

S45C steel

S45C steel is used by electric furnace, open hearth or pure oxygen converter steelmaking static steel all produced, the steel microstructure is uniform, without tissue defects.



The carbon content of the steel is above 0.4%, and its wear resistance is excellent, but its ductility is reduced. Quenching is easy to deform and crack. Therefore, heat treatment is very important, and it must be quenched immediately after tempering to avoid temper brittleness. The cutting properties of this kind of carbon steel can be improved by spheroidizing the steel.

It is a medium carbon steel with high strength. Because of its poor hardenability, it is generally used in normalizing state, and when the mechanical properties are high, the quenching and tempering treatment is adopted. Cold deformation is of medium plasticity, and the machinability of annealing and normalizing is better than that of tempering. It is used for manufacturing parts with high strength requirements, such as gears, shafts, piston pins, etc., and mechanical parts, forgings, stamping parts and bolts, nuts and pipes that are not very stressed. Quenching and tempering standard quenching temperature of 820 C ~870 C, water cooling, tempering temperature 550~650 C, very cold.

45C is widely used in mechanical manufacturing, and the mechanical properties of this kind of steel are very good. But this is a medium carbon steel, the quenching

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performance is not good, No. 45 steel can be hardened to HRC42~46. Therefore, if the surface hardness is needed, and the excellent mechanical properties of 45# steel will be brought into play, the 45# steel surface will be carburized and quenched, so that the required surface hardness can be obtained.

Standard: STEEL PALTE Grade :S45C, 1045
Thickness : 8mm-150mm Width : 1000mm-4000mm Length : 1000mm-20000mm
MOQ: 1 PC Product type : Steel plate Delivery time : Promptly (Stock) or 10-40 days (Production) Stock : Available MTC: Available
Delivery condition: AS REQUIREMENTS

C 0.42~0.48

Si 0.15~0.35

Mn 0.60~0.90

P≤0.030

S≤0.035

Cu≤0.30

Ni≤0.20

Cr≤0.20

Tensile σ_b (MPa) : ≥600 (61)

Yield σ_s (MPa) : ≥355 (36)

Elongation δ_5 (%) : ≥16

ψ (%) : ≥40

Impact Akv (J) : ≥39

α_{kv} (J/cm²) : ≥49 (5)

Hardness : ≤229HB;

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