



EN10083-2: C50, C50E steel works/steel structures/steel machining parts

C50 / C50E is medium carbon steel with high strength steel. It is usually used in normalizing, quenching or tempering condition. C50 / C50E steel is used in the manufacture of mechanical products and spring pieces, such as forging gear, tie rod, roller, shaft, friction plate, agricultural spindle dig plowshares and heavy-duty spindle bearing, etc. C50 / C50E steel are also with high wear resistance property.

The chemical composition of EN10083-2: C50/ C50E steel:

C: 0.47-0.55, Si: 0.4, Mn: 0.6-0.9, P: 0.03, S: 0.035, Cr: 0.4, Mo: 0.1, Ni: 0.4

Mechanical Properties in quenching and tempering condition (room temperature):

C50/ C50E: diameter \leq 16mm or thickness \leq 8mm:

Tensile strength σ_b (MPa): 750-900

Yield strength σ_s (MPa): \geq 520

Elongation δ_5 (%): \geq 13

C50/ C50E: 16mm < diameter \leq 40mm or 8mm < thickness \leq 20mm:

Tensile strength σ_b (MPa): 700-850

Yield strength σ_s (MPa): \geq 460

Elongation δ_5 (%): \geq 15

C50/ C50E: 40mm < diameter \leq 100mm or 20mm < thickness \leq 60mm:

Tensile strength σ_b (MPa): 650-800

Yield strength σ_s (MPa): \geq 400

Elongation δ_5 (%): \geq 16

Recommended temperature in heat treatment: Normalizing: 830°C,

Quenching: 830°C, tempering 600°C

Equivalent material: SAE J403 1050 steel, JIS G4051 S50C steel

Delivery condition of C50/ C50E steel: heat treatment (Q+T, annealing, normalizing or high temperature tempering), without heat treatment.

Based on positive and pragmatic attitude, efficient management system, and perfect after-sale service, Shanghai Katalor guarantees to provide you with the best C50, C50E steel plates, round bar or steel tube/pipe. With our strong machining service, we can process the C50 and C50E raw material into C50/C50E steel works, steel structures and steel machining parts. If you have any needs, please feel free to contact us. We can offer you the technical support according to your demand, and also will offer you best quality and service.



Shanghai Katalor Enterprises

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Shanghai Katalor Enterprises Co., Ltd located in Shanghai of China, is specialized in manufacturing and exporting steel and casting products. Based on the domestic rich product resources and professional research on the international market, Katalor's service has already spread to many countries in Europe, America, Southeast Asia, Middle East, South America, Africa, and so on.

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