



ZHEHENG STEEL

Wenzhou Zheheng Steel Industry Co.,Ltd
stainless-steelseamlesspipe.com



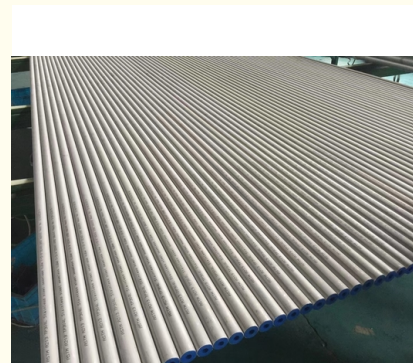
ASTM A312 TP309cb Schedule 40 SS Seamless Pipe High Temperature Tube

Our Product Introduction

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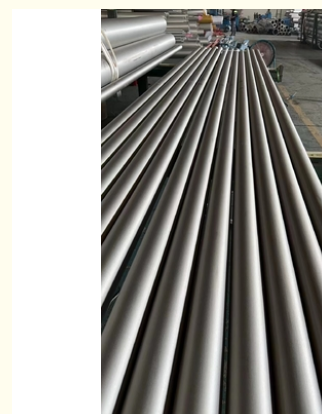
Basic Information

- Place of Origin: Wenzhou, China
- Brand Name: Zheheng
- Certification: ISO9001
- Model Number: TP309cb
- Minimum Order Quantity: MOQ500kg
- Packaging Details: In wooded cases or pallets, or as per clients requirement
- Delivery Time: 7-15 working days after receiving payment
- Payment Terms: L/C, D/P, T/T, Western Union
- Supply Ability: 1000 Ton/Tons per Month



Product Specification

- WT: SCH5-XXS
- Size: 1/8"-24"
- Surface Finish: Polishing, Hair Line, Pickling
- Price Terms: FOB, CIF, CFR, EXW
- Application: Industry
- Ends: Plain/Bevelled
- Highlight: **TP309cb SS Seamless Pipe ,
ASTM A312 SS Seamless Pipe ,
Schedule 40 SS Seamless Pipe**



Product Description

High Temperature Tube ASTM A312 TP309cb Schedule 40 SS Seamless Pipe Characteristic

309Cb belongs to the Austenitic series stainless steel, containing niobium element, which can resist high-temperature oxidation, corrosion and deformation caused by thermal cycling. It has good weldability and machinability. 309Cb is widely used in petrochemical, electric power, pharmaceutical and other industries under high temperature conditions. It is often used in the manufacture of high temperature stoves, petroleum equipment and chemical equipment.

Chemical Composition

A312 GRAD ES	UNS	C	Mn	P	S	Si	Cr	Ni	Mo	Nb
TP309 Cb	S30940	0.08	2	0.045	0.03	1	22.0- 24.0	12.0- 16.0	0.75	10xC min 1.10 max

Mechanical Properties

Grade	Tensile Strength (MPa) min	Yield Strength 0.2% Proof (MPa) min	Elongation (% in 50mm) min	Hardness	
				Rockwell B (HR B) max	Brinell (HB) max
309CB	515	205	40	95	217

Physical Properties

Density (lb./ in ²) @ RT		0.29
Modulus of Elasticity in Tension (psi x 10 ⁶)		29
Specific Heat (BTU/o F/lb.)	32 to 212 oF	0.12
Thermal Conductivity (BTU/hr/ft ² /ft)	212oF	9
	932oF	10.8
Mean Coefficient of Thermal Expansion (in. x 10 ⁻⁶ per o F)	32 to 212oF	8.3
	32 to 600oF	9.3
	32 to 1,000oF	9.6
	32 to 1,200oF	10
Electrical Resistivity (micro ohms – cm)	at 70oF	39.8
Melting Point Range (oF)		2550 – 2650
Oxidation Resistance – Continuous Service(oF)		2000
Oxidation Resistance – Intermittent Service(oF)		1800

To improve the corrosion resistance of steel, the following measures can be taken:

- (1) to form a stable passivation film on the surface of the steel. Passivation is due to the action of metal and medium to produce a thin protective film, the existence of the protective film hinders the anode process, thus improving the chemical stability of the metal. After chromium is contained in the steel, chromium is also contained in the passivation film. The higher the chromium content in the steel, the higher the chromium content in the TP309cb stainless steel tube film, which will increase the stability of the film, and its thickness is above 1nm. Therefore, the corrosion resistance of stainless steel is mainly caused by a chromium-rich oxide film with a thickness of about 1nm or more. The type of medium and other elements in the steel will affect the stability of the passivation film.
- (2) The steel obtains a single solid solution structure. For example, 18Cr-8Ni austenitic stainless steel has high corrosion resistance only after solution treatment to obtain a single uniform austenitic structure
- (3) Increase the electrode potential of the solid solution. The corrosion resistance of the metal is closely related to the type, concentration, temperature, pressure and other conditions of the medium, and the oxidation capacity of the medium has the greatest impact.

Image



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