Corrosion-resistant alloy

Alloy C276

Description

Alloy C-276 is engineered to survive the harshest mixed-corrosion service conditions where most stainless steels and standard nickel alloys fail.

Unlike conventional stainless steel, it remains stable under mixed oxidizing-reducing acids, wet chlorine and chloride-rich brines, resisting pitting, crevice attack and stress corrosion cracking.

Grade: UNS N10276, NC15D14KFe, W.Nr.2.4819

Chemical Composition (wt%)

Co	W	Cr	Mo	Fe	Mn	Si	P	S	V	C	Ni
≤2.5	3.0-4.5	14.5-16.5	15.0-17.0	4.0-7.0	≤1.0	≤0.08	≤0.04	≤0.03	≤0.35	≤0.010	Bal.

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Physical Properties

Thermal conductivity

θ/°C	W/(m·°C)
-168	7.2
-73	8.7
20	9.8
25	/
100	11.2
200	12.8
300	14.7
400	16.4
500	18.2
600	20
700	21.9
800	23.7
900	25.4
1000	27
1100	28.3

Coefficient of thermal expansion

θ/°C	α
20-100	12.2
20-200	12.4
20-300	12.9
20-400	13.2
20-500	13.5
20-600	13.6
20-700	14.1
20-800	14.8

Young's modulus

θ/°C	Gpa
25	205
100	203
200	198
300	192
400	186
500	180
600	178
700	167
800	159
900	150
1000	141

Disclaimer

Data is typical for reference only; actual values based on actual application.

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