



Elgatic 181CR

GTAW - TIG
Low-alloyed

Date: 2008-03-19
Revision: 12

Description:

Elgatic 181CR is a 0.5% Mo alloyed wire intended for TIG welding similar composition steels, used where creep rupture strength and ductility at service temperatures up to 550°C are required, e.g. DIN 15 Mo3, BS 3059 Grade 243 and ASTM A335 Grade P1. The Mo content confers some resistance to hydrogen attack in chemical process plant applications. Elgatic 181CR is also suitable for ordinary C-Mn steels when higher tensile strength weld metal is required. Preheat and interpass temperature of 100-150°C is recommended. Stress relieve at 620°C.

Welding current:

DC-

Wire composition, wt.%

	C	Si	Mn	P	S	Mo	Cu
Min	0,08	0,50	0,90			0,40	
Typical	0,10	0,60	1,10	0,015	0,01	0,50	
Max	0,12	0,70	1,30	0,02	0,02	0,60	0,35

Shielding gas:

I1, Argon, 7-10 l/min

Stamping

F SG Mo

Chemical composition, wt.%

	C	Si	Mn	Mo
Min				
Typical	0,09	0,55	1,00	0,45
Max				

Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Re:	≥ 355 MPa	480 MPa
Tensile Strength, Rm:	≥ 510 MPa	580 MPa
Elongation, A5	≥ 22%	24%
Impact energy, CV:	20°C • >47 J	-20°C • 75 J -30°C • 45 J

Classification:

EN 1668	W 46 2 W2Mo
EN ISO 21952	W MoSi
AWS A5.28	ER70S-A1

Approvals:

DB	Kennblatt Nr 42.042.05
TÜV	
CE	

Product data:

Diam.mm	Length mm	Product code
1,6	1000	9710-1016
2,0	1000	9710-1020
2,4	1000	9710-1024
3,0	1000	9710-1030

Note

PWHT: 620°C, 1h