0.016 0.019
0.033 0.016 0.013 0.016 0.011 0.011 0.009 0.014 0.012 0.017 0.020
0.050 0.018 0.012 0.016 0.015 0.012 0.011 0.011 0.012 0.017 0.033
0.050 0.019 0.013 0.009 0.012 0.010 0.012 0.012 0.011 0.018 0.040
0.037 0.024 0.011 0.013 0.012 0.011 0.011 0.013 0.017 0.020 0.045
0.042 0.022 0.011 0.013 0.013 0.012 0.013 0.012 0.012 0.013 0.018 0.042
0.021 0.015 0.016 0.011 0.011 0.013 0.017 0.017 0.013 0.016 0.020
0.047 0.022 0.012 0.013 0.013 0.011 0.013 0.013 0.011 0.016 0.043
0.036 0.018 0.019 0.028 0.029 0.016 0.016 0.016 0.019 0.019 0.049
0.049 0.020 0.017 0.017 0.016 0.016 0.018 0.019 0.027 0.040 0.045
0.041 0.015 0.015 0.028 0.014 0.051 0.019 0.040 0.046
0.041 0.046 0.014 0.014 0.038 0.038
0.031 0.009

Fig. 2

Fig. 3

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | **0.040** | 0.018 | 0.018 | **0.041** | | | | |
| | | | **0.037** | 0.015 | 0.016 | 0.017 | 0.019 | **0.044** | | | |
| | | | **0.041** | 0.015 | 0.015 | 0.019 | 0.013 | **0.046** | | | |
| | | **0.045** | 0.018 | 0.019 | 0.015 | 0.015 | 0.017 | 0.015 | **0.045** | | |
| | | **0.043** | 0.018 | 0.018 | 0.014 | 0.010 | 0.015 | 0.015 | 0.033 | | |
| | | 0.033 | 0.019 | 0.018 | 0.013 | 0.010 | 0.020 | 0.019 | 0.019 | | |
| | | 0.023 | 0.015 | 0.020 | 0.016 | 0.017 | 0.018 | 0.016 | 0.017 | | |
| | **0.039** | 0.018 | 0.018 | 0.019 | 0.014 | 0.015 | 0.015 | 0.017 | 0.020 | **0.040** | |
| | **0.040** | 0.018 | 0.019 | 0.020 | 0.012 | 0.012 | 0.013 | 0.013 | 0.018 | **0.041** | |
| | **0.040** | 0.019 | 0.013 | 0.014 | 0.012 | 0.011 | 0.011 | 0.018 | 0.021 | 0.022 | |
| | 0.018 | 0.017 | 0.014 | 0.013 | 0.013 | 0.011 | 0.013 | 0.019 | 0.015 | 0.029 | |
| | 0.027 | 0.017 | 0.014 | 0.013 | 0.011 | 0.013 | 0.017 | 0.012 | 0.018 | 0.019 | |
| | 0.025 | 0.018 | 0.016 | 0.020 | 0.015 | 0.013 | 0.019 | 0.014 | 0.020 | 0.018 | |
| **0.043** | 0.018 | 0.018 | 0.014 | 0.018 | 0.016 | 0.016 | 0.016 | 0.015 | 0.017 | 0.020 | **0.042** |
| **0.044** | 0.020 | 0.021 | 0.018 | 0.018 | 0.018 | 0.018 | 0.017 | 0.012 | 0.020 | 0.018 | **0.044** |
| **0.040** | 0.017 | 0.021 | 0.019 | 0.018 | 0.012 | 0.018 | 0.015 | 0.015 | 0.015 | 0.017 | **0.041** |
| **0.039** | 0.017 | 0.015 | 0.018 | 0.012 | 0.017 | 0.015 | 0.015 | 0.020 | 0.017 | 0.026 | **0.040** |
| **0.046** | 0.019 | 0.013 | 0.019 | 0.016 | 0.017 | 0.016 | 0.017 | 0.016 | 0.018 | 0.017 | **0.045** |
| **0.041** | 0.017 | 0.014 | 0.014 | 0.015 | 0.018 | 0.014 | 0.018 | 0.017 | 0.018 | 0.017 | **0.045** |
| **0.046** | 0.018 | 0.012 | 0.013 | 0.015 | 0.018 | 0.017 | 0.016 | 0.012 | 0.013 | 0.019 | **0.043** |
| **0.040** | 0.018 | 0.011 | 0.011 | 0.020 | 0.013 | 0.017 | 0.019 | 0.011 | 0.011 | 0.028 | **0.043** |
| **0.040** | 0.018 | 0.013 | 0.013 | 0.019 | 0.016 | 0.018 | 0.018 | 0.012 | 0.014 | 0.018 | **0.046** |
| **0.039** | 0.018 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.016 | 0.012 | 0.013 | 0.022 | 0.035 |
| | 0.020 | 0.020 | 0.014 | 0.015 | 0.016 | 0.014 | 0.017 | 0.015 | 0.012 | 0.017 | |
| | 0.017 | 0.016 | 0.018 | 0.013 | 0.015 | 0.017 | 0.010 | 0.016 | 0.018 | 0.018 | |
| | 0.018 | 0.016 | 0.011 | 0.012 | 0.020 | 0.014 | 0.013 | 0.022 | 0.018 | 0.018 | |
| | **0.045** | 0.015 | 0.015 | 0.016 | 0.014 | 0.012 | 0.015 | 0.013 | 0.017 | **0.041** | |
| | **0.041** | 0.018 | 0.018 | 0.014 | 0.011 | 0.015 | 0.011 | 0.018 | 0.018 | **0.041** | |
| | **0.046** | 0.015 | 0.018 | 0.015 | 0.015 | 0.010 | 0.013 | 0.009 | 0.013 | 0.017 | |
| | | 0.014 | 0.018 | 0.013 | 0.013 | 0.012 | 0.017 | 0.013 | 0.016 | | |
| | | 0.018 | 0.018 | 0.016 | 0.012 | 0.016 | 0.018 | 0.016 | 0.017 | | |
| | | **0.040** | 0.018 | 0.014 | 0.016 | 0.019 | 0.018 | 0.017 | **0.038** | | |
| | | **0.045** | 0.018 | 0.017 | 0.015 | 0.019 | 0.019 | 0.021 | **0.042** | | |
| | | | **0.043** | 0.019 | 0.019 | 0.020 | 0.023 | **0.045** | | | |
| | | | **0.040** | 0.017 | 0.014 | 0.019 | 0.023 | **0.045** | | | |
| | | | | **0.043** | 0.010 | 0.017 | **0.040** | | | | |

Fig. 4

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0.016 | 0.018 | 0.013 | 0.019 | | | | |
| | | | 0.012 | 0.015 | 0.018 | 0.015 | 0.018 | 0.013 | | | |
| | | | 0.015 | 0.015 | 0.013 | 0.017 | 0.018 | 0.019 | | | |
| | | 0.016 | 0.018 | 0.018 | 0.013 | 0.016 | 0.018 | 0.018 | 0.018 | | |
| | | 0.019 | 0.019 | 0.017 | 0.010 | 0.010 | 0.015 | 0.019 | 0.019 | | |
| | | 0.019 | 0.019 | 0.014 | 0.013 | 0.010 | 0.017 | 0.019 | 0.018 | | |
| | | 0.026 | 0.015 | 0.018 | 0.015 | 0.011 | 0.017 | 0.015 | 0.017 | | |
| | 0.017 | 0.018 | 0.014 | 0.017 | 0.014 | 0.011 | 0.013 | 0.017 | 0.017 | 0.017 | |
| | 0.017 | 0.017 | 0.018 | 0.017 | 0.013 | 0.009 | 0.013 | 0.014 | 0.018 | 0.018 | |
| | 0.018 | 0.015 | 0.014 | 0.014 | 0.014 | 0.013 | 0.017 | 0.012 | 0.019 | 0.018 | |
| | 0.018 | 0.019 | 0.012 | 0.012 | 0.011 | 0.010 | 0.016 | 0.012 | 0.015 | 0.019 | |
| | 0.019 | 0.010 | 0.015 | 0.013 | 0.014 | 0.014 | 0.016 | 0.012 | 0.018 | 0.018 | |
| | 0.018 | 0.019 | 0.014 | 0.013 | 0.014 | 0.013 | 0.019 | 0.010 | 0.017 | 0.018 | |
| 0.018 | 0.018 | 0.018 | 0.013 | 0.018 | 0.014 | 0.015 | 0.016 | 0.010 | 0.017 | 0.018 | 0.017 |
| 0.016 | 0.018 | 0.014 | 0.012 | 0.019 | 0.016 | 0.017 | 0.017 | 0.012 | 0.017 | 0.017 | 0.017 |
| 0.014 | 0.017 | 0.014 | 0.014 | 0.017 | 0.019 | 0.018 | 0.018 | 0.015 | 0.015 | 0.017 | 0.018 |
| 0.014 | 0.017 | 0.016 | 0.017 | 0.015 | 0.019 | 0.014 | 0.017 | 0.018 | 0.017 | 0.017 | 0.017 |
| 0.018 | 0.019 | 0.013 | 0.016 | 0.017 | 0.017 | 0.019 | 0.017 | 0.015 | 0.011 | 0.019 | 0.019 |
| 0.019 | 0.017 | 0.012 | 0.014 | 0.014 | 0.017 | 0.014 | 0.016 | 0.014 | 0.011 | 0.017 | 0.017 |
| 0.012 | 0.018 | 0.012 | 0.012 | 0.014 | 0.018 | 0.018 | 0.018 | 0.012 | 0.013 | 0.018 | 0.019 |
| 0.015 | 0.018 | 0.013 | 0.011 | 0.019 | 0.014 | 0.015 | 0.018 | 0.011 | 0.011 | 0.019 | 0.016 |
| 0.015 | 0.018 | 0.013 | 0.013 | 0.018 | 0.014 | 0.014 | 0.018 | 0.012 | 0.014 | 0.018 | 0.016 |
| 0.018 | 0.018 | 0.011 | 0.011 | 0.015 | 0.015 | 0.015 | 0.016 | 0.012 | 0.013 | 0.019 | 0.016 |
| | 0.019 | 0.011 | 0.013 | 0.015 | 0.014 | 0.013 | 0.013 | 0.015 | 0.012 | 0.017 | |
| | 0.017 | 0.016 | 0.012 | 0.013 | 0.014 | 0.011 | 0.015 | 0.016 | 0.018 | 0.018 | |
| | 0.018 | 0.016 | 0.011 | 0.008 | 0.011 | 0.012 | 0.010 | 0.010 | 0.018 | 0.018 | |
| | 0.013 | 0.015 | 0.013 | 0.011 | 0.011 | 0.016 | 0.010 | 0.013 | 0.017 | 0.018 | |
| | 0.013 | 0.018 | 0.016 | 0.011 | 0.011 | 0.012 | 0.011 | 0.013 | 0.018 | 0.018 | |
| | 0.018 | 0.017 | 0.015 | 0.010 | 0.010 | 0.010 | 0.012 | 0.009 | 0.013 | 0.017 | |
| | | 0.018 | 0.014 | 0.013 | 0.010 | 0.015 | 0.012 | 0.013 | 0.018 | | |
| | | 0.018 | 0.018 | 0.013 | 0.012 | 0.013 | 0.011 | 0.016 | 0.017 | | |
| | | 0.017 | 0.018 | 0.015 | 0.009 | 0.013 | 0.009 | 0.017 | 0.017 | | |
| | | 0.019 | 0.019 | 0.018 | 0.016 | 0.011 | 0.015 | 0.017 | 0.019 | | |
| | | | 0.017 | 0.019 | 0.014 | 0.010 | 0.017 | 0.019 | | | |
| | | | 0.019 | 0.017 | 0.014 | 0.019 | 0.017 | 0.019 | | | |
| | | | | 0.019 | 0.010 | 0.017 | 0.019 | | | | |

Fig. 5

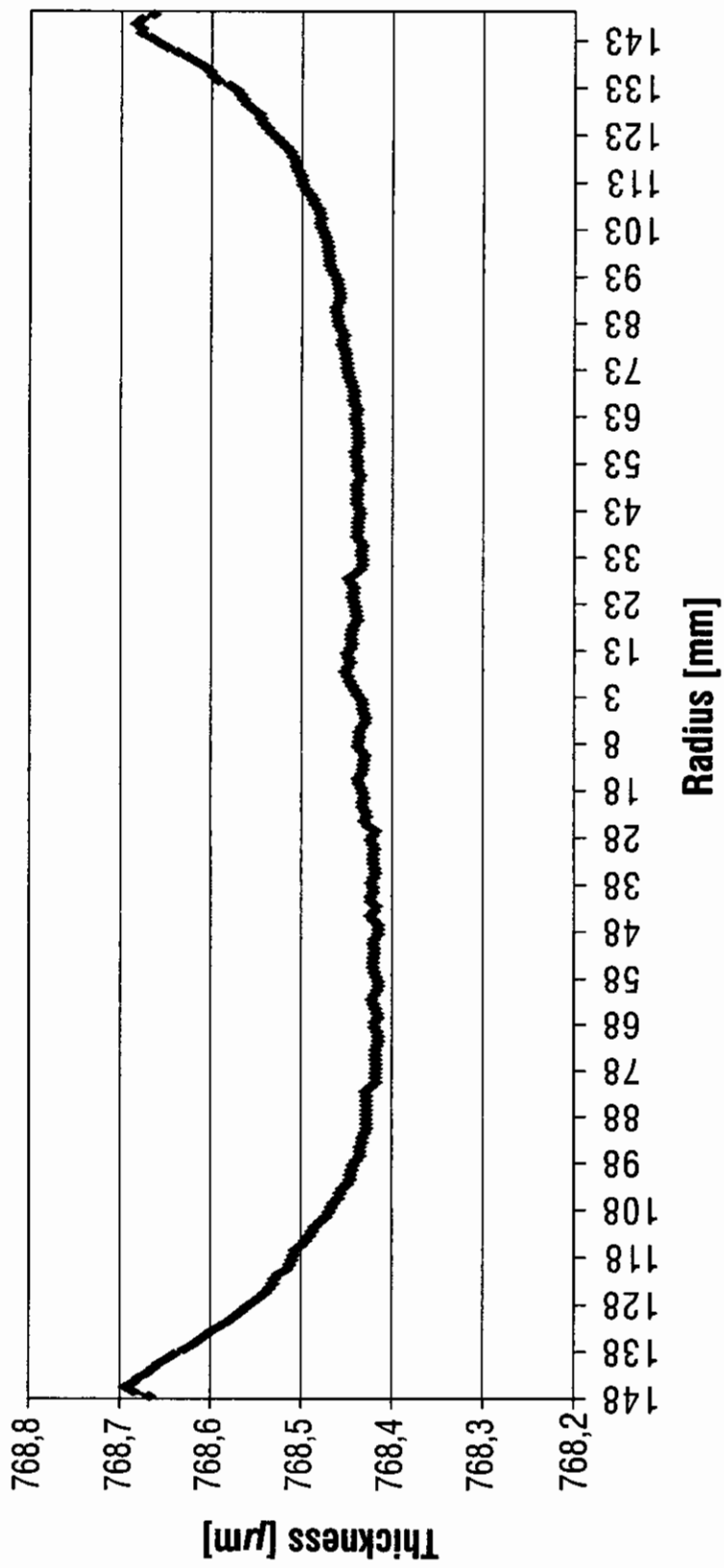
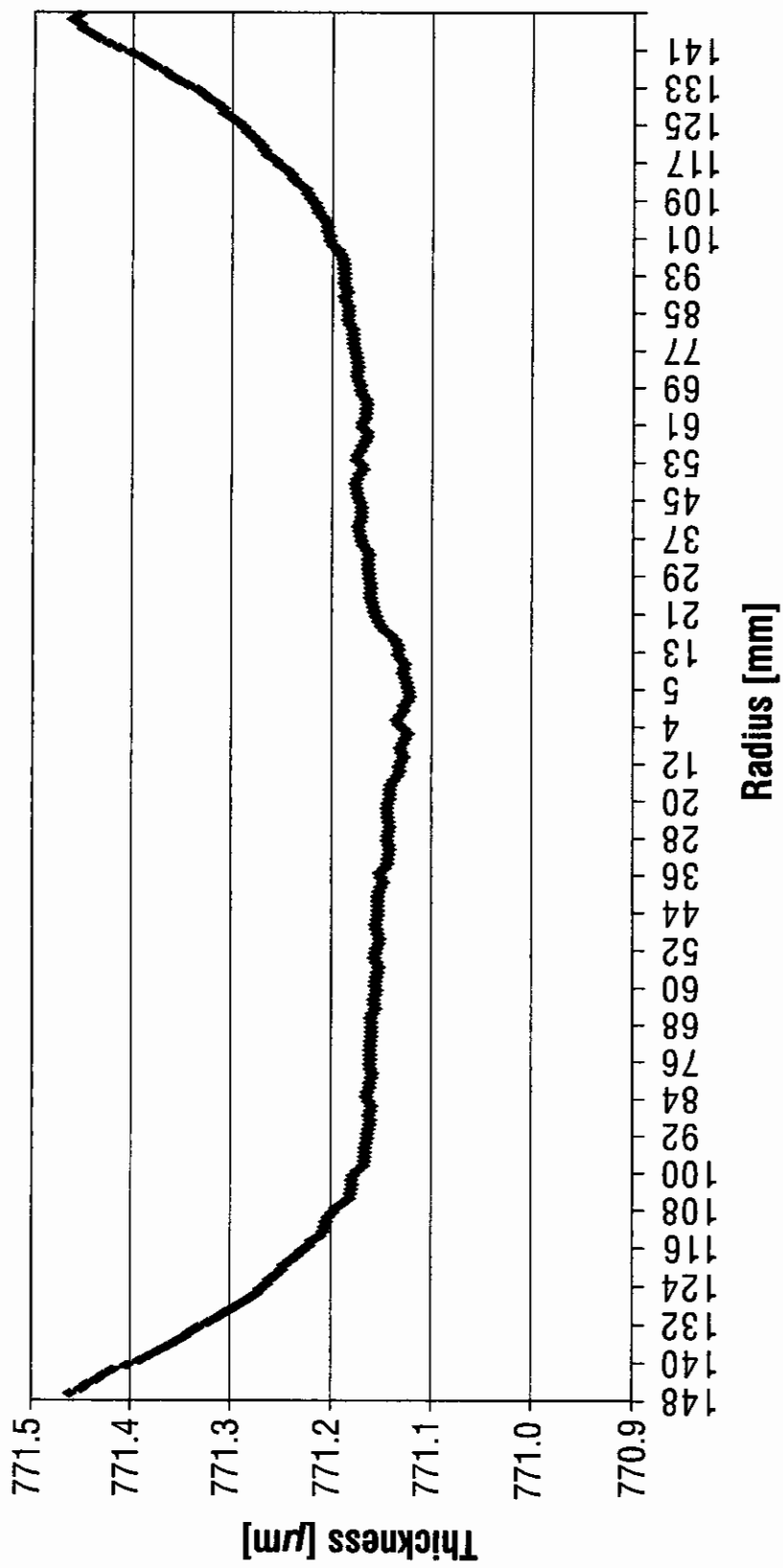

Thickness [µm]
768,8
768,7
768,6
768,5
768,4
768,3
768,2
Radius [mm]
148
138
128
118
108
98
88
78
68
58
48
38
28
18
8
3
13
23
33
43
53
63
73
83
93
103
113
123
133
143

Fig. 6


Thickness [µm]
771.5
771.4
771.3
771.2
771.1
771.0
770.9
Radius [mm]
148
140
132
124
116
108
100
92
84
76
68
60
52
44
36
28
20
12
4
5
13
21
29
37
45
53
61
69
77
85
93
101
109
117
125
133
141

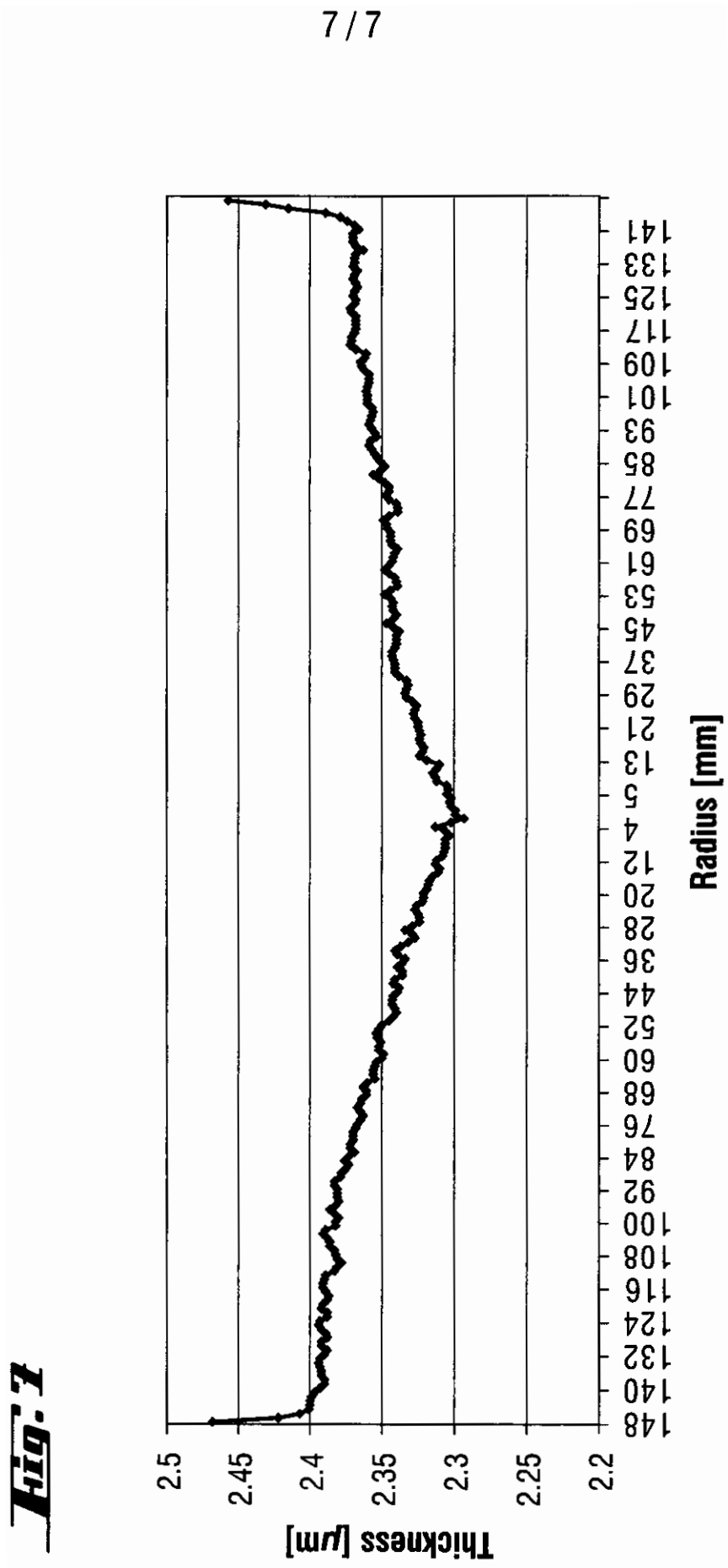

Thickness [µm]
2.5
2.45
2.4
2.35
2.3
2.25
2.2
Radius [mm]
148
140
132
124
116
108
100
92
84
76
68
60
52
44
36
28
20
12
4
5
13
21
29
37
45
53
61
69
77
85
93
101
109
117
125
133
141

Fig. 1