

Table 2A (Cont'd)
Section III, Division 1, Classes 1, MC, and CS; Section III, Division 3; and Section III, Division 5
Design Stress Intensity Values, S_m , and Section VIII, Division 2, Class 1 Maximum Allowable
Stress Values, S , for Ferrous Materials

| Line No. | Design Stress Intensity or Maximum Allowable Stress, MPa (Multiply by 1000 to Obtain kPa), for Metal Temperature, °C, Not Exceeding | | | | | | | | | | | | | | | |
|----------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|
| | 40 | 65 | 100 | 125 | 150 | 200 | 250 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 |
| 1 | 230 | 228 | 223 | 216 | 209 | 201 | 190 | 181 | 177 | 174 | 172 | 169 | 166 | 163 | ... | ... |
| 2 | 230 | 228 | 223 | 216 | 209 | 201 | 197 | 193 | 191 | 187 | 184 | 180 | 175 | 170 | ... | ... |
| 3 | 212 | 208 | 203 | 199 | 196 | 195 | 195 | 195 | 195 | ... | ... | ... | ... | ... | ... | ... |
| 4 | 180 | 177 | 173 | 169 | 167 | 165 | 165 | 165 | 165 | ... | ... | ... | ... | ... | ... | ... |
| 5 | 212 | 208 | 203 | 199 | 196 | 195 | 195 | 195 | 195 | ... | ... | ... | ... | ... | ... | ... |
| 6 | 180 | 177 | 173 | 169 | 167 | 165 | 165 | 165 | 165 | ... | ... | ... | ... | ... | ... | ... |
| 7 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 8 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 9 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 10 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 11 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 12 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 13 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 14 | 97.9 | 97.9 | 97.9 | 97.9 | 97.9 | 93.0 | 87.2 | 82.9 | 81.6 | 80.2 | 78.4 | 77.9 | 76.6 | 75.4 | ... | ... |
| 15 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 16 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 17 | 97.9 | 97.9 | 97.9 | 97.9 | 97.9 | 93.0 | 87.2 | 82.9 | 81.6 | 80.2 | 78.4 | 77.9 | 76.6 | 75.4 | ... | ... |
| 18 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 19 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 20 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 21 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 22 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 23 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 24 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 25 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 26 | 97.9 | 97.9 | 97.9 | 97.9 | 97.9 | 93.0 | 87.2 | 82.9 | 81.6 | 80.2 | 78.4 | 77.9 | 76.6 | 75.4 | ... | ... |
| 27 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 28 | 115 | 115 | 115 | 115 | 115 | 110 | 103 | 97.7 | 95.8 | 94.1 | 92.9 | 91.6 | 89.7 | 88.4 | ... | ... |
| 29 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 30 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 31 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 32 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 33 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 34 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 35 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 36 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 37 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 38 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 39 | 133 | 133 | 133 | 133 | 133 | 127 | 119 | 113 | 111 | 109 | 107 | 106 | 104 | 104 | 102 | 99.9 |
| 40 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 41 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 42 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 43 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 44 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |
| 45 | 138 | 138 | 138 | 138 | 138 | 129 | 122 | 116 | 114 | 111 | 109 | 107 | 105 | 103 | ... | ... |

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