



JIS G4051 S45C steel works/steel structures/steel machining parts

(1) This high quality carbon steel is the killed steel manufactured with electric furnace or pure oxygen converter steelmaking process.

(2) The metallographic structure is homogeneous and has no tissue defects.

The JIS G4051 S45C steel works/steel structures/steel machining parts have over 0.4% carbon content and good wear resistance.

The chemical composition of JIS G 4051 S45C steel

Grade	the chemical composition							
S45C	C	Si	Mn	Pmax	Smax	Cu max	Ni max	Cr max
	0.42-0.48	0.15-0.35	0.60-0.90	0.030	0.035	0.30	0.20	0.20

The mechanical property of JIS G4051 S45C steel

Grade	Availability hardness	Tensile strength	Yield strength min	Elongati on % min(δ 5)	impact strengt h	hardness
S45C	137~170HBS 167~229HBS 201~269HBS	> 686MPa	> 490MPa	17%	>78J/c m2	201~269 HB

(3) Heat treatment: quenching, annealing, tempering. Quenching temperature: 820°C~870°C, tempering temperature: 550°C~650°C. The ductility is reduced and the quenching is easy to deform and crack. Therefore, heat treatment is extremely important and must be cold after tempering so as to avoid the temper brittleness. The cutting performance can be improved by spheroidizing the steel.

(4) It is widely used in plastic moulds, die frames, mortise pin and guide pillars. If you need certain surface hardness and desire for superior mechanical properties, we can supply the necessary surface hardness with the carburizing and the quenching.

(5) Processing items: air hammer, ring rolling machine, grinding ring machine and the robot groove machine

If you have more requirements about S45C steel works, S45C steel structures, S45C steel machining parts, please let us know.



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