ASTM A53 Carbon Seamless Structural Steel Pipes / Alloy Seamless Pipe

Our Product Introduction

Basic Information

- Place of Origin: cangzhou
- Brand Name: BaoYang
- Certification: CE & ISO
- Model Number: ASTM A53 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: ASTM A53 Carbon Seamless Steel Pipe
- 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: **astm alloy seamless pipe**, **astm structural steel pipes**, **a53 alloy seamless pipe**

Product Description

ASTM A53 Carbon Seamless Steel Pipe For Structural Purposes

ASTM A53 Structural Seamless Steel pipes are a type of steel tubing that is used in a variety of structural applications due to their strength and versatility.

Here's a detailed look at these pipes based on the information provided:

1. Standard Specification: ASTM A53 is a standard specification developed by the American Society for Testing and Materials (ASTM) that covers both seamless and welded steel pipes. It is used for mechanical and pressure applications and is acceptable for ordinary uses in steam, water, gas, and air lines.

2. Types and Grades: ASTM A53 pipes are available in three types: A, B, and C, with each type having specific mechanical properties and applications. Type A is intended for general structural purposes, while Type B is used for mechanical applications. Type C is a high-strength pipe used for critical applications.

3. Chemical Composition: ASTM A53 pipes are made of carbon steel, which is defined by its carbon content and other alloying elements such as manganese, phosphorus, and sulfur. The exact chemical composition can vary depending on the specific grade.

4. Mechanical Properties: These pipes are known for their tensile strength, yield strength, elongation, and hardness, which are critical for structural applications. They also have good corrosion resistance and weldability, making them suitable for a wide range of uses.

5. Applications: ASTM A53 Structural Seamless Steel pipes are used in various industries, including plumbing, construction, oil and gas, HVAC, and mechanical engineering. They are particularly useful for low-critical applications such as plumbing systems, water supply systems, and fire sprinkler systems, as well as structural applications like bridges and buildings.

6. Advantages: The advantages of ASTM A53 pipes include cost-effectiveness, wide availability, and versatility across different applications. They are also known for their robustness and corrosion resistance.

7. Limitations: Despite their many benefits, ASTM A53 pipes do have some limitations. Grade A, for example, has lower strength compared to Grade B and C, and while they have good corrosion resistance, they may not be ideal for highly corrosive conditions. They are also not designed for high-pressure or high-temperature applications.

8. Quality Control: To ensure the pipes meet the required standards, they undergo rigorous quality control checks and testing, including non-destructive testing methods to ensure their structural integrity.

9. Ordering Information: When ordering ASTM A53 pipes, it is essential to provide precise details such as the type, grade, length, and specific dimensional requirements to ensure the correct pipes are supplied for the intended application.

ASTM A53 Structural Seamless Steel pipes are a popular choice for a wide range of projects due to their balance of strength, affordability, and availability, making them a reliable option for structural applications.

Comparison of Key Properties

GRADE	TENSILE STRENGTH (MPA)	YIELD STRENGTH (MPA)	ELONGATION (%)
A	330	205	28
B	415	240	22
C	485	275	21

Chemical Composition (%)

ELEMENT	A	B	C
Carbon	0.25	0.30	0.30
Manganese	0.95	1.20	1.20
Phosphorus	0.05	0.05	0.05
Sulfur	0.045	0.045	0.045

Chemical Properties

PROPERTY	A	B	C
Tensile Strength	330 MPa	415 MPa	485 MPa
Yield Strength	205 MPa	240 MPa	275 MPa
Elongation	28%	22%	21%
Hardness	Not Specified	Not Specified	Not Specified
Corrosion Resistance	Good	Good	Good
Weldability	Excellent	Excellent	Excellent

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