BS S95 is an aerospace steel bar product which offers very high strength and is suitable for use in elevated temperature service applications. The alloy offers a combination of good creep resistance and high notch toughness. The material is a proven performer in long term service applications. BS S95 is produced by EAF/VD/LF followed by electroslag refining (ESR) if necessary for special purposes. The alloy is used in a wide variety of applications including aerospace, military, power generation and chemical processing sectors.

Typical Applications

- Pressure vessels
- Gears and shafts
- Structural aerospace applications
- Turbine fasteners
- Boiler support rods
- Machine tools

Key Features

- Good creep resistance and high notch toughness
- Used in elevated temperature service applications
- High tensile strength
- Supplied in the bright annealed condition
- Good ductility and wear resistance
- Easily treatable

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>C</th>
<th>SI</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Mo</th>
<th>Ni</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.36</td>
<td>0.15</td>
<td>0.45</td>
<td>1.1</td>
<td>0.20</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>0.44</td>
<td>0.35</td>
<td>0.70</td>
<td>0.035</td>
<td>0.030</td>
<td>1.4</td>
<td>0.35</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Mechanical Properties

- Tensile Strength: 883 to 1080 MPa
- Yield Strength: 686 MPa min
- Elongation (%): 12 min
- Charpy V-Notch: 54.25 J min @ room temperature
- Hardness in final heat treated condition: 255 - 321 HB or 270 - 340 HV
- Hardness in the softened condition: 248 HB max

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

www.smithmetal.com
sales@smithmetal.com

All information in our data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading. © Smiths Metal Centres 2018