MIG 20/10M

Classification

AWS A5.9 : ER316L ISO 14343-A : G 19 12 3 L

Description & Applications

Low carbon solid wire for GMAW of stainless steels like 316, 316L, or without Molybden like 304, 304L. Mainly used for general construction with service temperature from -120°C up to +400°C.

Main applications: Boiler making, piping system, pressure vessels, power plant, chemical and petrochemical industries, refineries, food industries…

Base materials:

Stainless steels for general uses:

UNS	*Alloy*	*EN 10088*	*Material N°*
S31600	316	X5CrNiMo17-12-2	1.4401
S31603	316L	X2CrNiMo17-12-2	1.4404
S30400	304	X5CrNi18-10	1.4301
S30403	304L	X2CrNi18-10	1.4306

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min		0.30	1.0	18.0	11.0	2.5		-			-	-
Max	0.03	0.65	2.5	20.0	14.0	3.0	0.5	-	0.03	0.02	-	-
Type	0.02	0.45	1.8	18.6	12.1	2.55	0.08	0.01	0.02	0.01	0.05	0.06

Delong ferrite: 5-15%

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	320	510	30	-	-
Max				-	-
Type	470	600	35	+20°C -196°C	120 45

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: M12 (Ar+0.5-5%CO_2) M13 (Ar+0.5-3%O_2) 15-20 l/min

Back shielding with Argon or Nitrogen gas or with copper backing support to avoid “back end” rust phenomena.