

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 20KHGNTR (20XГHTP).

Grade :	20KHGNTR (20XГHTP)
Classification :	Alloy structural steel
Equivalent grades:	Is absent

Chemical composition in % for grade 20KHGNTR (20XГHTP)

C	Si	Mn	Ni	S	P	Cr	Ti	Cu	B
0.18 - 0.24	0.17 - 0.37	0.8 - 1.1	0.4 - 0.7	max 0.035	max 0.035	0.4 - 0.7	0.03 - 0.09	max 0.3	0.001 - 0.005

Mechanical properties under T=20°C for grade 20KHGNTR (20XГHTP)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 4543-71	Ø 15		1180	980	9	50	780	Guenching 850°C, oil, Drawing 200°C, oil,

Brinell hardness for 20KHGNTR (20XГHTP) , Rolled stock GOST 4543-71	HB 10 ⁻¹ = -1 MPa
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Technological properties for grade 20KHGNTR (20XГHTP)

Flakes :	not predisposed
Temper brittleness:	predisposed

Specification : Mechanical properties :

- σ_B - Tensile strength , [MPa]
- σ_T - Yield stress , [MPa]
- δ_5 - Specific elongation at fracture , [%]
- ψ - Reduction of area , [%]
- KCU - Impact strength , [kJ / m²]
- HB - Brinell hardness , [MPa]

Weldability :

- without limitations** - welding is done without heating and subsequent heat treating
- limited weldability** - welding is possible under heating up to 100-120 grade and subsequent heat treating
- hard weldability** - obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating is annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more then 2500 steels and alloys (stainless steel, alloy steel, carbone steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).
Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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