



Cromarod 309MoL

SMAW - (Stick) - MMA
Stainless Steel

Date: 2007-10-19
Revision: 21

Description:

Cromarod 309MoL is a rutile flux coated electrode which deposits a 23% Cr / 12%Ni / 2.5%Mo austenitic stainless steel weld metal. The high alloy content and ferrite level enable the weld metal to tolerate dilution from dissimilar and difficult-to-weld materials without hot cracking or brittle structures.

Applications:

- Dissimilar joints between stainless and mild, low alloy or medium carbon steels.
- Buffer layers on mild and low alloy steels prior to overlaying with Cromarod 316L.
- Interface runs in 316L clad steels.
- Joining of medium carbon hardenable steels e.g. armour plate..

Welding positions:



Coating type:

Rutile

Welding current:

DC +, AC 0CV > 39V

Ferrite content:

FN 20 (WRC-92)

Corrosion resistance

The corrosion resistance after surfacing carbon steels with two layers of Cromarod 309MoL is about the same as for 316L material.

Scaling temperature:

Approx. 1000 °C in air.

Redrying temperature:

350 °C, 2h

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min			0,5			22,0	12,0
Typical	0,02	0,8	0,8	0,02	0,02	22,8	12,8
Max	0,030	0,90	2,0	0,025	0,025	25,0	14,0

	Mo	Cu	V	Nb
Min	2,0			
Typical	2,4			
Max	3,0	0,5	0,1	0,1

Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Rp0.2%:	≥ 350 MPa	555 MPa
Tensile Strength, Rm:	≥ 560 MPa	680 MPa
Elongation, A5	≥ 30%	33%
Impact energy, CV:	-20 °C • ≥ 29 J	-20 °C • 50 J

Product data

Diam.mm	Length mm	Product code	Current A	Voltage V	Kg weld metal/kg electrodes	No. of electrodes/kg weld metal	Kg weld metal/hour arc time	Burn-off time/electrode (sec.)
2,0	300	74342000	35-60	26	0,63	135	0,7	33
2,5	300	74342500	40-80	27	0,64	84	1,1	36
3,2	350	74343200	80-120	28	0,65	43	1,5	42
4,0	350	74344000	100-160	29	0,65	29	2,1	55
4,0	450	74344045	100-160	29	0,65	23	2,1	70
5,0	450	74345000	150-220	30	0,67	13	3,1	79

Classification:

EN 1600	E 23 12 2 L R 32
AWS A5.4	E 309MoL-17
ISO 3581-A	E 23 12 2 L R 32

Approvals:

DB	Kennblatt Nr. 30.042.03
ABS	
DNV	
CE	
RINA	
TÜV	

Note

Core wire:
P ≤ 0.020%
S ≤ 0.015%
N ≤ 0.080%