General Product Description
15B30 is a carbon-boron steel produced in accordance with the American Iron and Steel Institute (AISI) and the Society of Automotive Engineers (SAE) chemical composition limits. 15B30 is a carbon steel with boron added to enhance the hardenability, strength and wear resistance compared to plain carbon steels of the same carbon content.

SSAB supplies 15B30 in the as-rolled, non-heat treated condition. 15B30 is vacuum degassed as part of the secondary steelmaking process to reduce the dissolved gasses (hydrogen, nitrogen, oxygen) in the molten steel and promote enhanced cleanliness and improved properties.

Applications:
Common applications for 15B30 include ground engaging tools and agricultural components such as tiller disks, sweeps and spikes.

Dimensions
The following 15B30 product sizes are available:

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Thickness (Inches)</th>
<th>Width (Inches)</th>
<th>Length (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coils</td>
<td>0.188 - 0.375</td>
<td>60 - 96</td>
<td>1)</td>
</tr>
<tr>
<td>Discrete Plate</td>
<td>0.500 - 3.00</td>
<td>72 - 103</td>
<td>2)</td>
</tr>
</tbody>
</table>

1) Narrower width multis produced by slitting coils are available, edge condition will be cut-edge/slit-edge, inquire widths.
2) Inquire for widths >103” to 120”.

Mechanical Properties
15B30 is produced to a specified chemical composition only. Please inquire for applications requiring specific mechanical properties.

Chemical Composition (ladle analysis)

<table>
<thead>
<tr>
<th>C (wt %)</th>
<th>Mn (wt %)</th>
<th>P (max wt %)</th>
<th>S (max wt %)</th>
<th>Si (wt %)</th>
<th>B (wt %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.27 - 0.35</td>
<td>0.70 - 1.20</td>
<td>0.030</td>
<td>0.010 *)</td>
<td>0.15 - 0.35</td>
<td>0.0005 - 0.0030</td>
</tr>
</tbody>
</table>

*) Note that SSAB’s sulfur (S) level is more restrictive than AISI or SAE specification requirements for 15B30. Through ladle refining, the sulfur (S) content of SSAB 15B30 is typically reduced to ≤0.005% for improved cleanliness. Additional compositional limits are available by request and subject to review.

Tolerances
Thickness, width, and length tolerances for 15B30 steel plate and coil are in accordance with the requirements of ASTM A6. The flatness tolerance for as-supplied plate is ½ ASTM A6.

Fabrication and Other Recommendations
15B30 steel in the as-rolled condition can be machined and mechanically cut in similar fashion as structural steels of similar strength level. Mechanical cutting of heat-treated or hardened 15B30 steel will be more difficult. Machining or drilling of hardened 15B30 will also be more difficult and require robust machinery, hard bits, high speed tooling, and proper fluid selection. Thermal cutting of 15B30 should be performed in the as-rolled condition. As a result of the carbon content and additional hardenability from the boron content, the plate should be preheated uniformly to 200°F prior to thermal cutting to decrease the cooling rate in the heat-affected zone and thereby reduce the heat-affected zone hardness. Immediately following thermal cutting, while the plate is still hot, the plate should be stress relieved to soften the cut edges and reduce the risk for cracking in the heat-affected zone. Stress relieving may be accomplished by heating the plate to 1100°F to 1200°F, holding ½ hr./in., and cooling in air. Annealing (critical or sub-critical) may also be used following thermal cutting. Thermal cutting of heat-treated or hardened 15B30 steel may alter the hardness and mechanical properties of the material.

Supplementary Requirements
By agreement between the purchaser and plate manufacturer, Supplementary Requirements may be specified on the purchase order.

Contact Information
www.ssab.com/contact