



## A106 Gr. B API 5L Pipeline Seamless Steel Pipeline For Oil Gas

### Our Product Introduction

#### Basic Information

- Place of Origin: cangzhou
- Brand Name: BaoYang
- Certification: CE & ISO
- Model Number: Carbon Seamless Steel Pipe
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: Standard Export Packing
- Delivery Time: 7~30 working days
- Payment Terms: L/C, D/A, D/P, T/T, Western Union



#### Product Specification

- Name: Seamless Steel Pipeline
- Technique: Hot-Rolled
- Standards: BS, JIS, GB, ASTM, DIN, AISI
- Material: Carbon Steel
- Wall Thickness: 4mm-150mm
- Outer Diameter: 13.7mm-609.6mm
- Processing Service: Bending, Punching, Cutting
- Usage: Pipeline Transport, Boiler Pipe, Hydraulic/Automobile Pipe, Oil/Gas Drilling
- Highlight: **a106 gas pipe steel, a106 pipeline steel pipe, oil gas pipe steel**



## Product Description

### API 5L Pipeline Seamless Steel Pipeline

API 5L Pipeline steel refers to a specific group of steel grades that are used for manufacturing line pipes as per the standards set by the American Petroleum Institute (API). These pipes are primarily used for the transportation of oil, natural gas, and water in pipeline transportation systems within the petroleum and natural gas industries. Here's a comprehensive overview of API 5L Pipeline steel:

**API 5L Specification:** API 5L is a standard that defines the requirements for two product specification levels (PSL 1 and PSL 2) of both seamless and welded steel pipes. PSL 2 has more stringent requirements compared to PSL 1, including additional testing and chemical composition controls.

**Grades:** API 5L covers various grades, including but not limited to Grade B, X42, X52, X60, X65, X70, and X80. The grade is indicative of the minimum yield strength of the steel, with the 'X' grades representing higher strength steels suitable for more demanding applications.

**Manufacturing Processes:** API 5L pipeline steel can be manufactured using several processes, including Electric Resistance Welding (ERW), Submerged Arc Welding (SAW), Double Submerged Arc Welding (DSAW), Longitudinal Submerged Arc Welding (LSAW), and seamless pipe manufacturing through hot rolling and cold rolling.

**Applications:** The steel is used in onshore and offshore pipelines, as well as in sour service applications where the pipeline may be exposed to corrosive environments like hydrogen sulfide (H<sub>2</sub>S).

**Chemical Composition:** The chemical composition of API 5L steel varies by grade and PSL. Elements such as carbon, manganese, phosphorus, sulfur, and silicon are controlled to ensure the desired mechanical properties and corrosion resistance.

**Mechanical Properties:** API 5L steel must meet certain tensile strength, yield strength, and elongation requirements. Higher-grade steels have increased minimum yield strengths and may have additional requirements for toughness and corrosion resistance.

**Hydrostatic Testing:** All API 5L pipes undergo hydrostatic testing to ensure they can withstand the internal pressure to which they may be subjected during service.

**Non-Destructive Testing (NDT):** API 5L pipes are subject to NDT methods such as ultrasonic testing, radiographic testing, and magnetic particle inspection to detect any internal or surface defects.

**Coatings:** To protect against corrosion, API 5L pipeline steel often requires the application of external coatings such as fusion-bonded epoxy (FBE), three-layer polyethylene (3LPE), or coal tar enamel (CTE).

**Length and Tolerances:** API 5L pipes are supplied in various lengths with specific tolerances for diameter, wall thickness, and length to ensure proper fit and assembly in the pipeline.

**Certification and Marking:** Manufacturers of API 5L steel pipes may undergo an audit by API to ensure compliance with the standard. Those passing the audit are awarded an API monogram, which can be used as a mark of quality assurance.

API 5L pipeline steel is a critical material in the construction and maintenance of safe and reliable pipelines for the oil and gas industry. Its production and use are governed by strict standards to ensure performance and safety.

### Standards of API 5L Pipeline Seamless Steel

Steel Grade (Steel Name)	Mass Fraction, Based on Heat and Product Analyses % max										Carbon Equivalent a % max	
	C b	Si	Mn b	P	S	V	Nb	Ti	Other		CE iiv	CE pcm
Seamless Pipe												
L245R or BR	0.24	0.4	1.2	0.025	0.015	c	c	0.04	e,l		0.43	0.25
L290R or X42R	0.24	0.4	1.2	0.025	0.015	0.06	0.05	0.04	e,l		0.43	0.25
L245N or BN	0.24	0.4	1.2	0.025	0.015	c	c	0.04	e,l		0.43	0.25
L290N or X42N	0.24	0.4	1.2	0.025	0.015	0.06	0.05	0.04	e,l		0.43	0.25
L320N or X46N	0.24	0.4	1.4	0.025	0.015	0.07	0.05	0.04	d,e,l		0.43	0.25
L360N or X52N	0.24	0.45	1.4	0.025	0.015	0.1	0.05	0.04	d,e,l		0.43	0.25
L390N or X56N	0.24	0.45	1.4	0.025	0.015	0.1 t	0.05	0.04	d,e,l		0.43	0.25
L415N or X60N	0.24 t	0.45 t	1.4 t	0.025	0.015	0.1 t	0.05 t	0.04 t	g,h,l		As agreed	
L245Q or BQ	0.18	0.45	1.4	0.025	0.015	0.05	0.05	0.04	e,l		0.43	0.25
L290Q or X42Q	0.18	0.45	1.4	0.025	0.015	0.05	0.05	0.04	e,l		0.43	0.25
L320Q or X46Q	0.18	0.45	1.4	0.025	0.015	0.05	0.05	0.04	e,l		0.43	0.25
L360Q or X52Q	0.18	0.45	1.5	0.025	0.015	0.05	0.05	0.04	e,l		0.43	0.25
L390Q or X56Q	0.18	0.45	1.5	0.025	0.015	0.07	0.05	0.04	d,e,i		0.43	0.25
L415Q or X60Q	0.18 t	0.45 t	1.7 t	0.025	0.015	g	g	g	h,l		0.43	0.25
L450Q or X65Q	0.18 t	0.45 t	1.7 t	0.025	0.015	g	g	g	h,l		0.43	0.25
L485Q or X70Q	0.18 t	0.45 t	1.8 t	0.025	0.015	g	g	g	h,l		0.43	0.25
L555Q or X80Q	0.18 t	0.45 t	1.9 t	0.025	0.015	g	g	g	i,j		As agreed	
L625Q or X90Q	0.16 t	0.45 t	1.9	0.020	0.01	g	g	g	j,k		As agreed	
L690Q or X100Q	0.16 t	0.45 t	1.9	0.020	0.01	g	g	g	j,k		As agreed	

### Product Photos





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