

Manufactory profile



My company has smelting, forging, heat treatment, machining etc workshop. Heat treatment equipment, heat treatment capacity of 20000 tons, 15 meters long, 4 m diameter workpiece; Special steel smelting with ED + LF + VD and electricity remelting of smelting slag ability.

The main production of special steel categories include: [Stainless Steel](#), [Tool steel](#), [Carbon steel](#), [Alloy steel](#), [Mould steel](#), [Ti Alloy](#), [High alloy](#), the whole steel, high temperature alloy, [nickel-based alloy](#), [cobalt-based alloy](#), [Hastelloy alloy](#) etc.

Production specifications including: [Round bar](#), [Tube/Pipe](#), [Steel plate](#), [Sheet](#), [Coil](#), [Flat bar](#), [Cold rolling](#), [Steel wire](#), [Steel strip](#) etc.

Characteristics for grade GS-45

Grade:	GS-45
Standard:	Germany DIN
Classification:	

Chemical composition % of the ladle analysis of grade GS-45

C	Si	Mn	P	S	Cr	Ni	Mo	V
Max 0.25	Max 0.60	0.20-0.50	Max 0.040	Max 0.040				
W	N	Cu	Co	Pb	B	Nb	Al	Other
Ti	Ta							

Mechanical properties of grade GS-45

Annealing hardness HBS	Cold pull hardness HBS	Preheating temperature °C	Quenching temperature °C		Holding time min	Hardening medium	Temper temperature °C	After tempering hardness ≥HRC
			salt-bath furnace	controlled atmosphere furnace				
235	262	788	1191	1204	5~15	air cooling	522	60

Physical Properties

Assortment	Dimension	Direct.	S _B	S _T	d ₅	y	KCU	Heat treatment
	mm	-	MPa	MPa	%	%	kJ / m ²	-
casted			11-13		30-40			
deformed			15		60-70			

Technological properties of grade GS-45

Melting temperature:	327.3 °C
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We can produce GS-45, the specifications follows:

Note:

- (1) listed in the table apex diameter (d), to steel thickness (a) multiples said.
- (2) in the ASTM A6 standard specified scope can meet any additional conditions.
- (3) from the standard for 50 mm (2 in).

Mechanical properties

Mechanische Eigenschaften

Caracteristiques mecaniques

ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d'élasticité minimale

Rm Tensile strength / Zugfestigkeit / Resistance a la traction

A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal

J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc

Round bar:

Diameter : 1mm-2000mm

Square bar:

Size: 50mm * 50mm-600mm * 600mm

Plate steel/flat bar:

Size: Thickness: 0.1mm-800mm Width: 10mm to 1500mm

Tube/pipe:

Size: OD: 6-219mm WT: 1-35 mm.

Cold-rolled sheet: Thickness: 2-5mm Width: 1000mm Length: 2000mm

Hot-rolled sheet: Thickness: 6-80mm Width: 210-610mm

Length: We can supply any length based on the customer's requirement.

Forging/hot rolling/ extrusion of steel.

Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes

Finished goods condition: hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any conditions based on the customer's requirement

Surface conditions: scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement

Furnaces for metallurgical processing: electrode arc + LF/VD/VOD/ESR/Vacuum consumable electrode.

Ultrasonic inspection: 100% ultrasonic inspection for any imperfections or based on the customer's requirement.

UTS according to SEP 1921 C/c,D/d,E/e; A388 or GB/T 6402

Excellent service for all kinds of industries, with advantages of technologies, equipment and price.

We serve you with our honesty, integrity, and professionalism.

Product pictures



Web address: [/Steel-Grades/Special-Alloy/GS-45.html](http://Steel-Grades/Special-Alloy/GS-45.html)