STAINLESS STEEL TUBE AS WELDED

NOT COLD-DRAWN
SUITABLE FOR POLISHING
ORNAMENTAL—MECHANICAL—STRUCTURAL

Ornamental tube is supplied in the as-welded condition, not annealed and not pressure tested. It is used primarily for decorative mechanical and structural applications. This tube can be polished and buffed to any degree of lustre desired. It is available in round, square, rectangular and oval shapes. Typical applications would be hand rails, furniture, marine accessories, hospital and restaurant equipment and many applications where no definite specifications are applicable.

TYPICAL CONDITIONS

Ornamental tubing is sold in the as-welded condition to outside diameter and wall dimensions. All O.D. weld flashes are removed; I.D. weld beads are present or removed (0.010″ max.), if specified. Bead-in average height measures 0.031″. Ornamental tubing is not annealed, pickled or tested, since it is not intended for pressure or extreme corrosive applications. Consequently many customers may realize tremendous savings by using ornamental grade rather than a more costly full-finished product.

301/302/304 ANALYSIS

Chromium	16.00/20.00%
Nickel	6.00/10.00%
Carbon	0.06/0.15%
Manganese	2.00% max.
Silicon	1.00% max.

Note: Other analyses will be considered, if the application is similar to that described above.

FLARE TEST PROPERTIES

A 4″ length of 18-8 tubing shall be capable of being flared with a tool having a 60° included angle until the tube, at the mouth of the flare, has been expanded 25 percent of the I.D. without showing cracks or weld flaws.

FLATTENING PROPERTIES

Ornamental tubing shall be capable of flattening to three times the thickness of the steel.

BENDING PROPERTIES

18 Ga. (0.049) and lighter, without a mandrel:
Centerline
Radius Equal to
3 times O.D.

16 Ga. (0.065) and heavier, with a mandrel:
Centerline
Radius Equal to
2 times O.D.

STRAIGHTNESS

Rounds, Squares and Rectangles shall not have a curvature exceeding 0.100″ in a three-foot length.

SPECIFICATIONS

A.S.T.M. A554

STAINLESS STEEL PIPE AND TUBING SPECIFICATIONS

Agency	Specification Number	Title	Scope
ASTM ASME	A249 SA 249	Welded Austenitic Stainless Steel Boiler, Superheater, Heat-Exchanger and Condenser Tubes.	Pressure tubes, made from austenitic stainless steels. (T.P. types 304, 304H, 304L, 305, 309, 310, 316, 316H, 316L, 317, 321, 321H, 347, 347H, 348, 348H.)
ASTM ASME	A268 SA–268	Seamless and Welded Ferritic Stainless Steel Tubing for General Service.	Six grades of ferritic stainless steel tubing for general corrosion resistance and high-temperature service. (T.P. types 405, 410, 430, 443, 446 and 329.)
ASTM	A269	Seamless and Welded Austenitic Stainless Steel Tubing for General Service.	Eight grades of austenitic stainless steel tubing for general corrosion–resisting and high–temperature service. (T.P. types 304, 304L, 316, 316L, 317, 321, 347 and 348.)

Agency	Specification Number	Title	Scope
ASTM	A270	Seamless and Welded Austenitic Stainless Steel Sanitary Tubing.	Austenitic stainless steel tubing intended for use in the dairy and food industry in sizes up to, and including, 4 in. outside diameter.
ASTM ASME	A312 SA–312	Seamless and Welded Austenitic Stainless Steel Pipe.	Austenitic stainless steel pipe intended for high-temperature and general-corrosive service. Fifteen grades are covered. (T.P. types 304, 304H, 304L, 309, 310, 316, 316H, 316L, 317, 321, 321H, 347, 347H, 348 and 348H.)
ASTM	A511	Hollow Bar	Seamless cold finished mechanical tube types 304, 316, and 321.)

Agency	Specification Number	Title	Scope
ASTM	A358	Electric-Fusion-Welded Austenitic Chromium-Nickel Alloy Steel Pipe for High-Temperature Service.	For corrosion and high-temperature service. Normally not less than 8 in. nominal diameter.
ASTM	A409	Welded, Large Outside Diameter, Light-Wall, Austenitic Chromium-Nickel Alloy Steel Pipe for Corrosive or High-Temperature Service.	Nominal diameter 14–30 in. in Schedules SS and IOS.
ASTM ASME	A450 SA–450	General Requirements for Carbon, Ferritic Alloy and Austenitic Alloy Steel Tubes.	Common requirements for ASTM tubular specifications as listed.

Agency	Specification Number	Title	Scope
ASTM	A554	Welded Stainless Steel Mechanical Tubing.	Seventeen grades are covered for mechanical applications. Rounds, squares, rectangles and special shapes are included.
SAE, AMS	AMS 5556	Steel Tubing, Corrosion and Heat Resistant 18 Cr; 11 Ni; (Cb + Ta) (SAE 30347) Hydraulic.	Annealed type 347 aircraft hydraulic line tubing.
SAE, AMS	AMS 5557	Steel Tubing, Corrosion and Heat Resistant 18 Cr; 11 Ni; Ti (SAE 30321) Hydraulic.	Annealed type 321 aircraft hydraulic line tubing.

STAINLESS STEEL PIPE AND TUBING SPECIFICATIONS (Continued)

Agency	Specification Number	Title	Scope
SAE, AMS	AMS 5558	Steel Tubing, SAE 30347 Thin Wall.	High-pressure ducting, wall thickness 2% of O.D. or less.
SAE, AMS	AMS 5559	Steel Tubing, SAE 30321 Thin Wall.	High-pressure ducting, wall thickness 2% of O.D. or less.
SAE, AMS	AMS 5639	Hollow Bar.	Cold finished mechanical tube seamless.
SAE, AMS	AMS 5565	Steel Tubing, Welded, Corrosion Resistant 19 Cr; 9 Ni (SAE 30304)	Annealed type 304 aircraft hydraulic line tubing. (Not subject to high pressure.)
SAE, AMS	AMS 5566	Steel Tubing, Corrosion Resistant 19 Cr; 10 Ni (SAE 30304) High Pressure Hydraulic.	Cold drawn type 304, high pressure, aircraft hydraulic line tubing.