TorqBolt Inc.

MATERIAL GRADE DATA SHEET

HASTEALLOY C 276

NICKEL ALLOY

HIGH TEMPERATURE RESISTING ALLOY

Hastelloy C-276 Alloy has excellent resistance to a wide variety of chemical process environments, including strong oxidizers such as ferric and cupric chlorides, hot contaminated media (organic and inorganic), chlorine, formic and acetic acids, acetic anhydride, and seawater and brine solutions. It is used in flue gas desulfurization systems because of its excellent resistance to sulfur compounds and chloride ions encounted in most scrubbers. C-276 alloy has excellent resistance to pitting and to stress-corrosion cracking. It is also one of the few materials that withstands the corrosive effects of wet chlorine gas, hypochlorite, and chlorine dioxide. In chemical processing, the alloy is used for components including heat exchangers, reaction vessels, evaporators and transfer piping.

Chemical Properties

C	Mn	P	S	Si	Cr	Mo	W	Fe	Co	Ni
0.01 Max	1.00 Max	0.04 Max	0.03 Max	0.08 Max	14.5-16.5	15.0-17.0	3.0-4.5	4.0-7.0	2.5 Max	BALANCE

Mechanical Properties

Yeild strength	Tensile strength	Elongation	Hardness
Min 0.2% Mpa	Min Mpa	Min %	HRC
310	760	25	20-32

Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Melting Point
(Kg/m^3)	(Gpa)	Expansion(µm/m/°C)			(W/m.K)		0-100°C	F°
8.89	205	11.2	12.8	13.4	7.2	19	427	2415-2500

Heat Treatment

Solution Annealed @ 1177°C & Rapidly Liquid Quenched

Equivalent Designation

UNS N10276
En Name NiMo16Cr15W
W.Nr. 2.4819
AFNOR Ni-Mo 16 Cr 15

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