WELDING OF:
H O K O T O L

Aleris
Europe
Preparing and welding of edges

Bad

Good

Heat-affected zone

Weld seam

Welding direction

First pass

Second pass

Hardness profile of welded HOKOTOL

- Welding process: TIG; Filler alloy: AA 5556
HOKOTOL - The High-Strength Alloy
Repair Welding

Influence of filler alloy

Bad

Good

Filler alloy: AA 2319
First pass: Crack

Filler alloy: AA 4043A + AA 2319
First pass: No crack

Filler alloy AA 2319

Filler alloy AA 4043A

Weld preparing and Welding

Bad

Good

R > 6

Filler alloy AA 4043A

Filler alloy AA 2319

Crack

Filler alloy: AA 2319

Filler alloy: AA 4043A

Filler alloy AA 2319

Filler alloy AA 4043A

Hardness profile of welded HOKOTOL

• Welding process: TIG
• Filler alloy: AA 4043A and AA 2319

Filler alloy AA 2319

Filler alloy AA 4043A
HOKOTOL - The High-Strength Alloy
Repair Welding

Preparing and welding of areas.

Bad

CRACK

Good

Heat - affected zone
Base material
Weld seam
Heat - affected zone
Base material
Weld seam
Heat - affected zone
Base material

200
180
160
140
120
100
80
60
40
20
0

Hardness profile of welded HOKOTOL

- Welding process: TIG
- Filler alloy: AA 2319
### Chemical composition of recommended filler alloys (weight %)

<table>
<thead>
<tr>
<th>Alloy</th>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Mn</th>
<th>Mg</th>
<th>Ti</th>
<th>Zr</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA 4043 (AlSi5)</td>
<td>4.5 – 6.0</td>
<td>max. 0.6</td>
<td>max. 0.30</td>
<td>max. 0.15</td>
<td>max. 0.20</td>
<td>max. 0.15</td>
<td>-</td>
</tr>
<tr>
<td>AA 5183 (AlMg4.5Mn0.7)</td>
<td>max. 0.20</td>
<td>max. 0.40</td>
<td>max. 0.10</td>
<td>0.40 – 1.00</td>
<td>4.00 – 4.9</td>
<td>max. 0.5</td>
<td>-</td>
</tr>
<tr>
<td>AA 5556 (AlMg5Mn)</td>
<td>max. 0.25</td>
<td>max. 0.40</td>
<td>max. 0.10</td>
<td>0.5 – 1.00</td>
<td>4.7 – 5.5</td>
<td>0.05 – 0.25</td>
<td>-</td>
</tr>
<tr>
<td>AA 2319 (AlCu6.5Mn0.3)</td>
<td>max. 0.20</td>
<td>max. 0.30</td>
<td>5.6 – 6.6</td>
<td>0.20 – 0.40</td>
<td>max. 0.02</td>
<td>0.02 – 0.20</td>
<td>0.10 – 0.25</td>
</tr>
</tbody>
</table>
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