

| Group 2. SteelUnpolished. | | | | | | | | | | | | |
|---------------------------|--|----------|-------------|------------|------------|------------------------------|---|------------|------------|------------------------------|---------|---|
| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
| 1 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 1 | A | 25.8 | 84.5 | 70.700 | 76.301 | 73.5 | 1.7163 | 72.29 | 77.89 | 75.089 | 1.6445 | 2.1159 |
| | B | 96.5 | 84.5 | | | 0 | | | | | | |
| | D | 61 | 122.8 | | | 0 | | | | | | |
| | C | 61.3 | 46.5 | | | 0 | | | | | | |
| 2 | A | 27.3 | 91.3 | 74.000 | 80.204 | 77.1 | 1.5598 | 74.70 | 80.91 | 77.803 | 1.5317 | 0.9040 |
| | B | 101.3 | 91.3 | | | 0 | | | | | | |
| | D | 64.5 | 130.5 | | | 0 | | | | | | |
| | C | 65.3 | 50.3 | | | 0 | | | | | | |
| 3 | A | 17 | 88 | 70.512 | 76.700 | 73.6 | 1.7117 | 71.16 | 77.35 | 74.255 | 1.6816 | 0.8817 |
| | B | 87.5 | 89.3 | | | 0 | | | | | | |
| | D | 52.5 | 126.5 | | | 0 | | | | | | |
| | C | 52.3 | 49.8 | | | 0 | | | | | | |
| 4 | A | 21.3 | 72.3 | 61.018 | 67.017 | 64 | 2.2637 | 61.62 | 67.62 | 64.621 | 2.2204 | 0.9603 |
| | B | 82.3 | 73.8 | | | 0 | | | | | | |
| | D | 51 | 106 | | | 0 | | | | | | |
| | C | 52.5 | 39 | | | 0 | | | | | | |
| 5 | A | 30 | 90.5 | 62.826 | 65.517 | 64.1 | 2.2566 | 63.44 | 66.13 | 64.782 | 2.2093 | 1.0535 |
| | B | 92.8 | 92.3 | | | 0 | | | | | | |
| | D | 62.3 | 125.8 | | | 0 | | | | | | |
| | C | 63.8 | 60.3 | | | 0 | | | | | | |
| 6 | A | 31.8 | 67.3 | 54.221 | 60.000 | 57.1 | 2.8438 | 54.43 | 60.21 | 57.321 | 2.8219 | 0.3859 |
| | B | 86 | 68.8 | | | 0 | | | | | | |
| | D | 59.3 | 98.5 | | | 0 | | | | | | |
| | C | 59.3 | 38.5 | | | 0 | | | | | | |
| 7 | A | 18.5 | 83 | 72.111 | 77.002 | 74.6 | 1.6661 | 72.19 | 77.08 | 74.633 | 1.6646 | 0.0443 |
| | B | 90.5 | 87 | | | 0 | | | | | | |
| | D | 56.3 | 123.8 | | | 0 | | | | | | |
| | C | 56.8 | 46.8 | | | 0 | | | | | | |
| 8 | A | 22.5 | 64 | 63.502 | 68.801 | 66.1 | 2.1221 | 63.78 | 69.08 | 66.429 | 2.1011 | 0.4956 |
| | B | 86 | 64.5 | | | 0 | | | | | | |
| | D | 54.8 | 97.8 | | | 0 | | | | | | |
| | C | 54.5 | 29 | | | 0 | | | | | | |
| 9 | A | 17.3 | 66.8 | 64.702 | 70.500 | 67.6 | 2.0290 | 64.81 | 70.61 | 67.712 | 2.0223 | 0.1648 |
| | B | 82 | 67.3 | | | 0 | | | | | | |
| | D | 49.8 | 101.5 | | | 0 | | | | | | |
| | C | 50 | 31 | | | 0 | | | | | | |
| 10 | A | 19.8 | 72.5 | 63.501 | 67.024 | 65.3 | 2.1744 | 64.00 | 67.52 | 65.759 | 2.1442 | 0.6977 |
| | B | 83.3 | 72.8 | | | 0 | | | | | | |
| | D | 52 | 106.3 | | | 0 | | | | | | |
| | C | 53.8 | 39.3 | | | 0 | | | | | | |

Group 2. SteelUnpolished.

| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
|--------|--|----------|-------------|------------|------------|------------------------------|---|------------|------------|------------------------------|---------|---|
| 2 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 11 | A | 28.8 | 98 | 59.008 | 60.901 | 59.9 | 2.5842 | 59.22 | 61.11 | 60.166 | 2.5614 | 0.4417 |
| | B | 87.8 | 97 | | | 0 | | | | | | |
| | D | 55 | 131.8 | | | 0 | | | | | | |
| | C | 58.5 | 71 | | | 0 | | | | | | |
| 12 | A | 15.3 | 97.8 | 61.040 | 66.508 | 63.8 | 2.2779 | 61.65 | 67.12 | 64.385 | 2.2367 | 0.9078 |
| | B | 76.3 | 100 | | | 0 | | | | | | |
| | D | 45.5 | 134 | | | 0 | | | | | | |
| | C | 46.5 | 67.5 | | | 0 | | | | | | |
| 13 | A | 17.5 | 82 | 68.812 | 72.502 | 70.6 | 1.8602 | 69.08 | 72.77 | 70.929 | 1.8430 | 0.4638 |
| | B | 86.3 | 83.3 | | | 0 | | | | | | |
| | D | 51.8 | 119 | | | 0 | | | | | | |
| | C | 52.3 | 46.5 | | | 0 | | | | | | |
| 14 | A | 19.5 | 73 | 68.812 | 78.500 | 73.6 | 1.7117 | 68.82 | 78.51 | 73.666 | 1.7086 | 0.0893 |
| | B | 88.3 | 74.3 | | | 0 | | | | | | |
| | D | 53.5 | 114 | | | 0 | | | | | | |
| | C | 53.5 | 35.5 | | | 0 | | | | | | |
| 15 | A | 23.8 | 68.3 | 70.003 | 77.515 | 73.8 | 1.7024 | 70.08 | 77.59 | 73.836 | 1.7007 | 0.0492 |
| | B | 93.8 | 69 | | | 0 | | | | | | |
| | D | 57.3 | 107.3 | | | 0 | | | | | | |
| | C | 58.8 | 29.8 | | | 0 | | | | | | |
| 16 | A | 10.8 | 100.5 | 49.010 | 52.314 | 50.6 | 3.6214 | 49.08 | 52.38 | 50.727 | 3.6032 | 0.2508 |
| | B | 59.8 | 101.5 | | | 0 | | | | | | |
| | D | 35.3 | 127.3 | | | 0 | | | | | | |
| | C | 36.5 | 75 | | | 0 | | | | | | |
| 17 | A | 17.5 | 71.5 | 66.805 | 72.700 | 69.8 | 1.9031 | 66.87 | 72.77 | 69.820 | 1.9020 | 0.0281 |
| | B | 84.3 | 72.3 | | | 0 | | | | | | |
| | D | 50.8 | 109 | | | 0 | | | | | | |
| | C | 51 | 36.3 | | | 0 | | | | | | |
| 18 | A | 12.8 | 82.3 | 71.203 | 76.201 | 73.8 | 1.7024 | 71.32 | 76.32 | 73.819 | 1.7015 | 0.0263 |
| | B | 84 | 83 | | | 0 | | | | | | |
| | D | 47.3 | 120.5 | | | 0 | | | | | | |
| | C | 47 | 44.3 | | | 0 | | | | | | |
| 19 | A | 29 | 90.3 | 69.552 | 79.500 | 74.5 | 1.6706 | 70.10 | 80.05 | 75.078 | 1.6449 | 0.7704 |
| | B | 98.5 | 93 | | | 0 | | | | | | |
| | D | 63.5 | 131.3 | | | 0 | | | | | | |
| | C | 63.5 | 51.8 | | | 0 | | | | | | |
| 20 | A | 15.5 | 80.8 | 71.820 | 77.519 | 74.6 | 1.6661 | 72.32 | 78.01 | 75.165 | 1.6411 | 0.7518 |
| | B | 87.3 | 82.5 | | | 0 | | | | | | |
| | D | 49.8 | 120 | | | 0 | | | | | | |
| | C | 51.5 | 42.5 | | | 0 | | | | | | |

| Group 2. SteelUnpolished. | | | | | | | | | | | | |
|---------------------------|--|--------------------------|-----------------------------|----------------------------|----------------------------|--|---|----------------------------|----------------------------|--|------------|---|
| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
| 3 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 21 | A | 22 | 99.8 | 53.813 | 57.801 | 55.8 | 2.9779 | 53.84 | 57.82 | 55.830 | 2.9747 | 0.0534 |
| | B | 75.8 | 101 | | | 0 | | | | | | |
| | D | 48 | 129.8 | | | 0 | | | | | | |
| | C | 48.3 | 72 | | | 0 | | | | | | |
| 22 | A | 17.5 | 88 | 50.802 | 53.702 | 52.3 | 3.3898 | 51.14 | 54.04 | 52.592 | 3.3522 | 0.5557 |
| | B | 68.3 | 88.5 | | | 0 | | | | | | |
| | D | 42.3 | 115.5 | | | 0 | | | | | | |
| | C | 41.8 | 61.8 | | | 0 | | | | | | |
| 23 | A | 15.3 | 88.5 | 52.501 | 58.302 | 55.4 | 3.0210 | 53.06 | 58.86 | 55.956 | 2.9613 | 0.9933 |
| | B | 67.8 | 88.8 | | | 0 | | | | | | |
| | D | 41 | 117.8 | | | 0 | | | | | | |
| | C | 41.5 | 59.5 | | | 0 | | | | | | |
| 24 | A | 27 | 101.5 | 51.800 | 56.200 | 54 | 3.1797 | 51.83 | 56.23 | 54.029 | 3.1763 | 0.0538 |
| | B | 78.8 | 101.5 | | | 0 | | | | | | |
| | D | 52.8 | 129.5 | | | 0 | | | | | | |
| | C | 52.8 | 73.3 | | | 0 | | | | | | |
| 25 | A | 26.5 | 72.3 | 50.805 | 55.502 | 53.1 | 3.2884 | 50.91 | 55.61 | 53.257 | 3.2690 | 0.2953 |
| | B | 77.3 | 73 | | | 0 | | | | | | |
| | D | 52 | 100.8 | | | 0 | | | | | | |
| | C | 52.5 | 45.3 | | | 0 | | | | | | |
| 26 | A | 25 | 99.8 | 53.809 | 60.012 | 56.9 | 2.8638 | 53.86 | 60.06 | 56.959 | 2.8579 | 0.1043 |
| | B | 78.8 | 100.8 | | | 0 | | | | | | |
| | D | 50.8 | 131.3 | | | 0 | | | | | | |
| | C | 52 | 71.3 | | | 0 | | | | | | |
| 27 | A | 25.8 | 84.3 | 53.205 | 58.002 | 55.6 | 2.9993 | 53.33 | 58.13 | 55.730 | 2.9853 | 0.2336 |
| | B | 79 | 85 | | | 0 | | | | | | |
| | D | 52.3 | 114 | | | 0 | | | | | | |
| | C | 52.8 | 56 | | | 0 | | | | | | |
| 28 | A | 32.3 | 100.3 | 51.202 | 57.002 | 54.1 | 3.1680 | 51.23 | 57.03 | 54.132 | 3.1643 | 0.0584 |
| | B | 83.5 | 100.8 | | | 0 | | | | | | |
| | D | 58 | 129.3 | | | 0 | | | | | | |
| | C | 57.5 | 72.3 | | | 0 | | | | | | |
| 29 | A | 28 | 100 | 51.301 | 56.702 | 54 | 3.1797 | 51.38 | 56.78 | 54.082 | 3.1701 | 0.1508 |
| | B | 79.3 | 100.3 | | | 0 | | | | | | |
| | D | 53 | 128.5 | | | 0 | | | | | | |
| | C | 53.5 | 71.8 | | | 0 | | | | | | |
| 30 | A | 27.5 | 100.5 | 52.301 | 57.300 | 54.8 | 3.0875 | 52.36 | 57.35 | 54.855 | 3.0813 | 0.1009 |
| | B | 79.8 | 100.8 | | | 0 | | | | | | |
| | D | 53.8 | 129.3 | | | 0 | | | | | | |
| | C | 53.8 | 72 | | | 0 | | | | | | |

Group 2. SteelUnpolished.

| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
|--------|--|--------------------------|-----------------------------|----------------------------|----------------------------|--|---|----------------------------|----------------------------|--|------------|--|
| 4 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 31 | A | 21 | 88.5 | 56.506 | 60.002 | 58.3 | 2.7279 | 57.14 | 60.63 | 58.885 | 2.6741 | 0.9927 |
| | B | 77.5 | 89.3 | | | 0 | | | | | | |
| | D | 49.3 | 120.8 | | | 0 | | | | | | |
| | C | 49.8 | 60.8 | | | 0 | | | | | | |
| 32 | A | 24.8 | 72 | 61.518 | 68.812 | 65.1 | 2.1878 | 61.53 | 68.83 | 65.181 | 2.1824 | 0.1246 |
| | B | 86.3 | 73.5 | | | 0 | | | | | | |
| | D | 54.5 | 106.8 | | | 0 | | | | | | |
| | C | 55.8 | 38 | | | 0 | | | | | | |
| 33 | A | 27 | 77.5 | 67.517 | 72.307 | 69.9 | 1.8977 | 67.61 | 72.40 | 70.001 | 1.8922 | 0.1448 |
| | B | 94.5 | 79 | | | 0 | | | | | | |
| | D | 60.8 | 114.8 | | | 0 | | | | | | |
| | C | 61.8 | 42.5 | | | 0 | | | | | | |
| 34 | A | 20 | 72.3 | 74.307 | 79.506 | 76.9 | 1.5679 | 74.84 | 80.04 | 77.438 | 1.5462 | 0.6943 |
| | B | 94.3 | 73.3 | | | 0 | | | | | | |
| | D | 55.8 | 113 | | | 0 | | | | | | |
| | C | 56.8 | 33.5 | | | 0 | | | | | | |
| 35 | A | 14 | 92.8 | 70.807 | 77.503 | 74.1 | 1.6886 | 71.44 | 78.13 | 74.784 | 1.6579 | 0.9145 |
| | B | 84.8 | 93.8 | | | 0 | | | | | | |
| | D | 48.3 | 132.3 | | | 0 | | | | | | |
| | C | 49 | 54.8 | | | 0 | | | | | | |
| 36 | A | 18.8 | 95 | 66.707 | 73.500 | 70.1 | 1.8869 | 66.72 | 73.51 | 70.115 | 1.8860 | 0.0217 |
| | B | 85.5 | 96 | | | 0 | | | | | | |
| | D | 52.3 | 131.3 | | | 0 | | | | | | |
| | C | 52.5 | 57.8 | | | 0 | | | | | | |
| 37 | A | 33.8 | 87.8 | 52.002 | 60.002 | 54.3 | 3.1447 | 52.01 | 60.01 | 56.013 | 2.9553 | 3.0576 |
| | B | 85.8 | 88.3 | | | 0 | | | | | | |
| | D | 59.5 | 116.5 | | | 0 | | | | | | |
| | C | 60 | 60 | | | 0 | | | | | | |
| 38 | A | 33.5 | 74.3 | 53.314 | 59.002 | 56.1 | 2.9461 | 53.38 | 59.07 | 56.223 | 2.9333 | 0.2179 |
| | B | 86.8 | 75.5 | | | 0 | | | | | | |
| | D | 60.3 | 103.5 | | | 0 | | | | | | |
| | C | 59.8 | 44.5 | | | 0 | | | | | | |
| 39 | A | 19.8 | 74 | 71.237 | 77.800 | 74.5 | 1.6706 | 71.33 | 77.89 | 74.609 | 1.6657 | 0.1459 |
| | B | 91 | 76.3 | | | 0 | | | | | | |
| | D | 56.3 | 113.8 | | | 0 | | | | | | |
| | C | 56.5 | 36 | | | 0 | | | | | | |
| 40 | A | 15.8 | 94.5 | 71.005 | 79.300 | 75.1 | 1.6440 | 71.08 | 79.37 | 75.227 | 1.6384 | 0.1688 |
| | B | 86.8 | 95.3 | | | 0 | | | | | | |
| | D | 51 | 135.3 | | | 0 | | | | | | |
| | C | 51 | 56 | | | 0 | | | | | | |

Group 2. SteelUnpolished.

| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
|--------|--|--------------------------|-----------------------------|----------------------------|----------------------------|---|---|----------------------------|----------------------------|--|------------|--|
| 5 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 41 | A | 26.3 | 95.5 | 52.716 | 56.500 | 54.6 | 3.1102 | 52.94 | 56.72 | 54.828 | 3.0844 | 0.4162 |
| | B | 79 | 96.8 | | | 0 | | | | | | |
| | D | 53.3 | 124 | | | 0 | | | | | | |
| | C | 53.5 | 67.5 | | | 0 | | | | | | |
| 42 | A | 27 | 100.3 | 69.345 | 76.332 | 72.8 | 1.7495 | 70.38 | 77.37 | 73.876 | 1.6989 | 1.4561 |
| | B | 96.3 | 102.8 | | | 0 | | | | | | |
| | D | 59.8 | 141.3 | | | 0 | | | | | | |
| | C | 62 | 65 | | | 0 | | | | | | |
| 43 | A | 25.5 | 70 | 70.507 | 76.009 | 73.3 | 1.7257 | 70.64 | 76.15 | 73.395 | 1.7213 | 0.1288 |
| | B | 96 | 71 | | | 0 | | | | | | |
| | D | 60.3 | 107.5 | | | 0 | | | | | | |
| | C | 61.5 | 31.5 | | | 0 | | | | | | |
| 44 | A | 23 | 89.5 | 51.502 | 57.501 | 54.5 | 3.1216 | 51.52 | 57.52 | 54.518 | 3.1196 | 0.0329 |
| | B | 74.5 | 90 | | | 0 | | | | | | |
| | D | 48.5 | 118.5 | | | 0 | | | | | | |
| | C | 48.8 | 61 | | | 0 | | | | | | |
| 45 | A | 30.8 | 91.5 | 48.203 | 53.302 | 50.8 | 3.5929 | 48.76 | 53.86 | 51.313 | 3.5214 | 1.0007 |
| | B | 79 | 92 | | | 0 | | | | | | |
| | D | 55.8 | 118.3 | | | 0 | | | | | | |
| | C | 55.3 | 65 | | | 0 | | | | | | |
| 46 | A | 32.3 | 90.8 | 49.010 | 52.531 | 50.8 | 3.5929 | 50.07 | 53.59 | 51.830 | 3.4516 | 1.9863 |
| | B | 81.3 | 91.8 | | | 0 | | | | | | |
| | D | 55.5 | 118 | | | 0 | | | | | | |
| | C | 57.3 | 65.5 | | | 0 | | | | | | |
| 47 | A | 37.3 | 97 | 47.203 | 53.502 | 50.4 | 3.6502 | 47.87 | 54.17 | 51.022 | 3.5618 | 1.2184 |
| | B | 84.5 | 96.5 | | | 0 | | | | | | |
| | D | 62.3 | 123 | | | 0 | | | | | | |
| | C | 61.8 | 69.5 | | | 0 | | | | | | |
| 48 | A | 31.3 | 89.3 | 50.000 | 53.009 | 51.5 | 3.4959 | 50.55 | 53.56 | 52.051 | 3.4223 | 1.0589 |
| | B | 81.3 | 89.3 | | | 0 | | | | | | |
| | D | 56.8 | 114.8 | | | 0 | | | | | | |
| | C | 57.8 | 61.8 | | | 0 | | | | | | |
| 49 | A | 15 | 87.5 | 71.302 | 78.006 | 74.6 | 1.6661 | 71.59 | 78.29 | 74.938 | 1.6511 | 0.4512 |
| | B | 86.3 | 88 | | | 0 | | | | | | |
| | D | 50.5 | 127 | | | 0 | | | | | | |
| | C | 51.5 | 49 | | | 0 | | | | | | |
| 50 | A | 18.8 | 84.3 | 71.210 | 75.702 | 73.5 | 1.7163 | 71.49 | 75.98 | 73.735 | 1.7054 | 0.3181 |
| | B | 90 | 85.5 | | | 0 | | | | | | |
| | D | 56.5 | 123 | | | 0 | | | | | | |
| | C | 57 | 47.3 | | | 0 | | | | | | |

Group 2. SteelUnpolished.

| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
|--------|--|----------|-------------|------------|------------|------------------------------|---|------------|------------|------------------------------|---------|---|
| 6 of 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 51 | A | 22.3 | 77.3 | 52.738 | 57.000 | 54.9 | 3.0763 | 52.79 | 57.05 | 54.917 | 3.0743 | 0.0317 |
| | B | 75 | 79.3 | | | 0 | | | | | | |
| | D | 49.5 | 106.8 | | | 0 | | | | | | |
| | C | 49.3 | 49.8 | | | 0 | | | | | | |
| 52 | A | 14.8 | 99.3 | 69.004 | 73.707 | 71.4 | 1.8188 | 69.10 | 73.80 | 71.450 | 1.8162 | 0.0704 |
| | B | 83.8 | 100 | | | 0 | | | | | | |
| | D | 49.5 | 136.5 | | | 0 | | | | | | |
| | C | 50.5 | 62.8 | | | 0 | | | | | | |
| 53 | A | 23.8 | 80.3 | 52.705 | 57.800 | 55.3 | 3.0320 | 52.71 | 57.81 | 55.259 | 3.0364 | -0.0737 |
| | B | 76.5 | 81 | | | 0 | | | | | | |
| | D | 50.8 | 109.3 | | | 0 | | | | | | |
| | C | 51 | 51.5 | | | 0 | | | | | | |
| 54 | A | 23.5 | 80.3 | 53.837 | 58.204 | 56 | 2.9566 | 54.12 | 58.48 | 56.300 | 2.9252 | 0.5332 |
| | B | 77.3 | 82.3 | | | 0 | | | | | | |
| | D | 49.8 | 110 | | | 0 | | | | | | |
| | C | 50.5 | 51.8 | | | 0 | | | | | | |
| 55 | A | 24.8 | 79 | 55.506 | 60.200 | 57.9 | 2.7658 | 55.64 | 60.34 | 57.991 | 2.7571 | 0.1576 |
| | B | 80.3 | 79.8 | | | 0 | | | | | | |
| | D | 52.8 | 110.5 | | | 0 | | | | | | |
| | C | 53 | 50.3 | | | 0 | | | | | | |
| 56 | A | 18 | 86 | 73.507 | 80.202 | 76.9 | 1.5679 | 73.53 | 80.23 | 76.880 | 1.5687 | -0.0254 |
| | B | 91.5 | 87 | | | 0 | | | | | | |
| | D | 54.8 | 126.5 | | | 0 | | | | | | |
| | C | 55.3 | 46.3 | | | 0 | | | | | | |
| 57 | A | 15 | 88.8 | 70.528 | 78.302 | 74.4 | 1.6750 | 70.61 | 78.38 | 74.498 | 1.6706 | 0.1320 |
| | B | 85.5 | 90.8 | | | 0 | | | | | | |
| | D | 49 | 124.3 | | | 0 | | | | | | |
| | C | 49.5 | 46 | | | 0 | | | | | | |
| 58 | A | 17 | 97.3 | 68.307 | 73.502 | 70.9 | 1.8445 | 68.87 | 74.06 | 71.463 | 1.8155 | 0.7885 |
| | B | 85.3 | 98.3 | | | 0 | | | | | | |
| | D | 51.3 | 136.3 | | | 0 | | | | | | |
| | C | 50.8 | 62.8 | | | 0 | | | | | | |
| 59 | A | 17 | 93.5 | 63.308 | 71.503 | 67.4 | 2.0410 | 63.53 | 71.73 | 67.630 | 2.0272 | 0.3402 |
| | B | 80.3 | 94.5 | | | 0 | | | | | | |
| | D | 48.8 | 130.3 | | | 0 | | | | | | |
| | C | 49.5 | 58.8 | | | 0 | | | | | | |
| 60 | A | 20.8 | 97.3 | 62.702 | 69.002 | 65.9 | 2.1350 | 62.96 | 69.26 | 66.107 | 2.1217 | 0.3136 |
| | B | 83.5 | 97.8 | | | 0 | | | | | | |
| | D | 52.5 | 132.8 | | | 0 | | | | | | |
| | C | 53 | 63.8 | | | 0 | | | | | | |

Group 2. SteelUnpolished.

| Image | Vertice | Row (μm) | Column (μm) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | l_1 (μm) | l_2 (μm) | Average diagonal length (μm) | HV (GP) | Relative error in average diagonal length |
|--------|--|--------------------------|-----------------------------|----------------------------|----------------------------|--|---|----------------------------|----------------------------|--|------------|---|
| 7 de 7 | Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images | | | | | | Data obtained in the manual manner by an expert | | | | | |
| 61 | A | 18 | 92.5 | 65.308 | 70.802 | 68 | 2.0052 | 66.02 | 71.51 | 68.763 | 1.9609 | 1.1099 |
| | B | 83.3 | 91.5 | | | 0 | | | | | | |
| | D | 51.8 | 128.3 | | | 0 | | | | | | |
| | C | 52.3 | 57.5 | | | 0 | | | | | | |
| 62 | A | 17 | 88 | 64.801 | 70.500 | 67.6 | 2.0290 | 65.12 | 70.82 | 67.966 | 2.0072 | 0.5392 |
| | B | 81.8 | 88.3 | | | 0 | | | | | | |
| | D | 49.8 | 124.3 | | | 0 | | | | | | |
| | C | 50 | 53.8 | | | 0 | | | | | | |
| 63 | A | 21.8 | 91.8 | 64.556 | 70.003 | 67.3 | 2.0471 | 64.95 | 70.39 | 67.671 | 2.0247 | 0.5488 |
| | B | 86.3 | 94.5 | | | 0 | | | | | | |
| | D | 53.8 | 128.5 | | | 0 | | | | | | |
| | C | 54.5 | 58.5 | | | 0 | | | | | | |
| 64 | A | 24.5 | 81.5 | 64.008 | 68.300 | 66.1 | 2.1221 | 64.40 | 68.69 | 66.547 | 2.0937 | 0.6710 |
| | B | 88.5 | 82.5 | | | 0 | | | | | | |
| | D | 56.8 | 117.8 | | | 0 | | | | | | |
| | C | 57 | 49.5 | | | 0 | | | | | | |
| 65 | A | 20.8 | 97.3 | 62.702 | 69.002 | 65.9 | 2.1350 | 62.79 | 69.09 | 65.940 | 2.1324 | 0.0609 |
| | B | 83.5 | 97.8 | | | 0 | | | | | | |
| | D | 52.5 | 132.8 | | | 0 | | | | | | |
| | C | 53 | 63.8 | | | 0 | | | | | | |
| 66 | A | 25.8 | 87.8 | 64.502 | 71.802 | 68.1 | 1.9993 | 64.52 | 71.82 | 68.166 | 1.9955 | 0.0961 |
| | B | 90.3 | 88.3 | | | 0 | | | | | | |
| | D | 58.3 | 124.3 | | | 0 | | | | | | |
| | C | 58.8 | 52.5 | | | 0 | | | | | | |
| 67 | A | 14.8 | 100.3 | 65.002 | 72.216 | 68.6 | 1.9703 | 65.24 | 72.45 | 68.846 | 1.9562 | 0.3575 |
| | B | 79.8 | 99.8 | | | 0 | | | | | | |
| | D | 46 | 137 | | | 0 | | | | | | |
| | C | 47.5 | 64.8 | | | 0 | | | | | | |
| 68 | A | 16.3 | 97.3 | 65.000 | 69.502 | 67.3 | 2.0471 | 65.52 | 70.03 | 67.775 | 2.0185 | 0.7011 |
| | B | 81.3 | 97.5 | | | 0 | | | | | | |
| | D | 48.5 | 133.5 | | | 0 | | | | | | |
| | C | 49 | 64 | | | 0 | | | | | | |
| 69 | A | 18 | 97.5 | 65.805 | 71.807 | 68.8 | 1.9588 | 65.94 | 71.95 | 68.945 | 1.9506 | 0.2108 |
| | B | 83.8 | 98.3 | | | 0 | | | | | | |
| | D | 51.5 | 134.3 | | | 0 | | | | | | |
| | C | 52.5 | 62.5 | | | 0 | | | | | | |
| 70 | A | 20.3 | 89 | 63.002 | 70.302 | 66.6 | 2.0904 | 63.07 | 70.36 | 66.715 | 2.0832 | 0.1725 |
| | B | 83.3 | 89.5 | | | 0 | | | | | | |
| | D | 51.3 | 126.3 | | | 0 | | | | | | |
| | C | 51.8 | 56 | | | 0 | | | | | | |