General Product Description

The ASTM A656 specification is the Standard Specification for Hot-Rolled Structural Steel, High-Strength Low-Alloy Plate with Improved Formability for plates in applications where increased strength-to-weight ratios are required. ASTM A656 includes five grades differentiated by minimum specified yield strengths of Grade 50, Grade 60, Grade 70, Grade 80 and Grade 100. Typical applications include construction equipment, crane booms, mobile man lifts, agricultural equipment, transport trailers, heavy vehicle frames and chassis, and rail cars.

Dimensions

<table>
<thead>
<tr>
<th>Grade</th>
<th>Product Type</th>
<th>Thickness (Inches)</th>
<th>Width (Inches)</th>
<th>Length (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>Mill Plate</td>
<td>0.188 - 2.00</td>
<td>72 - 120(^1)</td>
<td>120 - 1020(^1)</td>
</tr>
<tr>
<td>50</td>
<td>Temper Leveled Plate</td>
<td>0.100 - 0.625</td>
<td>48 - 96</td>
<td>72 - 720</td>
</tr>
<tr>
<td></td>
<td>Coil for Conversion To (^3)</td>
<td>0.188 - 0.625(^6)</td>
<td>60 - 96(^6)</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Please inquire for plate widths less than 72 inches and greater than 120 inches, and for plate lengths less than 120 inches and greater than 1020 inches.

\(^2\) SSAB’s Cut-To-Length facilities use the temper leveled coil (TLC) process to produce temper leveled plate products. For additional information concerning our temper leveling process, please refer to our SSAB Americas: North American Cut-to-Length Operations brochure located under the Downloads section of our Commercial Steels Overview page.

\(^3\) Coils are excluded from qualification to this specification until they are processed into a finished plate product and all required processing, inspections, and testing are performed.

\(^4\) Please inquire for coil thicknesses greater than 0.625 inches and for coil widths less than 60 inches and greater than 96 inches. Slitting capabilities are determined by strength levels and thicknesses, so please inquire all slitting opportunities.

Mechanical Properties

Tensile testing is performed in the tranverse direction. Tensile property requirements are tabulated below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Thickness (Inches)</th>
<th>Yield Strength (ksi)</th>
<th>Tensile Strength (ksi)</th>
<th>Elongation in 2&quot; (min %)</th>
<th>Elongation in 8&quot; (min %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>0.100 - 2.00</td>
<td>50</td>
<td>60</td>
<td>23</td>
<td>20</td>
</tr>
</tbody>
</table>

\(^5\) For plates wider than 24 in., the elongation requirement is reduced two percentage points. Additional elongation requirement adjustments are allowed per the Tension Test section of Specification ASTM A6.

Tolerances

Tolerances for Mill Plate:

Thickness, width and length tolerances for A656, Grade 50 plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances are available for plate thicknesses of 3/8 inches to 2.0 inches. Inquire for specific mill flatness capabilities.

Tolerances for Temper Leveled Plate:

Thickness, width and length tolerances for A656, Grade 50 plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances or better are available for temper leveled plates. Flatness capabilities are determined by the processing line and the minimum yield strength of the material.

Tolerances for Coils for Conversion To:

For minimum gauge orders, thickness and width tolerances are in accordance with the respective ASTM specifications of A568 for thicknesses of less than 0.230 inches (exclusive), and A635 for thicknesses of 0.230 inches to 1.00 inch, inclusive. Thickness tolerances are in accordance with Table S1.1 found in each of the ASTM specifications of A635 and A568, respective of thickness. Width tolerances are in accordance with Table 6 of ASTM A568 and Table 3 of ASTM A635. Thickness tolerances for nominal gauge orders must be inquired.

All tolerances will be confirmed to the customer via SSAB’s Order Acknowledgement document.

Contact Information

www.ssab.com/contact