Cromamig 318Si

GMAW - MIG MAG

Stainless Steel

Date: 2008-01-22
Revision: 6

Description:
Cromamig 318Si is designed for welding the Nb or Ti stabilised 18% Cr/12% Ni/3% Mo austenitic stainless steel grades 316 Cb and 316Ti. It is primarily intended for use at service temperatures above 400°C, but for structural applications at elevated temperatures the creep strength of the weld metal should always be considered.

Welding current:
DC+

Wire composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min		0,65	1,0			18,0	11,0
Typical	0,04	0,80	1,8	0,015	0,010	19,5	11,5
Max	0,08	1,00	2,5	0,03	0,020	20,0	14,0

	Mo	Cu	Nb
Min	2,0		10xC
Typical	2,7	0,10	0,5
Max	3,0	0,30	1,0

Shielding gas:
Acc. to EN 439:
M12, Ar + 2% CO2, 16-21 l/min
M13, Ar + 1-3% O2, 16-21 l/min

Ferrite content:
FN 9

Corrosion resistance
Good resistance to general and intergranular corrosion in dilute hot acids. Good resistance to chloride pitting corrosion as well as
oxidation and corrosion at elevated temperatures.

Scaling temperature:
Approx. 850°C in air.

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min							
Typical	0,04	0,8	1,8	0,015	0,010	19,0	11,0
Max							

	Mo	Nb
Min		
Typical	2,5	0,5
Max		

Mechanical properties

	Specified	Typical
Yield strength, Rp0.2%:	≥ 350 MPa	400 MPa
Tensile Strength, Rm:	≥ 550 MPa	610 MPa
Elongation, A5	≥ 25%	34%
Impact energy, CV:		20°C • 90 J
		-120°C • 40 J

Classification:

EN ISO 14343	G 19 12 3 Nb Si
AWS A5.9	~ER318

Approvals:

TÜV	
DB	Kennblatt Nr 43.042.16
CE	

Note

AWS A5.9: Slight deviation in Si-content.

Product data

Diam.mm	Product code	Dip Current A	Dip Voltage V	Spray Current A	Spray Voltage V
0,8	9813-2008	60-100	18-21	150-170	24-26
1,0	9813-2010	75-140	18-21	170-200	26-28
1,2	9813-2012	130-160	18-21	175-250	26-28