durostat 400/450 toughcore

Wear-resistant steels with especially high toughness and best processing properties

toughcore® makes it possible to shift current limits and match the most stringent material requirements.

**durostat 400 toughcore**

durostat 400 toughcore offers significant advantages when compared to conventional wear-resistant steels with respect to hardness and toughness. The unique combination of 20% higher hardness and excellent toughness properties of 40 J down to a temperature of minus 40 °C is not achievable when conventional manufacturing technologies are used.

**durostat 450 toughcore**

The new and patented toughcore® manufacturing technology maintains the same hardness while significantly improving the toughness of durostat 450 to a level not achieved by conventional wear-resistant steel plates. Their exceptional toughness results in a higher level of safety and can be used in applications where conventional materials meet their limits.
Wear tests of durostat® toughcore

A wear test, based on the ASTM G65 ABRASION TEST as well as Rockwell C tip scratch test and executed by the Austrian Excellence Center for Tribology shows the remarkable benefits of durostat® toughcore wearplates down to a test temperature of -40 °C.

The wear performance was determined by loss of volume and depth of the scratch. It was evaluated, that durostat 400 toughcore showed an approx. 20% better wear performance, than the competitor material.

Convincing advantages of durostat® toughcore

<table>
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<tr>
<th>Advantage</th>
<th>Description</th>
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<tbody>
<tr>
<td>50% higher toughness than conventional material</td>
<td>Guaranteed toughness for low temperature applications</td>
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<tr>
<td>20% higher hardness down to -40 °C than conventional material</td>
<td>Reduced plate thickness and weight as a result of high hardness</td>
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<td>Longer service life with much higher resistance to wear</td>
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<td>Unique toughcore® manufacturing technology</td>
<td>Best surface quality due to thinner rolling scale</td>
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<tr>
<td>State-of-the-art alloying and low carbon content</td>
<td>Good weldability, no preheating for small plate thicknesses</td>
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