Cromatig 312

GTAW - TIG

Stainless Steel

Date:	2008-01-22
Revision:	9

Description:
Cromatig 312 deposits a 29% Cr / 9% Ni austenitic/ferritic stainless steel weld metal with a ferrite content of about FN 40. The weld metal exhibits excellent tolerance to dilution from dissimilar and difficult-to-weld base materials without hot cracking, together with high strength and very good heat and oxidation resistance.

APPLICATIONS:
– Difficult-to-weld steels e.g. high carbon hardenable tool, die and spring steels, 13% Mn steels, free-cutting steels, high temperature steels.
– Dissimilar joints between stainless and high carbon steels.
– Surfacing of metal-to-metal wear areas, hot working tools, furnace components.
– Buffer layers prior to hard facing with high chromium carbide deposits.

Welding current:
DC-

Wire composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min		0,30	1,0			28,0	8,0
Typical	0,10	0,50	1,90	0,020	0,015	30,5	9,2
Max	0,15	0,65	2,5	0,030	0,020	32,0	12,0

	Mo	Cu
Min		
Typical	0,10	0,10
Max	0,30	0,30

Shielding gas:
Acc. to EN 439:
I1, 99.99% Ar, 6-12 l/min

Ferrite content:
FN 40

Corrosion resistance
Good resistance to sulphurous gases at high temperature. Good resistance to wet corrosion up to approximately 300°C.

Scaling temperature:
Approx. 1100°C in air.

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min							
Typical	0,10	0,5	1,8	0,02	0,01	30,0	9,0
Max							

	Mo
Min	
Typical	0,10
Max	

Mechanical properties

	Specified	Typical
Yield strength, Rp0.2%:	≥ 450 MPa	600 MPa
Tensile Strength, Rm:	≥ 660 MPa	750 MPa
Elongation, A5	≥ 22%	25%
Impact energy, CV:		20°C • 50 J

Classification:

EN ISO 14343	W 29 9
AWS A5.9	ER312

Approvals:

Product data

Diam.mm	Length mm	Product code
1,6	1000	9808-1016
2,0	1000	9808-1020
2,4	1000	9808-1024
3,2	1000	9808-1032