Application Note

Cross Sectioning of FeCrAl Alloy

Related instrument: Leica EM TIC3X
Cross Sectioning of FeCrAl Alloy

Market: Industry, Institutes, Universities

PURPOSE:
The hard/soft material combination is difficult to polish in a conventional way. The result is mostly a smeared surface. Ion beam slope cutting can solve this problem.

GOAL:
Cross section to see the layers and the interface structure.

PROCESS DESCRIPTION:
(benchmark values for this particular sample)
Mechanical pre-preparation with Leica EM TXP using 9 µm diamond lapping foil at 2600 rpm.

<table>
<thead>
<tr>
<th>TIC 3X Parameters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceleration voltage</td>
<td>7 kV</td>
</tr>
<tr>
<td>Gun current</td>
<td>2.6 mA</td>
</tr>
<tr>
<td>Milling time</td>
<td>6 h</td>
</tr>
</tbody>
</table>

RESULTS:
• The cut is flat and clean.
• The grain structure and the interfaces are clearly visible.

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Cross section of FeCrAl Alloy:
The statement by Ernst Leitz in 1907, "With the User, For the User," describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: Living up to Life.

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**Related Products**

**Leica EM TIC3X**

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