



Elgagig 181CR

GTAW - TIG
Low-alloyed

Date:	2021-02-09
Revision:	13

Description:

Elgagig 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. Elgagig 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	Cr	Ni	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	0,15	0,15	0,35

Shielding gas:

I1, Argon, 7-10 l/min

Stamping

F SG Mo

Weld Metal Typical 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:	≥ 460 MPa	480 MPa
Tensile Strength, Rm:	530 – 680 MPa	580 MPa
Elongation, A5	≥ 20%	24%
Impact energy, CV:	-20°C • >47 J	-20°C • 75 J -30°C • 45 J

Product data:

Diam.mm	Length mm
1,6	1000
2,0	1000
2,4	1000
3,0	1000

Note

PWHT: 620°C, 1h

Classification:

EN ISO 636-A	W 46 2 2Mo
EN ISO 21952-A	W MoSi
AWS A5.28	ER70S-A1

Approvals:

DB	Kennblatt Nr 42.042.05
TÜV	
CE	

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