MIG 20/10C

Classification

AWS A5.9 : ER308H ISO 14343-A : G 19 9 H

Description & Applications

High carbon solid wire for GMAW of stainless steels like 304H, 308H with high Carbon content. Mainly used for creep-resistant pieces and oxidation resistance of working temperatures between 400°C to 750°C.

Main applications: Boiler making, piping systems, pressure vessels…

Base materials:

Stainless steels for high temperature applications:

UNS	*Alloy*	*EN 10088*	*Material N°*
S30409	304H	X6CrNi18-11	1.4948
S30400	304	X5CrNi18-10	1.4301
S32100	321	X6CrNiTi18-10	1.4541
		X10CrNiTi18-10	1.6903
		X10CrNi18-8	1.4310

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min	0.04	0.30	1.0	19.5	9.0			-			-	-
Max	0.08	0.65	2.5	21.0	11.0	0.50	0.5	-	0.03	0.02	-	-
Type	0.05	0.40	1.8	19.9	9.7	0.10	0.10	0.01	0.02	0.01	0.06	0.06

Delong ferrite: ~6%

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	350	550	35	-	-
Max				-	-
Type	380	580	37	+20°C	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: 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.