



Alloy Steel Tubes

Specification	Allowable Outside Diameter Variations			Allowable Wall Thickness Variations		Exact Length Tolerances in mm		Testing
	in mm							
ASTMA - 270 Seamless & Welded Sanitary Tubing	Diameter	Over	under	Over %	Under %	Over	Under	Product Analysis Reverse Flattening test 100% Hydrostatic Test External polish on all tubes Refer to ASTMA-270
	25.4	.05	.20	+ 12.5	- 12.5	3.2	0	
	38.1	.05	.20	+ 12.5	- 12.5	3.2	0	
	50.8	.05	.28	+ 12.5	- 12.5	3.2	0	
	63.5	.05	.28	+ 12.5	- 12.5	3.2	0	
	76.2	.08	.30	+ 12.5	- 12.5	3.2	0	
101.6	.08	.38	+ 12.5	- 12.5	3.2	0		
ASTMA - 249 Welded Boiler, Superheater, Heat Exchanger and Condenser Tubes	Under 25.4	0.1016	0.1016	+ 10	- 10	3.175	0	Product Analysis Tension Test Flattening Test Flare Test/Flange Test * reverse Bend Test Hardness Test 100 % Hydrostatic Test * Reverse Flattening test Refer to ASTMA - 450 * Wherever applicable
	25.4 - 38.1 incl.	0.1524	0.1524	+ 10	- 10			
	38.1 - 50.8 excl.	0.2032	0.2032	+ 10	- 10			
	50.8 - 63.5 excl.	0.254	0.254	+ 10	- 10			
	63.5 - 76.2 excl.	0.3048	0.3048	+ 10	- 10			
	76.2 - 101.6 incl.	0.381	0.381	Minimum Wall tubes + 18% - 0 available on request				
ASTMA - 312 Seamless & Welded Pipe	13.7 - 48.3 incl.	04 0	0.79	Minimum Wall 12.5% under nominal wall Specified		6.4	0	Product Analysis Tension Test Flattening Test 100% Hydrostatic Test Refer to ASTMA - 530
	48.3 - 114.3 incl.	.79	0.79			6.4	0	
	114.3 - 220 incl.	01.59	0.79			6.4	0	
						(Normally Random length ordered)		
ASTMA - 269 Seamless & Welded Service	Upto 12.7	0.13	0.13	+ 15	- 15	3.2	0	Product Analysis Flare Test Flant Test (Welded only) Hardness Test Reverse Flattening test (Welded only) 100% Hydrostatic test Refer to ASTMA - 269
	12.7 - 38.1 excl.							
	38.1 - 88.99 excl.							
	88.9 - 139.7 excl.							
	139.7 - 2032 excl.							
ASTMA - 213 Seamless Boiler Superheater and Heat Exchanger Tubes	Under 25.4	0.1016	0.1016	+ 20	- 0	3.175	0	Product Analysis Tension Test Flattening Test Flare Test Hardness Test 100% Hydrostatic Test Refer to ASTMA - 450
	25.4 - 38.1 incl.	0.1524	0.1524	+ 20	- 0	3.175	0	
	38.1 - 50.8 excl.	0.2032	0.2032	+ 22	- 0	3.176	0	
	50.8 - 63.5 incl.	0.254	0.254	+ 22	- 0	3.76	0	
	63.5 - 76.2 excl.	0.3048	0.3048	+ 22	- 0	4.76	0	
76.2 - 101.6 incl.	0.381	0.381	+ 22	- 0	4.76	0		

Elbow (90°, 45°, 180°)

ASTMA - 268 Seamless & welded Ferritic stainless steel tubes	Under 12.7 12.7 - 38.1 excl. 38.1 - 88.9 excl. 88.9 - 168.3 excl.	0.13 0.13 0.25 0.38	0.13 0.13 0.25 0.38	+ 15 + 10 + 10 + 10	- 15 - 10 - 10 - 10	3.2 3.2 4.8 4.8	0 0 0 0	Product Analysis Tension Test, flare test flange Test, (ERW only) hardness test, reverse flattening test, 100% hydrostatic test.
ASTMA - 358 for welded big Diameter Pipes	For all sizes	+ 0.5%	+ 0.5%	No LIMIT	-0.3 mm	Customer's Specification	Product Analysis Transvers tension test, Transverse guided bend test. Hydrostatic test, radiographic examination (as specified dye penetrant (Optional)	