

# Steel Pipe

- Stainless Steel Pipe
- Carbon Steel Pipe
- Galvanized Pipe
- Welded Pipe
- Spiral Pipe
- Rectangular Pipe



Hanwu Iron and Steel (Shandong) Co., Ltd.

#### **COMMON MATERIALS**

Austenitic Stainless Steel	201/202/301/302/303/304/304L/305/309S/310S/316 316L/316Ti/317/317L/321/330/347 etc.	
Ferritic Stainless Steel	405/409/430/434/444 etc.	
Martensitic Stainless Steel	403/410/416/420/440A etc.	
Duplex Stainless Steel	329/2205/2304/2507/2750 etc.	
Standard	ISO 15510:2010, ASTM A240/A240M, JIS G4304/G4305, EN 10088-2, etc.	
Certificate	SGS, BV, TUV, V-Trust, etc.	

#### STAINLESS STEEL SURFACE



### STAINLESS STEEL PRODUCTION & TESTING















# PROPERTIES OF STAINLESS STEEL

#### Yield Strength

Depending on the grade, stainless may exhibit high strength and low elongation or low strength and high elongation properties. They compare very well to carbon steels when it comes to yield strength.

#### Strength at High Temperatures

Stainless steel performs comparatively better than other carbon steels at higher temperatures. It shows better fire resistance due to its high strength retention factor at elevated temperatures (above 500°C). It also has better stiffness retention factor than carbon steel above 300°C.

#### **Tensile Strength**

When it comes to tensile strength, stainless steel is superior to materials like aluminium, brass, and mild steel. The highest tensile strength is seen in precipitation hardening and martensitic grades. These grades can have tensile strengths that are twice as much as the ubiquitous 304 and 316 grades. Duplex steel, in particular, has a high strength/ductility ratio.

#### Cryogenic Resistance

Some stainless steel grades are extremely adept at handling a wider range of temperatures. Austenitic steels display exceptional toughness and increased tensile strength at sub-zero temperatures. This widens the scope of their usage considerably opening up new avenues for modern applications.

#### **Ductility**

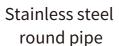
The ductility of different stainless steel grades can be significantly different. Some grades have high ductility allowing the use of strenuous deep drawing processes.

# Stainless Steel Pipe











Rectangular steel tube



Seamless Steel Pipe



Stainless Steel Welded Pipe



Stainless Steel Spiral Pipe

Outside Diameter

Round Tube: 4-200mm / Square Tube: 10\*10-100\*100mm

Rectangular Tube: 10\*20mm-50\*100mm

Wall Thickness 0.6mm-6.0mm

Length 1-6m or Customized

Standard AISI, ASTM, GB, BS, EN, JIS, DIN etc.

Surface Black, Glossy Polishing, Rough Turning,

Matte Surface Treatment, No.4, Ba, Etc

Certificate ISO / SGS / BV etc.

### **TYPE OF CARBON STEEL**

Туре	Carbon Content	Characteristic	Grade
Low Carbon Steel	0.05-0.25%	They are good ductile and manipulable, have good weldability, and do not respond to the heat treatment of quenching.	AISI 1005-1026, 1108-1119, 1211-1215, 1513-1527, etc.
Medium Carbon Steel	0.26-0.60%	They accept hardening treatment, and are more resistant and harder naturally, but they are also more difficult to weld.	AISI 1029-1053, 1137-1151, 1541-1552, etc.
High Carbon Steel	0.61-1.50%	They are harder and more resistant than medium-carbon steels, and have a good disposition to hardening.	AISI 1055-1095, 1137-1151, 1561-1572, etc.

# **DIFFERENT CARBON STEEL**

Туре	Standard	Characteristic
Carbon Steel	A36/S235JR/A283/A514/A572/S355JR/A709 A285/A387/A515/A516/A533/A537/A588 etc.	Carbon steel can be easily machined and welded, making it versatile for various applications.
Manganese Steel	Werkstoff X120Mn12, Euronorm X120Mn13 Din 1.3401, ASTM A128, Z120M12, etc.	Manganese Steel with a 11% to 14% manganese content is a work hardening steel.
Pressure Vessel Steel	A202/A204/A285/A387/A515/A516/A533/A537 etc.	Used for the construction of vessels, characterised are high toughness and good cold forming characteristics.
Structural Steel	ASTM A36/ASTM A500/ASTM A572/ASTM A588 ASTM A709/ASTM A992/ASTM A285/ASTM A514	Structural steel is metal used in construction materials, it is defined as steel optimized for use in building construction.
Wearing(NM) Series	NM260, NM300, NM400, NM450, NM500, NM550, NM600, etc.	NM Series is a high-strength wear resistant steel plate with high hardness.

# **CARBON STEEL PRODUCTION & TESTING**













# Carbon Steel Pipe





Round Tube/Square Tube Shape

Rectangular Tube/Hexagonal Tube

Outside Seamless: 1/4 "-36"

Diameter Welding: 21.3mm-3620mm

Round Tube: 1/2 "-10" Square/Rectangular Tube:

15x15-400x600mm

Seamless: 1.25mm-50mm Wall **Thickness** 

Welding: 1.65mm-65mm

Length 1m-12m or Customized

Galvanized, Bright, Surface echnology Polished, Black etc.

Other Mechanical Processing (Cnc), Services

Centerless Grinding (Cg), Heat Treatment, Annealing, Pickling, Polishing, Rolling, Forging, Cutting, Bending, Small-Scale Processing etc.

Carbon steel pipes are made by hot rolling, cold rolling, or cold drawing. Carbon steel pipes play an important role in China's steel pipe industry.



**Galvanized Pipe** 



Carbon Steel Seamless Pipe



Carbon Steel Welded Pipe (SSAW/LSAW/ERW)

## **GALVANIZED & GALVALUME**

Aspects	Galvanized Steel	Galvalume Steel
Composition	Galvanizing is made entirely of zinc. Its protective capacity is less enhanced than that of Galvalume.	The composition of a Galvalume coat utilizing these three ingredients is 55% aluminum, 43.4% zinc, and 1.6% silicon.
Usage	Galvanized steel is also used in outdoor applications but it is often used for different purposes than galvalume steel. It is used for fencing, guardrails, and railings.	Galvalume is commonly used in outdoor applications like siding, gutters, flashings around chimneys, skylights, and other roof penetrations.
Thickness	There is no theoretical limit to thickness, just a practical limit. It must not be greater than 10 miles, or else the cool-down may take longer.	Galvalume has a thickness of approximately 1 mil. Its production comprises the hot-dip technique, and the thickness variation is mostly determined by the coating.
Appearance	Whereas galvanized steel has a matte gray finish making fences and guardrails look appealing.	Galvalume steel has a slightly shiny silvery appearance giving a modern look to refrigerator cases used in restaurants and bakeries.

# **GALVANIZED STEEL SURFACE**

Big Spangle (Large)	Normal Spangle (Regular)	Minimized Spangle (Small)	Spangle - Free (Zero)
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## **STANDARD AND GRADE**

Hot-Dip Galvanized Steel				
Standard	ASTM A653M-06a	EN10327:2004/10326:2004	JIS G 3302-2010	AS-NZS 4534-2006
Commercial Quality	CS	DX51D+Z	SGCC	G1+Z
Structural Steel	SS GRADE 230	S220GD+Z	SGC340	G250+Z
	SS GRADE 255	S250GD+Z	SGC400	G330+Z
	SS GRADE 275	S280GD+Z	SGC440	G350+Z
	SS GRADE 340	S320GD+Z	SGC490	G450+Z
	SS GRADE 550	S350GD+Z	SGC570	G500+Z
	1	S550GD+Z	1	G550+Z

### **PRODUCTION & TESTING**









# Galvanized Pipe







Galvanized steel pipes are steel pipes that have undergone a specialized coating process to resist corrosion and increase the lifespan of the pipes. These pipes are typically made of carbon steel and coated with a layer of zinc.

Туре	Outside Diameter		Wall Thi	ckness
Unit	mm	inch	mm	inch
Round	0.508-11.938	0.02-0.47	17-273	0.66-10.74
Square	0.508-11.938	0.02-0.47	15-400	0.59-15.74 0.39x0.78-
Rectangular	0.508-11.938	0.02-0.47	10x20-200x400	7.87x15.74
Length	2m-5.8m/6m/12m (Can customized according to your needs)			
Standard	DIN2440, JIS-G3444, EN10240, EN10255, etc.			



#### **PRODUCT PACKAGING**

Standard Export Seaworthy Package (Waterproof paper, and steel strip packed). Suit for all kinds of transport, or as required. Every cartons loaded with good shoring and strengthening. Use 6m loaded by 20ft container, 12m loaded by 40ft container. We will take container loading pictures and seal the container. Transportation speed is quick. And keep customer each step informed.













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