

30MnB5

BARON STEEL FOR QUENCHING

STANDARD	EN ISO 683-2																																												
IDENTIFICATION NUMBER	1.5531																																												
CLASSIFICATION	Quality Steel																																												
TYPE	Alloy Steel																																												
ROLLING STATE	AR - Rolling blank																																												
BRIEF DESCRIPTION	Boron steel with high hardenability. Ideal for applications subject to wear, abrasion and high mechanical stress where high hardness and strength after heat treatment are required.																																												
APPLICATIONS	Agricultural machinery, blades, discs, knives, wear-resistant components, working tools, hardened structural parts, earth-moving machinery and industrial equipment.																																												
STANDARD COIL STOCK RANGE	<table border="1"> <thead> <tr> <th>30MnB5</th> <th>1000</th> <th>1250</th> <th>1500</th> </tr> </thead> <tbody> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>2.5</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td>•</td></tr> <tr><td>5</td><td></td><td></td><td>•</td></tr> <tr><td>6</td><td></td><td></td><td>•</td></tr> <tr><td>8</td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td></tr> </tbody> </table>	30MnB5	1000	1250	1500	2				2.5				3				4			•	5			•	6			•	8				10				12							
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CHEMICAL COMPOSITION	<p>Regulatory standard</p> <table border="1"> <thead> <tr> <th>C (%)</th> <th>Si (%)</th> <th>Mn (%)</th> <th>P (%)</th> <th>S (%)</th> <th>Al (%)</th> <th>Nb (%)</th> <th>Ti (%)</th> <th>V (%)</th> <th>Mo (%)</th> <th>Cu (%)</th> </tr> </thead> <tbody> <tr> <td>0.27-0.33</td> <td>≤ 0.040</td> <td>1.15-1.45</td> <td>≤ 0.025</td> <td>≤ 0.035</td> <td></td> <td></td> <td></td> <td></td> <td>≤ 0.10</td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Cr (%)</th> <th>Ni (%)</th> <th>N (%)</th> <th>B (%)</th> <th>Nb+Ti+V (%)</th> <th>Cr+Mo+Ni (%)</th> <th>Ni+Cr+Cu+Mo (%)</th> <th>C.E.V. (%)</th> </tr> </thead> <tbody> <tr> <td>≤ 0.40</td> <td>≤ 0.40</td> <td></td> <td>0.0008-0.0050</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><i>C.E.V. (%) = C+(Mn/6)+[(Cr+Mo+V)/5]+[(Ni+Cu)/15]</i></p>	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Al (%)	Nb (%)	Ti (%)	V (%)	Mo (%)	Cu (%)	0.27-0.33	≤ 0.040	1.15-1.45	≤ 0.025	≤ 0.035					≤ 0.10		Cr (%)	Ni (%)	N (%)	B (%)	Nb+Ti+V (%)	Cr+Mo+Ni (%)	Ni+Cr+Cu+Mo (%)	C.E.V. (%)	≤ 0.40	≤ 0.40		0.0008-0.0050										
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MECHANICAL PROPERTIES	<p>Tempered steel. Refer to standard EN ISO 683-1</p> <table border="1"> <thead> <tr> <th>Mechanical characteristics</th> <th>Direction</th> <th>Thicknesses</th> <th>Values</th> </tr> </thead> <tbody> <tr><td>R_e (MPa)</td><td></td><td></td><td></td></tr> <tr><td>R_m (MPa)</td><td></td><td></td><td></td></tr> <tr><td>A₃₀ (%)</td><td></td><td></td><td></td></tr> <tr><td>A₅ (%)</td><td></td><td></td><td></td></tr> <tr><td>Bend Test 180°</td><td></td><td></td><td></td></tr> <tr><td>KV 20°C (J)</td><td></td><td></td><td></td></tr> <tr><td>KV 0°C (J)</td><td></td><td></td><td></td></tr> <tr><td>KV -20°C (J)</td><td></td><td></td><td></td></tr> <tr><td>KV -40°C (J)</td><td></td><td></td><td></td></tr> <tr><td>KV -50°C (J)</td><td></td><td></td><td></td></tr> </tbody> </table> <p>* = Standard option t = thickness in mm of the test piece for the bend test</p> <p>L = Tensile testing carried out on longitudinal test pieces T = Bend tests carried out on cross-cut test pieces</p>	Mechanical characteristics	Direction	Thicknesses	Values	R _e (MPa)				R _m (MPa)				A ₃₀ (%)				A ₅ (%)				Bend Test 180°				KV 20°C (J)				KV 0°C (J)				KV -20°C (J)				KV -40°C (J)				KV -50°C (J)			
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TOLERANCES	<p>Tolerances on the dimensions and on the shape UNI EN 10051 Surface condition UNI EN 10163-2</p>																																												
CERTIFICATIONS	EN10204-3.1																																												