

**Spiral welded steel pipe** is a type of steel pipe that is manufactured by rolling a strip of steel into a cylindrical shape and then welding the edges together to form a spiral seam.

## **SSAW Spiral Welded Pipe Applications**

Oil and gas transmission pipelines
Water and sewage pipelines
Structural and piling purposes
Offshore and onshore construction
Industrial plant piping
Mining and dredging operations









## **Spiral Steel Pipe Standards**

API 5L: widely used for line pipes in oil and gas industry applications.

ASTM A252: covers welded steel pipe piles used in construction and structural applications.

# **Spiral Steel Pipe Standards**

API 5L Grade B, X42, X52, X60, X65, X70

API 5L PSL1 Welded Steel Pipe	Chemical Composition				Mechanical	Properties
Steel grade	C (max.)%	Mn (max.)%	P (max.)%	S (max.)%	Yield strength min. MPa	Tensile strength min. MPa
Grade A	0.22	0.9	0.03	0.03	207	331
Grade B	0.26	1.2	0.03	0.03	241	414

### ASTM A252 Grade 1, Grade 2, Grade 3

ASTIN A232 Grade 1, Grade 3						
ASTM A252 Welded Steel Pipe Piles Mechanical Properties						
Steel Grade	Minimum Yield Strength	Minimum Tensile Strength	Elongation for nominal wall thicknesses 7.9mm or more			
	MPa	MPa	Elongation in 50.8mm,min,%			
Grade 1	205	345	30			
Grade 2	240	415	25			
Grade 3	310	455	20			



## **Spiral Welded Steel Pipe Dimensions**

Outer Diameter	219-3000mm	
Wall Thickness	6-28mm	
Length	5.8-12M according to client requirement	
Certificate	API 5L, ISO 9001:2008,SGS, BV, CCIC etc	
	Hot dipped galvanized with zinc 220~260g/m2;	
	Painted with black/varnish lacquer;	
	Oil on the surface to prevent rust;	
	Bare pipe without painting:	
Finish of pipe	Epoxy painting/FBE coating/3PE coating	
Pipe End	Plain end/ Bevel end;	
Marking	As per client requirement or mill standard	
	OD not less than 273mm: Loose packing, piece by piece.	
	OD less than 273mm: In hexagonal seaworthy bundles packed by steel strips.	
Packing	small sizes nested into big sizes.	
Techinical	SSAW (spiral submerged arc welded)	
Trade Term	FOB, CFR, CIF, EXW, FCA	

#### Advantages of spiral welded pipe:

- (1) Steel pipes of different diameters can be produced using strip steel of the same width, and steel pipes of large diameter can be produced from narrow strip steel.
- (2) Under the same pressure conditions, the stress of the spiral welded seam is smaller than that of the straight seam, which is 75% to 90% of that of the straight seam welded pipe, so it can withstand greater pressure. Compared with the straight seam welded pipe of the same outer diameter, the wall thickness can be reduced by 10% to 25% under the same pressure.
- (3) The size is accurate, the general diameter tolerance does not exceed 0.12%, the deflection is less than 1/2000, and the ovality is less than 1%. Generally, the sizing and straightening process can be omitted.
- (4) Continuous production is possible. In theory, long steel pipes can be produced, with small head and tail loss, and can increase the metal utilization rate by 6% to 8%.
- (5) The equipment is light in weight and low initial investment. It can be made into a trailer-type mobile unit to directly produce welded pipes at the construction site



