



## A-36

### Chemical Requirements

\*Elements represented in percentage

*Note 1 – Where “-” appears in this table, there is no requirement. The heat analysis for manganese shall be determined and reported as described in the heat analysis section of Specification A6/A6M.*

| <b>Product</b>   | <b>PlatesB</b>                    |   |  |   |                 |
|--|-----------------------------------|---|--|---|-----------------|
|  | To $\frac{3}{4}$<br>[20],<br>incl | Over $\frac{3}{4}$ to $1\frac{1}{2}$<br>[20 to 40],<br>incl | Over $1\frac{1}{2}$ to<br>$2\frac{1}{2}$ [40 to<br>65], incl | Over $2\frac{1}{2}$ to<br>4; [65 to<br>100], incl | Over 4<br>[100] |
| <b>Carbon, max, %</b>  | 0.25                              | 0.25  | 0.26   | 0.27  | 0.29            |
| <b>Manganese, %</b>  | –                                 | 0.80-1.20   | 0.80-1.20  | 0.85-1.20   | 0.85-1.20       |
| <b>Phosphorus, max, %</b>                                    | 0.030                             | 0.030   | 0.030  | 0.030   | 0.030           |
| <b>Sulfur, max, %</b>  | 0.030                             | 0.030   | 0.030  | 0.030   | 0.030           |
| <b>Silicon, %</b>  | 0.40<br>max                       | 0.40 max  | 0.15-0.40  | 0.15-0.40   | 0.15-0.40       |
| <b>Copper, min, %<br/>when copper steel<br/>is specified</b> | 0.20                              | 0.20  | 0.20   | 0.20  | 0.20            |

### Tensile Requirements

| <b>Plates, Shapes, and Bars:</b>     |                 |
|--------------------------------------|-----------------|
| Tensile strength, ksi [MPa]          | 58-80 [400-550] |
| Yield Point, ksi [MPa]               | 36 [250]        |
| <b>Plates and Bars:</b>              |                 |
| Elongation in 8 in. [200 mm], min, % | 20              |
| Elongation in 2 in. [50 mm], min, %  | 23              |
| <b>Shapes:</b>                       |                 |
| Elongation in 8 in. [200 mm], min, % | 20              |
| Elongation in 2 in. [50 mm], min, %  | 21              |