



Stainless Steel Liner Pipe

A stainless steel liner is a protective coating made of stainless steel lining the interior of pipelines. It primarily prevents chemical reactions between the pipeline's contents and the original material, while also protecting against corrosion and wear. Widely used in industries such as petroleum, chemicals, power, food processing, and water supply, it is especially suitable for environments requiring corrosion resistance, high-temperature tolerance, and high-pressure conditions.

The hydraulic expansion method for stainless steel lining pipes is a core composite process in which a corrosion-resistant alloy steel inner pipe is coaxially and accurately placed into a carbon steel outer pipe. Pure water is used as an incompressible pressure medium, and uniform radial pressure is applied through a high-pressure pump to control the plastic expansion of the inner pipe and tightly adhere to the outer pipe, forming a stable mechanical interference fit structure; This process has the advantages of uniform stress distribution, controllable composite quality, and adaptability to large-scale continuous production. The composite pipes produced have both the high strength of carbon steel outer pipes and the excellent corrosion resistance of stainless steel inner linings, with long service life and good economy. They are widely used in large-diameter transportation, chemical medium transportation, marine engineering and other scenarios that require high durability and safety of pipelines.

◆ Superiority

- Exhibits strong corrosion resistance, effectively resisting corrosion from water and chemical media.
- Long service life with stainless steel lining for stable operation over time.
- High-strength and pressure-resistant, with an outer carbon steel structure designed for complex environments.
- Offers performance comparable to stainless steel pipes at a lower cost, delivering excellent cost-effectiveness.
- Easy to install and maintain, compatible with conventional welding and connection methods, and convenient for construction.



Scope of Application



①



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④



⑤



⑥

① **Municipal water supply network** - suitable for long-distance water transportation and urban water supply systems.

② **Building hot and cold water system** - including the delivery of domestic hot and cold water for residential and commercial buildings.

③ **Heating and air conditioning circulation system** - with strong pressure capacity, suitable for HVAC circulating water pipelines.

④ **Industrial fluid transportation** - corrosive or clean media in industries such as chemical, food, and pharmaceutical.

⑤ **Fire pipeline system** - with excellent pressure resistance, suitable for various types of fire water pipes.

⑥ **Agricultural and water treatment equipment** - used for irrigation, sewage treatment, and recycled water utilization projects.



PROCESS

- **Raw material preparation:** Quality, size, and appearance inspection of carbon steel pipes and stainless steel strips.
- **Inner lining forming:** Roll stainless steel strip into a cylinder and make an inner lining tube through welding or forming process.
- **Composite set:** using mechanical expansion or hydraulic expansion to tightly fit the inner lining pipe and outer steel pipe.
- **Reinforcement at both ends:** Flanging, crimping, or welding treatment is applied to both ends of the pipe to ensure a secure seal.
- **Straightening and testing:** Conduct comprehensive quality testing on the pipe body, including straightening, pressure resistance, dimensions, and welds.
- **Surface treatment and packaging:** After completing spraying, anti-corrosion, and labeling, packaging and storage are carried out.

LINING GRADE & SIZE

304 (00Cr19Ni10)
316L (022Cr17Ni12Mo2)
2205 (022Cr23Ni5Mo3N)
2507 (022Cr25Ni7Mo4N)
Inconel 625 (GH3625)
Inconel 825 (GH825)
DN50-DN1400

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