MIG NI82

Classification

AWS A5.14 : ERNiCr-3 ISO 18274 : S Ni 6082 (NiCr20Mn3Nb)

Description & Applications

Solid wire for GMAW of high nickel content alloys like Inconel 600* or Incoloy 800*. Used in the construction of equipment submitted to oxidizing and corrosive attacks at high temperatures. High resistance at low temperatures on steels of 5% and 9% Ni. Also used for heterogeonous assembly between C-Mn steels or low alloy steels with stainless steels or Nickel base alloy and with some copper alloys.

* Trade mark INCO ALLOYS

Main applications: Construction and repair welding of high strength steels, tool steels, corrosion resistant steels, high temperature and nickel alloys in component manufacturing, furnace construction, cement industry.

Base materials:

UNS	Alloy	DIN	Material N°
	5%Ni	12Ni19	1.5680
N06600	600	NiCr15Fe	2.4816
N08800	800	X10NiCrAlTi3220	1.4876
N08810	800H	X5NiCrAlTi3120	1.4958
	DS	X8NiCrSi3818	1.4862

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Nb+Ta	Cu	P	S	Fe	Ti	Ni
Min			2.5	18.0	2.0						67.0
Max	0.10	0.50	3.5	22.0	3.0	0.50	0.03	0.015	3.0	0.7	
Type	0.03	0.20	3.2	20.5	2.3	0.01	0.01	0.01	2.0	0.30	>67.0

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	-	-	-	-	-
Max					
Type	430	670	42	+20°C -196°C	200 100

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current (A)	Voltage (V)	
GMAW = +	0.8 1.0 1.2 1.6	70 - 180 80 - 220 150 - 320 220 - 380	18 - 26 18 - 28 22 - 32 24 - 34	ISO 14175: I1 (100% Ar) I3 (Ar+10-30%He) Z (Ar+He+H+CO_2) 15-20 l/min