



Alloy 276 is a solid-solution strengthened, nickel-molybdenum-chromium alloy with a small amount of tungsten, which exhibits excellent corrosion resistance in an assortment of harsh environments. Applications include and are not limited to, stack liners, ducts, dampers, scrubbers, stack-gas re-heaters, heat exchangers, reaction vessels and evaporators. Industries where C276 can be utilized are petrochemical and chemical processing, power generation, pharmaceutical, pulp and paper production and waste treatment.

Alloy C276 has excellent resistance to pitting, stresscorrosion cracking and to oxidizing atmospheres. C276 also exhibits excellent resistance to corrosion by seawater especially under crevice conditions, which induce attack in other commonly used materials.

CHEMICAL COMPOSITION

	C	Mn	S	Si	Cr	Ni	Fe	Mo	Co	V	W	P
MIN/MAX	0.01 max	1.00 max	0.03 max	0.08 max	14.50-16.50	Balance	4.00-7.00	15.00-17.00	2.50 max	0.35 max	0.30-4.50	0.05 max

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APPLICABLE SPECIFICATIONS

Bar	Wire	Sheet/Plate	Tube	Pipe	Fitting	Forging
ASTM B574	-	ASTM B575	ASTM B626 ASTM B619 ASTM B622	ASTM B626 ASTM B619 ASTM B622	ASTM B366	ASTM B564

APPLICATIONS

Heat exchangers	Transfer piping	Pickling tanks	Fan housings
Reaction vessels	Evaporators	Dampers	Pickling hooks

PHYSICAL PROPERTIES

Density	Electrical Resistivity	Coefficient of Thermal Expansion	Thermal Conductivity	Modulus of Elasticity	Specific Heat Capacity	Melting Point	Specific Gravity
0.321 lb/in ³	75 ohm • circ mil/ft	6.2 x 10 ⁻⁶ in/in °F	67.9 btu • in/ft ² • h • °F	29806 ksi	0.102 Btu/lb•°F	2415-2500 °F	8.90
8.89 g/cm ³	24 μW • cm	11.2 μm/m °C	9.8 W/m • °C	205.5 kN/mm ²	425 J/kg•°K	1325-1370 °C	8.90

MAXIMUM PRESSURE WORK

P = Maximum work pressure (psi)
 S = Minimum tensile strength of material for a specific temper (It is the value of the tensile strength in psi in Mechanical properties table)
 D = Exterior diameter of tube
 T = Wall thickness of tube

$$P = \frac{2TS}{SD}$$

NON DESTRUCTIVE TESTS

Eddy Current Testing
 Hydrostatic Testing
 Air Underwater Testing
 Ultrasonic Testing
 (PMI) Positive Material Identification

DESTRUCTIVE TESTS

Microstructure Test
 Tensile Test
 Expansion Test
 Optical Spectrometry Test