



# TIG 20/10C

Old reference: TIG 308H

## Classification

AWS A5.9 : ER308H

ISO 14343-A : W 19 9 H

## Description & Applications

High carbon solid rod for GTAW 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	0.5	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	0.015	0.06	0.06

Delong ferrite: ~6%

## All Weld Metal Mechanical Properties

	R <sub>p0.2</sub> ( MPa )	R <sub>m</sub> ( MPa )	A <sub>5</sub> ( % )	KV ( J )
Min	350	550	35	-
Max				-
Type	380	580	37	+20°C 100

## 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.

FT En-TN06-200406

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