

ALLOY C276 NICKEL TUBING



Alloy C276 is a nickel-molybdenum-chromium-tungsten superalloy, showing excellent resistance to mechanical and chemical degradation. The high nickel and molybdenum content impart remarkable corrosion resistance in reducing environments while chromium provides the same in an oxidizing media. Molybdenum also provides strong resistance to crevice corrosion and pitting. This alloy gives an excellent performance in a wide range of chemical processing conditions, often where nothing else works. Target applications include those involving strong oxidizers such as ferric and cupric chlorides and hot contaminated media (organic and inorganic), formic acid, seawater, and brine solutions.

PRODUCT SPECIFICATIONS

ASTM B622, B829 / ASME SB622, SB829 / NACE MR0175

SIZE RANGE

Outside Diameter (OD)	Wall Thickness
.250"-.500"	.035"-.065"

Cold Finished and Bright Annealed Tube

CHEMICAL REQUIREMENTS

ALLOY C276 (UNS N10276)
COMPOSITION %

Ni	Nickel	57.0 min
Cr	Chromium	14.5-16.5
Mo	Molybdenum	15.0-17.0
Fe	Iron	4.0-7.0
W	Tungsten	3.0-4.5
C	Carbon	0.010 max
Si	Silicon	0.08 max
Co	Cobalt	2.5 max
Mn	Manganese	1.0 max
V	Vanadium	0.35 max
P	Phosphorus	0.04 max
S	Sulfur	0.03 max

DIMENSIONAL TOLERANCES

OD	OD Tolerance	Wall Tolerance
.250"-.500" excl	+0.004"/-.005"	± 15%

MECHANICAL PROPERTIES

Yield Strength	41 ksi min
Tensile Strength	100 ksi min
Elongation (min 2")	40%

OD	Wall	ID	Lbs./Ft.	Bursting PSI	Working PSI
1/4" (.250")	.035	.180	.0910	26,063	6,516
	.049	.152	.1191	38,044	9,511
3/8" (.375")	.035	.305	.1440	16,673	4,168
	.049	.277	.1933	24,123	6,031
	.065	.245	.2438	33,206	8,302
1/2" (.500")	.035	.430	.1969	12,258	3,065
	.049	.402	.2674	17,581	4,395
	.065	.370	.3421	23,990	5,998

All pressure ratings are approximate and for illustration purposes only. Values are not guaranteed or warranted.

TYPICAL APPLICATIONS

Equipment in Sulfuric Acid Environments
 Chemical Processing - Organic/Inorganic Chlorides
 Sour Gas Well Environments
 Pulp & Paper Productions - Digesters, Bleach Plants
 Waste Treatment - Evaporators
 Pollution Control - Sulfur Compounds in Flue Gas

FABRICATION

Detailed fabrication and welding process information is available upon request.

