



# Steel Seamless Boiler Tubes Company Sa213 T11 Tubes A333 Low Temp Pipe

**Basic Information** 





# **Product Specification**

- Product Name:
- Technique:
- Outer Diameter:
- Wall Thickness:
- Length:
- Material:
- Section Shape:
- Standard:
- Highlight:

Seamless Steel Boiler Pipe

Hot Rolled, Cold Rolled, Cold Drawn

- 8~1240mm
- 1-200mm
- Customized
- Carbon Steel, Stainless Steel, Etc

Round, Square, Or Other Special Shape

- ASME, ASTM, DIN, GB8162, GB8163, GB5310
- sa213 t11 tubes, boiler steel tube, Seamless Boiler Tube sa213 t11 t



# Round Carbon Steel Hot Rolled Pipe SMLS Steel Pipe for Steam Boiler

Seamless boiler tubes are manufactured through a process called seamless tube manufacturing. In this process, a solid steel billet is heated to a high temperature and then pierced to form a hollow tube. The tube is then further elongated and shaped through a series of rolling mills to achieve the desired dimensions and properties.

These tubes are typically made from carbon steel, alloy steel, or stainless steel, depending on the specific requirements of the boiler system. The choice of material depends on factors such as the operating temperature, pressure, and corrosive environment within the boiler.

# Specifications

Product name	Material	Standard	Size(mm)	Application
Low temperature tube	09Mn2VDG	2003	OD:8-1240*	Apply to - 45 ~ 195 low temperature pressure vessel and low temperature heat exchanger pipe
High-pressure boiler tube	20G ASTMA106B ASTMA210A ST45.8-III			Suitable for manufacturing high pressure boiler tube, header, steam pipe, etc
Petroleum cracking tube	10 20		OD: 8-630* WT:1-60	Used in oil refinery furnace tube, heat exchanger tube
Low medium pressure boiler tube	120#			Suitable for manufacturing various structure of low and medium pressure boiler and locomotive boiler
General structure of the tube	10#,20#,45#,27 SiMn ASTM A53A,B 16Mn,Q345	GB/T17396		Apply to the general structure, engineering support, mechanical processing, etc
Oil casing	J55,K55,N80,L 80 C90,C95,P110	5CT		Used for extraction of oil or gas in oil Wells casing, used in oil and gas well sidewall

#### Production method of boiler seamless tube

Boiler seamless tube is a kind of seamless tube. The manufacturing method is the same as that of seamless pipes, but there are strict requirements on the steel grades used in the manufacture of steel pipes. According to the operating temperature, it can be divided into general boiler tubes and high-pressure boiler tubes.

#### (1) Manufacturing method:

Generally, the service temperature of boiler seamless pipe is below 450. Domestic pipes are mainly made of No. 10 and No. 20 carbon steel hot-rolled pipes or cold-drawn pipes.

High-pressure boiler tubes are often in high temperature and high pressure conditions when they are used. The tubes will be oxidized and corroded under the action of high-temperature flue gas and water vapor. The steel pipe is required to have high enduring strength, high oxidation and corrosion resistance, and good organizational stability.

Seamless steel tube production process:

a. Hot rolled (extruded) seamless steel tube: round tube billet  $\rightarrow$  heating  $\rightarrow$  piercing  $\rightarrow$  three-roll cross rolling, continuous rolling or extrusion  $\rightarrow$  tube removal  $\rightarrow$  sizing (or reducing)  $\rightarrow$  cooling  $\rightarrow$  straightening  $\rightarrow$ Hydrostatic test (or flaw detection)  $\rightarrow$  marking  $\rightarrow$  storage

b. Cold drawn (rolled) seamless steel tube: round tube  $blank \rightarrow heating \rightarrow perforation \rightarrow heading \rightarrow annealing \rightarrow pickling \rightarrow oiling (copper plating) \rightarrow multi-pass cold drawing (cold rolling) \rightarrow blank tube \rightarrow heat treatment \rightarrow Straightening \rightarrow hydrostatic test (flaw detection) \rightarrow marking \rightarrow warehousing$ 

### (2) Application:

General boiler seamless pipes are mainly used to make water wall pipes, boiling water pipes, superheated steam pipes, superheated steam pipes for locomotive boilers, large and small smoke pipes and arched brick pipes.

High-pressure boiler tubes are mainly used to manufacture superheater tubes, reheater tubes, air guide tubes, main steam tubes, etc. of high-pressure and ultra-high-pressure boilers.

#### Boiler seamless steel tube adopts steel grade:

(1) High-quality carbon structural steel grades are 20G, 20MnG, and 25MnG.

(2) Alloy structural steel grades 15MoG, 20MoG, 12CrMoG, 15CrMoG, 12Cr2MoG, 12CrMoVG, 12Cr3MoVSiTiB, etc.
(3) The commonly used 1Cr18Ni9 and 1Cr18Ni11Nb boiler tubes with rust and heat-resistant steels should be subjected to hydrostatic tests, flaring and flattening tests one by one in addition to ensuring chemical composition and mechanical properties. Steel pipes are delivered in heat-treated condition.

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