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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Measurement of roundness by Dial gauge deflections of 6-mm Diameter Mild Steel (MS) Round Bar** **After Straightening** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Mean values of Dial Gauge Deflection Readings after straightening of 6 mm MS round bar x 0.01 mm** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Angles in Degrees** | | | | | | | | | | | | | | | | | | | | | | | |  |
| Length in cm | 0o | 15o | 30o | 45o | 60o | 75o | 90o | 105o | 120o | 135o | 150o | 165o | 180o | 195o | 210o | 225o | 240o | 255o | 270o | 285o | 300o | 315o | 330o | 345o | STD  DEV (mm) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16.3 | 191 | 191 | 193 | 194 | 193 | 194 | 193 | 192 | 190 | 189 | 187 | 184 | 181 | 179 | 179 | 178 | 181 | 182 | 181 | 183 | 187 | 189 | 191 | 190 | 0.0538 |
| 20.0 | 183 | 181 | 183 | 183 | 184 | 183 | 184 | 183 | 187 | 190 | 189 | 183 | 183 | 182 | 177 | 175 | 174 | 177 | 178 | 175 | 177 | 178 | 179 | 181 | 0.0427 |
| 25.0 | 182 | 177 | 179 | 178 | 181 | 183 | 180 | 182 | 183 | 184 | 185 | 183 | 184 | 182 | 178 | 177 | 178 | 180 | 178 | 180 | 182 | 183 | 182 | 183 | 0.0389 |
| 30.0 | 177 | 174 | 176 | 178 | 179 | 182 | 183 | 184 | 185 | 186 | 185 | 186 | 184 | 183 | 182 | 184 | 182 | 181 | 182 | 178 | 183 | 179 | 178 | 177 | 0.0378 |
| 35.0 | 178 | 180 | 178 | 177 | 179 | 182 | 181 | 183 | 182 | 184 | 186 | 183 | 185 | 183 | 182 | 181 | 182 | 180 | 182 | 182 | 184 | 180 | 179 | 177 | 0.0288 |
| 40.0 | 176 | 177 | 175 | 178 | 177 | 178 | 179 | 178 | 178 | 180 | 182 | 183 | 182 | 183 | 181 | 182 | 181 | 178 | 177 | 178 | 182 | 178 | 175 | 176 | 0.0364 |
| 45.0 | 177 | 173 | 177 | 173 | 176 | 175 | 178 | 179 | 177 | 178 | 179 | 177 | 182 | 180 | 182 | 181 | 182 | 181 | 180 | 178 | 183 | 181 | 178 | 176 | 0.0345 |
| 50.0 | 175 | 176 | 175 | 174 | 174 | 175 | 176 | 178 | 176 | 177 | 178 | 180 | 179 | 181 | 182 | 181 | 178 | 177 | 178 | 179 | 181 | 183 | 180 | 176 | 0.0411 |
| **55.0** | 177 | 174 | 176 | 174 | 175 | 175 | 177 | 176 | 175 | 173 | 177 | 176 | 174 | 178 | 180 | 181 | 183 | 183 | 181 | 179 | 180 | 179 | 178 | 175 | 0.0289 |
| **60.0** | 176 | 175 | 173 | 174 | 175 | 175 | 178 | 177 | 175 | 173 | 176 | 175 | 177 | 172 | 173 | 175 | 176 | 173 | 174 | 176 | 175 | 176 | 175 | 174 | 0.0289 |
| 65.0 | 174 | 175 | 176 | 178 | 176 | 177 | 179 | 175 | 176 | 175 | 174 | 176 | 174 | 174 | 172 | 173 | 174 | 177 | 175 | 177 | 179 | 174 | 175 | 173 | 0.0377 |
| 70.0 | 176 | 174 | 171 | 174 | 176 | 176 | 175 | 173 | 172 | 173 | 175 | 174 | 173 | 173 | 172 | 174 | 173 | 176 | 174 | 176 | 179 | 176 | 175 | 175 | 0.0311 |
| **75.0** | 176 | 175 | 175 | 174 | 178 | 176 | 177 | 175 | 174 | 172 | 174 | 175 | 174 | 173 | 175 | 176 | 175 | 176 | 173 | 176 | 175 | 178 | 177 | 175 | 0.0133 |
| 80.0 | 180 | 177 | 183 | 181 | 183 | 182 | 185 | 183 | 178 | 178 | 183 | 182 | 181 | 184 | 182 | 183 | 184 | 183 | 181 | 184 | 182 | 184 | 183 | 182 | 0.0285 |
| 85.0 | 182 | 183 | 189 | 190 | 185 | 189 | 190 | 193 | 192 | 194 | 193 | 189 | 185 | 183 | 185 | 186 | 189 | 191 | 192 | 190 | 188 | 184 | 184 | 183 | 0.0476 |
| 93.0 | 183 | 187 | 186 | 187 | 188 | 192 | 187 | 187 | 183 | 184 | 183 | 184 | 182 | 184 | 188 | 193 | 192 | 197 | 196 | 196 | 190 | 188 | 184 | 183 | 0.0573 |

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|  | **Measurement of roundness by Dial gauge deflections of 8-mm Diameter Mild Steel (MS) Round Bar** **After Straightening** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | Mean values of Dial Gauge Deflection Readings after straightening of 8 mm Mild Steel (MS) round bar x 0.01 mm | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Angles in Degrees** | | | | | | | | | | | | | | | | | | | | | | | |  |
| **Length in cm** | **0o** | **15o** | **30o** | **45o** | **60o** | **75o** | **90o** | **105o** | **120o** | **135o** | **150o** | **165o** | **180o** | **195o** | **210o** | **225o** | **240o** | **255o** | **270o** | **285o** | **300o** | **315o** | **330o** | **345o** | **STD**  **DEV (mm)** |
| 12 | 163 | 166 | 162 | 158 | 155 | 153 | 150 | 148 | 146 | 147 | 149 | 155 | 159 | 167 | 149 | 149 | 153 | 158 | 159 | 160 | 159 | 158 | 155 | 152 | 0.0599 |
| 17 | 155 | 150 | 149 | 145 | 141 | 142 | 138 | 135 | 137 | 138 | 145 | 148 | 152 | 155 | 135 | 140 | 145 | 150 | 155 | 157 | 157 | 158 | 157 | 154 | 0.0771 |
| 22 | 153 | 153 | 150 | 148 | 146 | 146 | 142 | 139 | 142 | 143 | 138 | 137 | 140 | 138 | 135 | 142 | 136 | 141 | 145 | 151 | 154 | 156 | 156 | 154 | 0.0674 |
| 27 | 152 | 149 | 148 | 146 | 144 | 143 | 140 | 140 | 144 | 146 | 143 | 142 | 143 | 140 | 138 | 135 | 140 | 143 | 142 | 143 | 142 | 145 | 148 | 149 | 0.0391 |
| 32 | 148 | 143 | 143 | 143 | 142 | 142 | 139 | 142 | 143 | 145 | 144 | 143 | 142 | 144 | 143 | 140 | 142 | 140 | 142 | 140 | 138 | 134 | 137 | 140 | 0.0288 |
| 36 | 147 | 146 | 144 | 146 | 145 | 142 | 140 | 145 | 146 | 144 | 141 | 144 | 142 | 140 | 144 | 142 | 140 | 142 | 144 | 143 | 143 | 142 | 139 | 141 | 0.0221 |
| 40 | 150 | 147 | 143 | 145 | 144 | 146 | 142 | 144 | 144 | 143 | 140 | 142 | 144 | 142 | 141 | 142 | 139 | 138 | 140 | 142 | 140 | 141 | 142 | 143 | 0.0265 |
| 45 | 149 | 148 | 146 | 147 | 146 | 144 | 144 | 142 | 145 | 144 | 143 | 141 | 142 | 144 | 138 | 141 | 138 | 140 | 141 | 141 | 144 | 142 | 144 | 146 | 0.0287 |
| 50 | 147 | 149 | 145 | 145 | 144 | 146 | 145 | 144 | 146 | 145 | 143 | 141 | 137 | 138 | 138 | 134 | 141 | 138 | 140 | 142 | 144 | 141 | 140 | 143 | 0.0367 |
| 55 | 148 | 147 | 143 | 144 | 145 | 144 | 142 | 143 | 145 | 146 | 145 | 134 | 136 | 135 | 136 | 137 | 139 | 141 | 137 | 137 | 141 | 143 | 145 | 146 | 0.0421 |
| 60 | 146 | 145 | 144 | 143 | 146 | 142 | 144 | 142 | 143 | 141 | 142 | 143 | 143 | 141 | 137 | 137 | 137 | 137 | 137 | 135 | 135 | 141 | 143 | 144 | 0.0353 |
| 65 | 145 | 143 | 142 | 144 | 145 | 144 | 143 | 143 | 141 | 145 | 138 | 139 | 140 | 140 | 138 | 136 | 135 | 133 | 133 | 133 | 132 | 140 | 141 | 143 | 0.0422 |
| 70 | 147 | 146 | 143 | 142 | 144 | 143 | 142 | 144 | 142 | 144 | 143 | 139 | 143 | 144 | 144 | 139 | 142 | 139 | 143 | 141 | 143 | 144 | 143 | 145 | 0.0198 |
| 75 | 149 | 144 | 147 | 145 | 146 | 145 | 144 | 142 | 143 | 143 | 141 | 145 | 144 | 146 | 144 | 146 | 142 | 145 | 144 | 143 | 141 | 143 | 145 | 147 | 0.0195 |
| 80 | 145 | 146 | 145 | 146 | 145 | 143 | 141 | 143 | 144 | 146 | 145 | 146 | 145 | 146 | 143 | 144 | 146 | 145 | 147 | 144 | 147 | 145 | 144 | 147 | 0.0147 |
| 85 | 148 | 145 | 146 | 145 | 144 | 142 | 142 | 141 | 142 | 144 | 143 | 142 | 141 | 142 | 143 | 142 | 144 | 143 | 142 | 140 | 139 | 141 | 143 | 145 | 0.0201 |
| 90 | 144 | 143 | 142 | 144 | 143 | 140 | 141 | 144 | 143 | 145 | 144 | 143 | 142 | 141 | 142 | 144 | 142 | 144 | 143 | 142 | 140 | 142 | 141 | 143 | 0.0135 |
| 95 | 143 | 145 | 144 | 142 | 145 | 142 | 143 | 143 | 144 | 146 | 145 | 144 | 142 | 141 | 143 | 142 | 145 | 143 | 144 | 141 | 143 | 144 | 143 | 141 | 0.0139 |
| 101.3 | 146 | 144 | 143 | 143 | 147 | 145 | 144 | 142 | 142 | 145 | 143 | 142 | 144 | 143 | 142 | 144 | 142 | 145 | 142 | 144 | 142 | 143 | 142 | 144 | 0.0141 |
| 106.3 | 147 | 145 | 144 | 146 | 145 | 143 | 145 | 144 | 145 | 143 | 145 | 143 | 142 | 144 | 143 | 142 | 144 | 142 | 144 | 143 | 141 | 142 | 143 | 145 | 0.0145 |
| 111.3 | 144 | 142 | 143 | 145 | 143 | 141 | 144 | 146 | 143 | 141 | 140 | 142 | 141 | 142 | 140 | 141 | 130 | 144 | 143 | 142 | 144 | 141 | 142 | 143 | 0.0297 |
| 116.3 | 148 | 146 | 144 | 143 | 142 | 140 | 142 | 143 | 141 | 139 | 138 | 141 | 144 | 139 | 143 | 139 | 141 | 142 | 144 | 143 | 142 | 143 | 144 | 145 | 0.0237 |
| 121.3 | 148 | 145 | 139 | 141 | 139 | 137 | 137 | 139 | 135 | 136 | 140 | 138 | 140 | 136 | 136 | 137 | 138 | 140 | 140 | 139 | 138 | 140 | 142 | 144 | 0.0314 |
| 126.3 | 144 | 141 | 138 | 139 | 137 | 135 | 136 | 135 | 136 | 137 | 138 | 136 | 138 | 140 | 142 | 143 | 144 | 141 | 139 | 141 | 143 | 144 | 145 | 146 | 0.0339 |
| 131.3 | 141 | 136 | 137 | 136 | 135 | 136 | 132 | 134 | 134 | 135 | 135 | 134 | 134 | 135 | 134 | 133 | 133 | 133 | 135 | 134 | 135 | 137 | 139 | 142 | 0.0251 |
| 136.3 | 139 | 128 | 126 | 131 | 133 | 134 | 136 | 118 | 118 | 122 | 132 | 127 | 129 | 129 | 128 | 130 | 129 | 127 | 128 | 126 | 125 | 134 | 136 | 138 | 0.0556 |
| 141.3 | 136 | 116 | 116 | 115 | 118 | 120 | 119 | 120 | 127 | 128 | 129 | 129 | 130 | 130 | 129 | 128 | 129 | 128 | 125 | 122 | 120 | 117 | 118 | 113 | 0.062 |

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|  | **Measurement of roundness by Dial gauge deflections of 10-mm Diameter Mild Steel (MS) Round Bar After Straightening** | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | Mean values of Dial Gauge Deflection Readings after straightening of 10 mm Mild Steel (MS) round bar x 0.01 mm | | | | | | | | | | | | | | | | | | | | | | | |  |
|  | **Angles in Degrees** | | | | | | | | | | | | | | | | | | | | | | | |  |
| **Length in cm** | **0o** | **15o** | **30o** | **45o** | **60o** | **75o** | **90o** | **105o** | **120o** | **135o** | **150o** | **165o** | **180o** | **195o** | **210o** | **225o** | **240o** | **255o** | **270o** | **285o** | **300o** | **315o** | **330o** | **345o** | **STD**  **DEV (mm)** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14.5 | 153.0 | 152.5 | 152.0 | 152.0 | 152.0 | 151.8 | 151.5 | 151.3 | 151.0 | 151.3 | 151.5 | 151.8 | 152.0 | 152.3 | 152.5 | 152.8 | 153.0 | 153.0 | 153.0 | 153.3 | 153.5 | 153.3 | 153.0 | 153.0 | 0.0074 |
| 17 | 146.0 | 146.0 | 146.0 | 146.0 | 146.0 | 146.0 | 146.0 | 145.8 | 145.5 | 145.8 | 146.0 | 145.8 | 145.5 | 146.0 | 146.5 | 146.5 | 146.5 | 146.8 | 147.0 | 146.8 | 146.5 | 146.8 | 147.0 | 146.5 | 0.0045 |
| 20 | 144.0 | 144.8 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 145.5 | 146.0 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 146.3 | 146.0 | 146.0 | 146.0 | 146.3 | 0.0064 |
| 23.5 | 147.5 | 147.3 | 147.0 | 147.3 | 147.5 | 147.5 | 147.5 | 147.8 | 148.0 | 148.0 | 148.0 | 148.3 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.5 | 148.3 | 0.0051 |
| 26 | 146.5 | 147.0 | 147.5 | 147.3 | 147.0 | 147.3 | 147.5 | 147.3 | 147.0 | 146.8 | 146.5 | 146.8 | 147.0 | 147.5 | 148.0 | 148.0 | 148.0 | 147.5 | 147.0 | 147.0 | 147.0 | 147.0 | 147.0 | 147.0 | 0.0042 |
| 29 | 145.0 | 145.0 | 145.0 | 145.3 | 145.5 | 145.5 | 145.5 | 145.3 | 145.0 | 145.0 | 145.0 | 145.3 | 145.5 | 145.3 | 145.0 | 145.3 | 145.5 | 145.0 | 144.5 | 145.5 | 146.5 | 146.3 | 146.0 | 146.0 | 0.0046 |
| 31.5 | 145.0 | 145.0 | 145.0 | 145.3 | 145.5 | 145.5 | 145.5 | 144.8 | 144.0 | 144.3 | 144.5 | 144.0 | 143.5 | 144.3 | 145.0 | 145.0 | 145.0 | 145.3 | 145.5 | 145.8 | 146.0 | 146.0 | 146.0 | 146.0 | 0.007 |
| 34 | 144.0 | 145.0 | 146.0 | 145.5 | 145.0 | 144.8 | 144.5 | 144.8 | 145.0 | 144.5 | 144.0 | 144.0 | 144.0 | 144.5 | 145.0 | 145.0 | 145.0 | 145.3 | 145.5 | 145.8 | 146.0 | 146.3 | 146.5 | 146.5 | 0.0078 |
| 37 | 145.0 | 145.3 | 145.5 | 145.8 | 146.0 | 145.5 | 145.0 | 145.5 | 146.0 | 145.5 | 145.0 | 145.0 | 145.0 | 145.0 | 145.0 | 144.8 | 144.5 | 145.0 | 145.5 | 145.5 | 145.5 | 146.0 | 146.5 | 146.3 | 0.005 |
| 40 | 143.5 | 143.5 | 143.5 | 143.5 | 143.5 | 143.3 | 143.0 | 143.8 | 144.5 | 144.3 | 144.0 | 144.0 | 144.0 | 144.0 | 144.0 | 144.3 | 144.5 | 144.3 | 144.0 | 144.3 | 144.5 | 144.3 | 144.0 | 144.0 | 0.0041 |
| 43 | 142.0 | 142.0 | 142.0 | 142.3 | 142.5 | 142.0 | 141.5 | 141.8 | 142.0 | 141.8 | 141.5 | 141.0 | 140.5 | 141.3 | 142.0 | 142.0 | 142.0 | 142.0 | 142.0 | 141.8 | 141.5 | 141.8 | 142.0 | 142.3 | 0.0043 |
| 46 | 147.0 | 147.3 | 147.5 | 147.3 | 147.0 | 147.3 | 147.5 | 147.5 | 147.5 | 147.3 | 147.0 | 146.8 | 146.5 | 146.5 | 146.5 | 146.5 | 146.5 | 147.0 | 147.5 | 147.3 | 147.0 | 147.0 | 147.0 | 147.0 | 0.0035 |
| 49 | 143.0 | 143.0 | 143.0 | 142.8 | 142.5 | 143.5 | 144.5 | 143.3 | 142.0 | 142.5 | 143.0 | 142.8 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.8 | 143.0 | 143.3 | 143.5 | 143.5 | 143.5 | 143.5 | 0.0053 |
| 52 | 144.0 | 144.3 | 144.5 | 144.3 | 144.0 | 144.0 | 144.0 | 143.8 | 143.5 | 143.3 | 143.0 | 143.0 | 143.0 | 143.0 | 143.0 | 143.3 | 143.5 | 143.8 | 144.0 | 144.3 | 144.5 | 144.5 | 144.5 | 144.3 | 0.0055 |
| 55 | 144 | 144.3 | 144.5 | 144.3 | 144 | 144.0 | 144 | 144.0 | 144 | 143.8 | 143.5 | 143.5 | 143.5 | 143.5 | 143.5 | 143.8 | 144 | 144.3 | 144.5 | 144.3 | 144 | 144.3 | 144.5 | 144.5 | 0.0034 |
| 58 | 143 | 143.0 | 143 | 142.5 | 142 | 143.0 | 143.5 | 143.0 | 143 | 143.0 | 142.5 | 142.0 | 143 | 143.0 | 142.5 | 142.5 | 142.5 | 143.0 | 143 | 143.0 | 143.5 | 143.5 | 144 | 144.8 | 0.0059 |
| 61 | 142 | 142.3 | 142.5 | 142.3 | 142 | 142.3 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.5 | 142.8 | 143 | 142.8 | 142.5 | 142.8 | 143 | 143.0 | 143 | 143.0 | 0.003 |
| 64 | 142.5 | 143.0 | 143.5 | 143.0 | 142.5 | 142.5 | 142.5 | 142.3 | 142 | 142.0 | 142 | 141.5 | 141 | 141.3 | 141.5 | 141.5 | 141.5 | 141.3 | 141 | 141.3 | 141.5 | 141.8 | 142 | 142.0 | 0.0067 |
| 67 | 141.5 | 142.0 | 142.5 | 141.8 | 141 | 141.8 | 142.5 | 142.3 | 142 | 142.0 | 142 | 141.8 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.0 | 140.5 | 141.0 | 0.0047 |
| 70 | 140.5 | 140.3 | 140 | 140.0 | 140 | 140.3 | 140.5 | 140.3 | 140 | 140.0 | 140 | 140.0 | 140 | 140.0 | 140 | 140.3 | 140.5 | 140.0 | 139.5 | 140.0 | 140.5 | 140.5 | 140.5 | 140.8 | 0.0028 |
| 73 | 138.5 | 139.8 | 141 | 141.0 | 141 | 140.5 | 140 | 140.3 | 140.5 | 141.0 | 141.5 | 141.0 | 140.5 | 140.5 | 140.5 | 140.3 | 140 | 140.3 | 140.5 | 140.8 | 141 | 140.8 | 140.5 | 140.5 | 0.0059 |
| 76 | 141.5 | 141.0 | 140.5 | 141.3 | 142 | 142.0 | 142 | 141.8 | 141.5 | 141.5 | 141.5 | 141.3 | 141 | 141.0 | 141 | 141.3 | 141.5 | 141.0 | 140.5 | 141.3 | 142 | 141.8 | 141.5 | 141.5 | 0.0043 |
| 79 | 141 | 140.3 | 139.5 | 140.0 | 140.5 | 140.8 | 141 | 141.3 | 141.5 | 141.0 | 140.5 | 140.8 | 141 | 140.8 | 140.5 | 140.5 | 140.5 | 140.8 | 141 | 140.8 | 140.5 | 140.8 | 141 | 141.0 | 0.0041 |
| 82 | 138 | 137.3 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 136.5 | 0.0034 |
| 85 | 137.5 | 137.8 | 138 | 137.5 | 137 | 137.3 | 137.5 | 138.0 | 138.5 | 138.0 | 137.5 | 137.5 | 137.5 | 137.3 | 137 | 137.3 | 137.5 | 138.3 | 139 | 139.3 | 139.5 | 138.8 | 138 | 138.0 | 0.0069 |
| 88 | 137.5 | 137.8 | 138 | 138.3 | 138.5 | 138.5 | 138.5 | 138.3 | 138 | 138.3 | 138.5 | 138.5 | 138.5 | 138.5 | 138.5 | 138.5 | 138.5 | 138.5 | 138.5 | 138.3 | 138 | 138.0 | 138 | 138.0 | 0.0029 |
| 91 | 137 | 136.8 | 136.5 | 136.8 | 137 | 137.0 | 137 | 137.3 | 137.5 | 137.5 | 137.5 | 137.8 | 138 | 138.0 | 138 | 138.3 | 138.5 | 138.3 | 138 | 138.3 | 138.5 | 138.3 | 138 | 137.8 | 0.006 |
| 94 | 135.5 | 135.8 | 136 | 136.3 | 136.5 | 136.5 | 136.5 | 136.8 | 137 | 136.8 | 136.5 | 136.8 | 137 | 137.0 | 137 | 137.0 | 137 | 137.0 | 137 | 137.5 | 138 | 137.5 | 137 | 136.8 | 0.0055 |
| 97 | 136 | 136.0 | 136 | 136.0 | 136 | 136.0 | 136 | 136.3 | 136.5 | 136.5 | 136.5 | 136.8 | 137 | 137.0 | 137 | 137.3 | 137.5 | 137.5 | 137.5 | 137.3 | 137 | 136.8 | 136.5 | 136.3 | 0.0054 |
| 100 | 135.5 | 135.3 | 135 | 135.3 | 135.5 | 135.5 | 135.5 | 135.5 | 135.5 | 135.5 | 135.5 | 135.3 | 135 | 135.5 | 136 | 136.0 | 136 | 136.0 | 136 | 136.0 | 136 | 136.0 | 136 | 136.0 | 0.0035 |
| 104.5 | 134.5 | 134.5 | 134.5 | 134.5 | 134.5 | 134.8 | 135 | 135.0 | 135 | 135.0 | 135 | 135.0 | 135 | 135.0 | 135 | 134.8 | 134.5 | 134.8 | 135 | 135.0 | 135 | 135.0 | 135 | 135.0 | 0.0022 |
| 107.5 | 137.5 | 137.8 | 138 | 138.3 | 138.5 | 138.5 | 138.5 | 138.3 | 138 | 138.0 | 138 | 138.0 | 138 | 138.0 | 138 | 138.0 | 138 | 138.0 | 138 | 138.3 | 138.5 | 138.3 | 138 | 138.0 | 0.0024 |
| 110.5 | 140.5 | 141.0 | 141.5 | 141.5 | 141.5 | 141.5 | 141.5 | 141.3 | 141 | 141.0 | 141 | 141.0 | 141 | 140.5 | 140 | 140.3 | 140.5 | 140.3 | 140 | 140.5 | 141 | 140.8 | 140.5 | 140.8 | 0.0048 |
| 113.5 | 141.5 | 141.8 | 142 | 142.3 | 142.5 | 142.5 | 142.5 | 142.8 | 143 | 142.8 | 142.5 | 142.0 | 141.5 | 141.5 | 141.5 | 141.3 | 141 | 141.0 | 141 | 141.0 | 141 | 141.0 | 141 | 141.3 | 0.0069 |
| 116.5 | 142 | 142.5 | 143 | 143.0 | 143 | 143.0 | 143 | 143.0 | 143 | 143.0 | 143 | 142.3 | 141.5 | 141.3 | 141 | 141.0 | 141 | 141.3 | 141.5 | 141.5 | 141.5 | 141.8 | 142 | 142.0 | 0.0078 |
| 119.5 | 142.5 | 142.8 | 143 | 143.0 | 143 | 143.0 | 143 | 142.5 | 142 | 142.0 | 142 | 141.8 | 141.5 | 141.3 | 141 | 141.3 | 141.5 | 141.5 | 141.5 | 141.3 | 141 | 141.3 | 141.5 | 142.0 | 0.0071 |

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|  | **Measurement of roundness by Dial gauge deflections of 12-mm Diameter Mild Steel (MS) Round Bar After Straightening** | | | | | | | | | | | | | | | | | | | | | | | | |  | |
|  | **Mean values of Dial Gauge Deflection Readings after straightening of 12 mm Mild Steel (MS) round bar x 0.01 mm** | | | | | | | | | | | | | | | | | | | | | | | | |  | |
|  | **Angles in Degrees** | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| **Length in cm** | **0o** | **15o** | **30o** | **45o** | **60o** | **75o** | **90o** | **105o** | **120o** | **135o** | **150o** | **165o** | **180o** | **195o** | **210o** | **225o** | **240o** | **255o** | **270o** | **285o** | **300o** | **315o** | **330o** | **345o** | **STD**  **DEV (mm)** | |
| 10.5 | 93.0 | 94 | 95.0 | 97 | 99.0 | 101 | 102.0 | 104 | 105.0 | 107 | 108.0 | 109 | 109.0 | 109 | 108.0 | 107 | 105.0 | 103 | 101.0 | 99.5 | 98.0 | 96.8 | 95.5 | 94.8 | 0.0527 | |
| 15 | 59.0 | 58.5 | 58.0 | 58.5 | 59.0 | 59 | 59.0 | 59 | 59.0 | 59 | 59.0 | 59.8 | 60.5 | 60.3 | 60.0 | 60 | 60.0 | 60 | 60.0 | 60 | 60.0 | 59.8 | 59.5 | 59.3 | 0.0065 | |
| 20 | 57.0 | 57 | 57.0 | 57 | 57.0 | 57 | 57.0 | 56.8 | 56.5 | 57 | 57.5 | 58 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.3 | 58.0 | 58 | 0.0074 | |
| 22 | 57.0 | 57.5 | 58.0 | 59.5 | 61.0 | 61.5 | 62.0 | 63 | 64.0 | 64.5 | 65.0 | 65.5 | 66.0 | 65.5 | 65.0 | 64 | 63.0 | 62.5 | 62.0 | 60.5 | 59.0 | 57.5 | 56.0 | 56 | 0.0324 | |
| 24.5 | 56.5 | 56.5 | 56.5 | 56.3 | 56.0 | 55.8 | 55.5 | 55.5 | 55.5 | 55.8 | 56.0 | 56.3 | 56.5 | 57 | 57.5 | 57.3 | 57.0 | 57 | 57.0 | 57.3 | 57.5 | 58 | 58.5 | 57.8 | 0.0083 | |
| 31 | 56.0 | 55.5 | 55.0 | 55 | 55.0 | 54.8 | 54.5 | 54.5 | 54.5 | 54.8 | 55.0 | 55.5 | 56.0 | 56.3 | 56.5 | 56.3 | 56.0 | 56.3 | 56.5 | 56.8 | 57.0 | 57 | 57.0 | 57 | 0.0089 | |
| 32 | 55.0 | 55.5 | 56.0 | 56.5 | 57.0 | 58 | 59.0 | 59 | 59.0 | 59.5 | 60.0 | 59.5 | 59.0 | 58.5 | 58.0 | 57 | 56.0 | 55.5 | 55.0 | 54.5 | 54.0 | 54 | 54.0 | 54 | 0.0206 | |
| 35 | 54.5 | 54.5 | 54.5 | 54.5 | 54.5 | 54.5 | 54.5 | 54.5 | 54.5 | 54.3 | 54.0 | 54.3 | 54.5 | 54.8 | 55.0 | 55.3 | 55.5 | 55.5 | 55.5 | 55.5 | 55.5 | 55.3 | 55.0 | 54.8 | 0.0047 | |
| 40 | 53.0 | 53.5 | 54 | 54 | 54.0 | 54 | 54.0 | 54.3 | 54.5 | 54.3 | 54.0 | 54 | 54.0 | 54 | 54.0 | 54.5 | 55.0 | 55 | 55.0 | 55 | 55.0 | 55 | 55.0 | 54.8 | 0.0055 | |
| 42 | 53.0 | 53.3 | 53.5 | 54.8 | 56.0 | 56.3 | 56.5 | 56.5 | 56.5 | 56.5 | 56.5 | 56.5 | 56.5 | 55.8 | 55.0 | 53.8 | 52.5 | 52 | 51.5 | 51.5 | 51.5 | 51.3 | 51.0 | 51 | 0.0218 | |
| 45 | 54.5 | 54 | 53.5 | 53.5 | 53.5 | 53.8 | 54.0 | 54 | 54.0 | 53.8 | 53.5 | 53.5 | 53.5 | 53.5 | 53.5 | 53.8 | 54.0 | 54 | 54.0 | 54 | 54.0 | 54 | 54.0 | 54.3 | 0.0028 | |
| 48 | 52.0 | 51.5 | 51.0 | 51 | 51.0 | 51.5 | 52.0 | 52 | 52.0 | 52.5 | 53.0 | 53 | 53.0 | 53 | 53.0 | 53 | 53.0 | 52.5 | 52.0 | 52 | 52.0 | 51.5 | 51.0 | 51 | 0.0076 | |
| 52.5 | 51.0 | 51.3 | 51.5 | 52.3 | 53.0 | 53 | 53.0 | 53 | 53.0 | 52.8 | 52.5 | 52 | 51.5 | 51 | 50.5 | 50 | 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 49.8 | 0.0142 | |
| 62 | 51.0 | 51 | 51.0 | 51.5 | 52.0 | 52.3 | 52.5 | 52.3 | 52.0 | 52 | 52.0 | 52 | 52.0 | 51.5 | 51.0 | 51 | 51.0 | 51 | 51.0 | 54 | 57.0 | 54 | 51.0 | 51 | 0.0138 | |
| 72 | 51.0 | 51.5 | 52.0 | 51 | 50.0 | 51.5 | 53.0 | 52 | 54.0 | 52 | 51.0 | 53 | 54.0 | 51 | 50.0 | 51.5 | 53.0 | 55 | 56.0 | 54 | 52.0 | 53 | 54.0 | 53 | 0.0153 | |
| 82 | 52.0 | 52.5 | 53.0 | 52 | 51.0 | 51.5 | 52.0 | 52 | 53.0 | 51 | 52.0 | 51.5 | 51.0 | 52 | 53.0 | 52 | 51.0 | 52 | 53.0 | 52.5 | 52.0 | 51.5 | 51.0 | 52 | 0.0066 | |
| 92 | 51.0 | 51.5 | 52.0 | 53 | 54.0 | 52.5 | 51.0 | 51.5 | 52.0 | 52.5 | 53.0 | 52.5 | 52.0 | 51.5 | 51.0 | 51.5 | 52.0 | 52.5 | 53.0 | 52 | 51.0 | 52 | 53.0 | 52 | 0.0078 | |
| 103 | 57.5 | 54 | 50.5 | 50.5 | 50.5 | 50.8 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 0.0147 | |
| 112 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51.3 | 51.5 | 51.8 | 52.0 | 52 | 52.0 | 52 | 52.0 | 52 | 52.0 | 51.8 | 51.5 | 51.3 | 51.0 | 51 | 51.0 | 51 | 51.0 | 51 | 0.0045 | |
| 121 | 53.0 | 53 | 53.0 | 54.3 | 55.5 | 55.8 | 56.0 | 56.3 | 56.5 | 56.5 | 56.5 | 56.8 | 57.0 | 57 | 57.0 | 56.5 | 56.0 | 55 | 54.0 | 54 | 54.0 | 53.8 | 53.5 | 53.5 | 0.0146 | |