TI-6Al-2Sn-4Zr-6Mo (6-2-4-6)

Titanium Alloy Sheet

Typical Applications

- Gas turbine engine components
- High performance racing engine components
- Oil and gas production equipment

Product Description

6-2-4-6 (a stronger derivative of 6-2-4-2) is an alpha-beta titanium alloy offering very high mechanical strength with good retention up to 450°C. The alloy is heat treatable and deep hardenable.

Weldability

The weldability of 6-2-4-6 alloy is limited.

Material Specifications

- ASTM UNS R56260
- AMS 4981
- MIL-T-9047

Availability

Round bar

Corrosion Resistance

Corrosion resistance is good. The material is approved for sour service in the NACE MR-01-75 standard.

Chemical Composition (weight %)

<table>
<thead>
<tr>
<th>Weight (%)</th>
<th>C</th>
<th>N</th>
<th>Fe</th>
<th>O</th>
<th>Al</th>
<th>Sn</th>
<th>Zn</th>
<th>Mo</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td>0.04</td>
<td>0.04</td>
<td>0.15</td>
<td>0.5</td>
<td>5.5</td>
<td>1.75</td>
<td>3.5</td>
<td>5.5</td>
<td>0.0125</td>
</tr>
</tbody>
</table>

Mechanical Properties (minima at RT for Annealed Bar)

| UTS, MPa | 1172 |
| 0.2% PS, MPa | 1103 |
| Elongation % in 51mm GL | 10 |
| Reduction in area, % | 20L 15T |
| Hardness, HRC | 39 |

| L = Longitudinal |
| T = Traverse |

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.

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