



沧州博拓国际贸易有限公司

Cangzhou Botop International Co.,Ltd.

LSAW Steel Pipe Specification

<https://www.botopsteelpipe.com>

LSAW Pipe Meaning



- 🏠 LSAW Pipe is a longitudinally welded steel pipe produced using submerged arc welding technology.
- 🏠 LSAW steel pipes are characterized by longitudinal welds running the entire length of the pipe, which protrude from the inner and outer surfaces of the pipe.
- 🏠 The advantage of LSAW steel pipe is that it can provide large-diameter, thick-walled, and high-pressure pipes.



Manufacturing Process of LSAW



In simple terms, the LSAW production process involves curling steel plates into a tube shape and then using submerged arc welding to weld the edges of the steel plates together to form a steel pipe.

- 🔦 **Plate inspection:** The steel plates used to produce the pipes are inspected to ensure that they meet the production requirements.
- 🔦 **Cutting:** The steel plates are cut to length and width using a flame or plasma cutting machine, depending on the dimensions of the required steel pipe.
- 🔦 **Edge milling:** The edges of the cut steel plates are milled to make them smooth and even, so that they can be welded and formed later.
- 🔦 **Pre-bending:** The steel plate is pre-bent into the desired tubular shape in preparation for the subsequent forming process.
- 🔦 **Forming:** The pre-bent steel plate is further bent to form a tubular structure using the JCOE forming process.
- 🔦 **Pre-welding of the seam:** The seam of the steel plate is pre-welded to ensure that the steel plate is tightly joined during the subsequent welding process.
- 🔦 **Welding:** Double-sided submerged arc welding (DSAW) technology is used to weld the longitudinal seams of the steel pipe to form a complete steel pipe.

Manufacturing Process of LSAW



- 🌀 **Finishing:** The surface of the welded steel pipe is treated to remove spatter and scale from the welding process.
- 🌀 **Straightening:** The steel pipe is straightened to ensure that its straightness meets the requirements.
- 🌀 **Expanding:** The pipe is expanded using an expanding machine to increase the inner diameter of the pipe and improve its load-bearing capacity.
- 🌀 **Hydrostatic leak test:** The weld seam and the overall structure of the steel pipe are tested for leaks using a hydrostatic test.
- 🌀 **Non-destructive testing:** The internal quality of the steel pipe is tested using non-destructive testing techniques (such as ultrasonic testing and X-ray testing) to ensure that there are no internal defects.
- 🌀 **Pipe end processing:** The ends of the steel pipe are processed to meet the requirements for subsequent connection or installation.
- 🌀 **Demagnetization:** The steel pipe is demagnetized to eliminate its magnetism for subsequent transportation and use.
- 🌀 **Storage:** The pipes that have passed the inspection are labeled and stored in a warehouse, ready for shipment or further processing.

Advantages of LSAW steel pipes



- 🔥 **Highly adaptable:** LSAW steel pipes are often used in high-temperature and high-pressure working environments. With the appropriate coating, these pipes can maintain reliable performance even in extreme climates and complex geological conditions.
- 🔥 **Welding quality:** In the production of LSAW, the double-sided submerged arc welding (DSAW) process is used. This process ensures that the weld is completely penetrated, thus achieving a high standard of welding quality. The weld is uniform and consistent, further enhancing the overall performance and reliability of the steel pipe.
- 🔥 **Large diameter thick-walled steel pipe:**

Abbreviations	Name	Outer Diameter	Wall Thickness
SSAW (HSAW,SAWH)	Spiral Submerged Arc Welding	200-3500 mm	5-25 mm
LSAW (SAWL)	Longitudinal Submerged Arc Welding	350-1500 mm	8-80 mm
ERW	Electric Resistance Welded	20-660 mm	2-20 mm
SMLS	Seamless	13.1-660 mm	2-100 mm

As can be seen from the above production size comparison, LSAW steel pipes have obvious advantages in the production of large-diameter thick-walled steel pipes, meeting the needs of large-scale projects and industrial applications.

Advantages of LSAW steel pipes



- 🔥 Widely used: LSAW steel pipes are widely used in oil and gas transmission, structural engineering, bridge construction, and other fields that require high-strength steel pipes due to their high strength and excellent performance.



LSAW Execution Standards and Materials



Standard	Usage	Grade
API 5L / ISO 3183	line pipe	Grade B, X42, X52, X60, X65, X72, etc.
GB/T 9711	line pipe	L245, L290, L360, L415, L450, etc.
GB/T 3091	Conveying low-pressure fluids	Q195, Q235A, Q235B, Q275A, Q275B, etc.
ASTM A252	Piling pipe	Grade 1, Grade 2, and Grade 3
ASTM A500	Cold-formed structural pipe	Grade B, Grade C, and Grade D
ASTM A501	Hot-formed structural pipe	Grade A, Grade B, and Grade C
EN 10219	Cold-formed structural pipe	S275J0H, S275J2H, S355J0H, S355J2H
EN 10210	Hot-finished structural pipe	S275J0H, S275J2H, S355J0H, S355J2H

In addition to the common steel pipe standards listed above, the material and standard of the steel plate, such as SS400, are also involved in the manufacture of steel pipes using the LSAW process. They are not listed here.

LSAW Steel Pipe Coating



The inner and outer surfaces of LSAW steel pipes are often coated to suit different operating environments.

These coatings can be temporary protective coatings or long-term anti-corrosion coatings. Common coating types include **paint**, **galvanization**, **3LPE**, **FBE**, **TPEP**, **epoxy coal tar**, etc.

These coatings effectively protect the steel pipes from corrosion, extend their service life, and ensure their stability and reliability under various environmental conditions.



About Us



Name	Cangzhou Botop International Co., Ltd.
Information	Located in Cangzhou, China, with a total investment of 500 million yuan and an area of 600,000 square meters
Equipment	Equipped with advanced JCOE molding process and DSAW welding technology, complete production and testing equipment
Production capacity	Annual production of more than 200,000 tons
Certification	API 5L, ISO 9001, ISO 19001, ISO 14001, ISO 45001, etc.
Participating projects	Ranawala Mini Hydropower Plant; Transit gas pipeline NO.2 to Turkey; Ranawala Mini Hydropower Plant; City Construction Project; etc.
Exported countries	Australia, Indonesia, Canada, Saudi Arabia, Dubai, Egypt, Europe and other countries and regions
Advantages	LSAW Steel Pipe Factory and Manufacturer; LSAW steel pipe wholesalers; LSAW steel pipe stockists; Factory direct sales, quality guaranteed, and cheaper prices.



About Us



Since its establishment in 2014, Botop Steel has become a leading supplier of carbon steel pipe in Northern China, known for excellent service, high-quality products, and comprehensive solutions.

The company offers a variety of carbon steel pipes and related products, including seamless, ERW, LSAW, and SSAW steel pipe, as well as a complete lineup of pipe fittings and flanges. Its specialty products also include high-grade alloys and austenitic stainless steels, tailored to meet the demands of various pipeline projects.



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