

ASTM A213 and ASME SA213 American Standard (Seamless Ferrite and Austenitic Alloy Steel Pipe for Boiler, Superheater and Heat Exchanger)

Standard:

ASTM A213/A213M/ASME SA213/SA-213M

Application:

It is applied to seamless ferrite and austenitic steel pipe for boiler and superheater with the minimum wall thickness and austenitic steel pipe for heat exchanger.

Grades of Main Steel Pipe:

T11, T12 and T22 other grades of steel pipe can be provided based on negotiations.

Mechanical Properties

Standard	Grade	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)
ASTM A213 ASME SA213	T11	415	170	30
	T12	415	205	30
	T22	415	205	30

Chemical Composition

Standard	Grade	C	Si	Mn	P, S	Cr	Mo	V	Cu	Ni
ASTM A213	T11	0.05~ 0.15	0.50~ 1.00	0.30~ 0.60	0.025	1.00~ 1.50	0.44~ 0.65	/	/	/
ASME	T12	0.05~ 0.15	0.50	0.30~ 0.61	0.025	0.80~ 1.25	0.44~ 0.65	/	/	/
SA213	T22	0.05~ 0.15	0.50	0.30~ 0.60	0.025	1.90~ 2.60	0.87~ 1.13	/	/	/

Remarks

HR: hot rolled	CW: cold worked	SR: stress relieved
A: annealed	N: normalized	HF