Stainless solid wire

Classification

AWS A5.9-93 : ER318*
EN 12072-99 : W 19 12 3 NbSi / G 19 12 3 NbSi

* Nearest classification

General description

Solid wire for welding Ti or Nb stabilized stainless CrNiMo-steels
High resistance to intergranular corrosion and general corrosion conditions

Shielding gases (acc. EN 439)

GTAW	I1	Inert gas Ar (100%)
GMAW	M12	Mixed gas Ar+ >0-5% CO_2
	M13	Mixed gas Ar+ >0-3% 02

Approvals

	DB	TÜV
GTAW	+	+
GMAW	+	+

Chemical composition (w%), typical, wire / rod

C	Mn	Si	Cr	Ni	Mo	Nb
0.04	1.4	0.85	18.9	11.7	2.7	0.5

Mechanical properties, typical, all weld metal

	Process	Shielding gas	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	Impact ISO-V(J) -196°C
Typical values	GTAW	I1	AW	420	680	35	70	45
	GMAW	M12	AW	410	630	35	100	

Materials to be welded

Steel grades	EN 10088-11-2	EN102 13-4	W.Nr.	ASTM/ACI A240/A312/A35	UNS
Extra low carbon C<0,03%	X2 CrNiMo 17-12-2		1.4404	(TP)316L	S31603
				CF-3M	J92800
	X2 CrNiMo 18-14-3		1.4435	(TP)316L	S31603
	X2 CrNiMoN 17-11-2		1.4406	(TP)316LN	S31653
	X2 CrNiMoN 17-13-3		1.4429		
Medium carbon C>0,03%	X4 CrNiMo 17-12-2		1.4401	(TP)316	S31600
	X4 CrNiMo 17-13-3		1.4436		
		GX5 CrNiMo19-11	1.4408	CF 8M	J92900
Ti-,Nb stabilized	X6 CrNiMoTi 17-12-2		1.4571	316Ti	S31635
	X6 CrNiMoNb 17-12-2		1.4580	316 Cb	S31640
	X6 CrNiNb 18-10		1.4550	(TP)347	S34700
		GX5 CrNiNb 19-10	1.4552	Cf-8C	J92710

Packaging

Process	Unit	Sizes (mm) 0.8	1.0	1.2	1.6	2.0	2.4	3.2
GTAW	2 and 10 kg tube			X	X	X	X	X
GMAW	15 kg spool BS300	X	X	X	X			

Other sizes and packaging on request