ASTM A210/ASME SA210 Grade C Seamless Steel tube boiler pipe

Professional manufacturer and exporter of ASTM A210/ASME SA210 Grade C Seamless Steel tube in China.

The tubing sizes and thicknesses usually furnished to this specification are $^{1}/_{2}$ in. to 5 in. [12.7 to 127 mm] in outside diameter and 0.035 to 0.500 in. [0.9 to 12.7 mm], inclusive, in minimum wall thickness. Tubing having other dimensions may be furnished, provided such tubes comply with all other requirements of this specification.

ASTM A210 Grade C is a carbon steel tube primarily used in **boilers**, **superheaters**, and **heat exchangers** for high-pressure and high-temperature applications. These tubes are designed for seamless construction, offering excellent strength, durability, and resistance to heat and pressure.

This ASTM A210 specification covers grades A-1 and C of Seamless Medium-Carbon Boiler and Superheater Tubes with different chemical and tensile requirements.

Standard	ASTM A210, ASME SA210
Equivalents	UNI 5462-64, DIN 17175, EN 10216-2, BS 3602 Part I, NF A 49-213, NBR 5592
Materials	SA210C

Chemistry Composition of ASME SA210 SA210C

C, %	Mn, %	Si, %	P, %	S, %
0.35 max	0.29-1.06	0.10 min	0.035 max	0.035 max

Mechanical Properties of ASTM A210 grade C

Tensile Strength, MPa	Yield Strength, MPa	Elongation, %	Hardness, HB
485 min	275 min	30 min	179 max

ASTM A210 / A210M Tube Wall Thickness Tolerance

Seamless, Cold-Finished Tubes		
Outside Diameter In. (mm)	Wall thickness Tolerance %	
	Over (+)	Under (-)
1 ½ (38.1) and under	20	0
Over 1½ (38.1)	22	0

ASTM A210 / A210M Tube Outside Diameter Tolerance

Cold-Finished Seamless Tubes		
Outside Diameter In. (mm)	Permissible Variations In. (mm)	
	Over (+)	Under (-)
Under 1 (25.4)	0.004 (0.10)	0.004 (0.10)
1 to 1 ½ (25.4 to 38.1), Incl	0.006 (0.15)	0.006 (0.15)
Over 1½ to 2 (38.1 to 50.8), Excl	0.008 (0.20)	0.008 (0.20)
2 to 2½ (50.8 to 63.5), Excl	0.010 (0.25)	0.010 (0.25)
2½ to 3 (63.5 to 76.2), Excl	0.012 (0.30)	0.012 (0.30)

ASTM A210 / A210M Tube Cut Length Tolerance

Cold-Finished Seamless Tubes		
Outside Diameter, In. (mm)	Cut Length, in. (mm)	
	Over (+)	Under (−)
All Sizes	3⁄16 [5]	0 [0]
Under 2 (50.8)	1⁄8 [3]	0 [0]
2 (50.8) and over	3⁄16 [5]	0 [0]
Under 2 (50.8)	1⁄8 [3]	0 [0]
2 (50.8) and over	3⁄16 [5]	0 [0]
These permissible variations in length apply to tubes before bending. They apply to cut lengths up to and including 24 ft [7.3 m]. For lengths greater than 24 ft [7.3 m], the above over-tolerances shall be increased by 1⁄8 in. [3 mm] for each 10 ft [3 m] or fraction thereof over 24 ft or 1⁄2 in. [13 mm], whichever is the lesser.		

ASTM A210 / A210M Tube Hydrostatic Test Pressures

Each tube shall be subjected to the hydrostatic pressure test, or instead of this test, a nondestructive test may be used when specified by the purchaser.

Hydrostatic Test Pressures	
Outside Diameter of Tube, in. [mm]	Hydrostatic Test Pressure, psi [MPa]
Under 1 [25.4]	1000 [7]
1 to 1 1⁄2 [25.4 to 38.1], excl	1500 [10]
1 1⁄2 to 2 [38.1 to 50.8], excl	2000 [14]
2 to 3 [50.8 to 76.2], excl	2500 [17]

ASTM A210 / A210M Flattening Test

One flattening test shall be made on specimens from each end of one finished tube from each lot, but not the one used for the flaring test. Tears or breaks occurring at the 12 or 6 o' clock positions on Grade C tubing with sizes of 2.375 in. [60.3 mm] in outside diameter and smaller shall not be considered a basis for rejection.

ASTM A210 / A210M Flaring Test

One flaring test shall be made on specie- men from each end of the one finished tube from each lot, but not the one used for the flattening test.

ASTM A210 Tube Ordering Information

Orders for ASTM A210 / A210M, ASME SA210 should include the following, as required, to describe the desired material adequately:

- Quantity (feet, meters, or number of lengths),
- Name of material (seamless tubes),
- Grade,
- Manufacture (hot-finished or cold-finished),
- Size (outside diameter and minimum wall thickness),
- Length (specific or random),
- Optional requirements,
- Test report required (see section on Certification of Specification A 450/A 450M),
- Specification designation,
- Special requirements.

ASTM A210 Grade C tubes are a high-performance solution for high-pressure, high-temperature applications. With their excellent strength, seamless design, and versatility, they are a reliable choice for **boiler systems**, **superheaters**, and **industrial heat exchangers**. If you need detailed specifications or further assistance

ASTM A210C tube order information

Product: ASTM A210C Seamless tube for boiler

Size : 44.5 OD 5.1W.T. 6meters long

Standard: ASTM A210 /SA
210