

Highlights of ASTM Specifications for Stainless Steel Tubes and Pipes

	Allowable Outside Diameter Variations in mm			Allowable Wall Thickness Variations		Exact Length Tolerances in mm		Testing Product Analysis
	Diameter	Over	Under	Over %	Under %	Over	Under	
ASTM A-270 Seamless & Welded Sanitary Tubing Dairy Tubing (No Internal bead & fine surface finish to prevent collection of dirt.)	25.4 38.1 50.8 63.5 76.2 101.6	.05 .05 .05 .05 .08 .08	.20 .20 .28 .28 .30 .38	+12.5 +12.5 +12.5 +12.5 +12.5 +12.5	-12.5 -12.5 -12.5 -12.5 -12.5 -12.5	3.2 3.2 3.2 3.2 3.2 3.2	0 0 0 0 0 0	Reverse Flattening test 100% Hydraustatic Test External polish on all tubes Refer to ASTM A-270
ASTM A-249 Welded Boiler, Superheater, Heat Exchanger and Condenser Tubes (Excellent corrosion resistance)	Under 25.4 25.4-38.1 incl. 38.1-50.8 excl. 50.8-63.5 excl. 63.5-76.2 excl. 76.2-101.6 incl.	0.1016 0.1524 0.2032 0.254 0.3048 0.381	0.1016 0.1524 0.2032 0.2540 0.3048 0.3810	+10 +10 +10 +10 +10 +10	-10 -10 -10 -10 -10 -10	3.175 3.175 3.176 4.76 4.76 4.76	0 0 0 0 0 0	Tension Test Flattening Test Flare Test/Flange Test *Reverse Bend Test Hardness Test 100% Hydraustatic Test *Reverse Flattening Test Refer to ASTM A-450 *Wherever applicable
ASTM A-312 Seamless & Welded Pipe	13.7-48.3 incl. 48.3-114.3 incl. 114.3-220. incl.	0.40 0.79 1.60	0.79 0.79 0.79	Minimum Wall 12.5% under nominal wall Specified		6.4 6.4 6.4	0 0 0	Tension Test Flattening Test 100% Hydraustatic Test Refer to ASTM A-530 (Normally Random lengths ordered)
ASTM A-269 Seamless & Welded Service (General heat & corrosion resisting services existing in furnaces, driers, ovens & handling, storing of liquified gases)	Upto 12.7 12.7-38.1 excl. 38.1-88.9 excl. 88.9-139.7 excl. 139.7-203.2 excl.	0.13 0.13 0.25 0.38 0.76	0.13 0.13 0.25 0.38 0.76	+15 -10 +10 +10 +10	-15 -10 -10 -10 -10	3.2 3.2 4.8 4.8 4.8	0 0 0 0 0	Flare Test Flange Test (Welded only) Hardness Test Reverse Flattening Test (Welded only) 100% Hydraustatic Test Refer to ASTM A-269
ASTM A-213 Seamless Boiler, Superheater and Heat Exchanger Tubes	Under 25.4 25.4-38.1 incl. 38.1-50.8 excl. 50.8-63.5 incl. 63.5-76.2 excl. 76.2-101.6 incl.	0.1016 0.1524 0.2032 0.2540 0.3048 0.3810	0.1016 0.1524 0.2032 0.2540 0.3048 0.3810	+20 +20 +22 +22 +22 +22	-0 -0 -0 -0 -0 -0	3.175 3.175 3.176 3.76 4.76 4.76	0 0 0 0 0 0	Tension Test Flattening Test Flare Test Hardness Test 100% Hydraustatic Test Refer to ASTM A-450
ASTM A-268 Seamless & welded Ferritic Stainless Steel Tubes	Under 12.7 12.7-38.1 excl. 38.1-88.9 excl. 88.9-163.3 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	Tension Test, flare Test Flange Test, (ERW only) Hardness Test Reverse flattening Test 100% Hydraustatic Test
ASTM A-358 for welded big Diameter Pipes	For all size	+0.5%	-0.5%	No LIMIT	-0.3 mm	Customer's Specification		Transvers tension test, Transverse guided bend Test Hydaustatic Test, Radiographic Examination (as specified) dye penetrant (optional.)
ASTM A-688 For welded Feed water heater 'U' Tubes	Under 25.4	.1016	.1016	+20 +10	-0 (for Min Wall Thk.) -10 (For Avg. Wall Thk.)	3 to 13	0	Tension, Hardness, corrosion, Reversebend, Flange, Flattening, Hydraustatic Test, Pneumatic Test, Non Destructive Test