TIG 20/10

Old reference: TIG 308L

Classification

AWS A5.9 : ER308L ISO 14343-A : W 19 9 L

Description & Applications

Low carbon solid rod for GTAW of stainless steels like 304 and 304L, stabilised with Niobium like 347 and stabilised with Titanium like 321. Used for applications with service temperature between -120°C to +350°C.

Avaible in spool for automatised GTAW (TIG orbital).

Main applications: Boiler making, piping systems…

Base materials

Stainless steels for general use:

UNS	*Alloy*	*EN 10088*	*Material N°*
S30400	304	X5CrNi18-10	1.4301
S30403	304L	X2CrNi19-11	1.4306
S32100	321	X6CrNiTi18-10	1.4541
S34700	347	X6CrNiNb18-10	1.4550

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min		0.30	1.0	19.5	9.0			-			-	-
Max	0.03	0.65	2.5	21.0	11.0	0.5	0.5	-	0.03	0.02	-	-
Type	0.015	0.40	1.8	19.7	9.8	0.10	0.10	0.01	0.02	0.015	0.05	0.06

Delong ferrite: 6-12%

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	320	520	35	-	-
Max				-	-
Type	430	600	38	+20°C -196°C	150 50

Welding Current & Instructions

Welding mode	Shielding Gas
TIG = -	ISO 14175 : I1 (Ar) 6-12 l/min Back shielding: I1 (Ar) / N1 (Nitrogen) : 3-6 l/min

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