



Cromarod Duplex

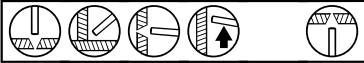
SMAW - (Stick) - MMA
Stainless Steel

Date: 2009-02-27
Revision: 22

Description:

Cromarod Duplex is a rutile flux coated electrode which deposits a 24%Cr / 10%Ni / 3%Mo / 0.15%N austenitic-ferritic duplex stainless steel weld metal having a ferrite content of about FN 35. The electrode is easy to use and produces a smooth weld bead finish and good slag detachability. Cromarod Duplex is designed for welding similar composition duplex stainless steels which offer an excellent combination of high strength and very good resistance to chloride induced pitting and stress corrosion cracking. A heat input range of 0.5-2.5 KJ/mm is recommended to maintain a favourable phase balance. Applications include offshore platform pipework, pipelines transporting chloride bearing products or sour gas and process vessels for chloride environments. Where higher fracture toughness at -46 °C is required, use Cromarod Duplex B.

Welding positions:



Coating type:

Rutile

Welding current:

DC +, AC 0CV > 39V

Ferrite content:

FN 35 (WRC-92)

Corrosion resistance

Very good resistance to pitting corrosion and stress corrosion cracking in chloride and H₂S environments. Good resistance to intergranular corrosion. Pitting resistance equivalent, PRE = 36
Critical pitting temp. CPT = 30 °C (ASTM G48).

Scaling temperature:

Approx. 850 °C in air.

Redrying temperature:

350 °C, 2h

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min		0,6	0,5			21,0	7,5
Typical	0,02	0,9	0,7	0,02	0,02	23,5	9,5
Max	0,040	1,0	2,0	0,030	0,025	24,0	10,5

	Mo	Cu	V	Nb	N
Min	2,5				0,13
Typical	3,0				0,16
Max	4,0	0,5	0,1	0,1	0,20

Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Rp0.2%:	≥ 480 MPa	670 MPa
Tensile Strength, Rm:	≥ 690 MPa	840 MPa
Elongation, A5	≥ 22%	25%
Impact energy, CV:	-46 °C • ≥ 27 J	-46 °C • 34 J

Classification:

EN 1600	E 22 9 3 N L R 12
AWS A5.4	~E 2209-17
ISO 3581-A	E 22 9 3 N L R 12

Approvals:

LR
GL
TÜV
DNV
BV
CE

Note

AWS: Slight difference in Cr.

Core wire:

P ≤ 0.020%
S ≤ 0.010%
0.14% ≤ N ≤ 0.17%

Produkt 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.)
2,5	300	74522500	60-90	24	0,62	92	1,1	33
3,2	350	74523200	80-120	25	0,64	45	1,4	50
4,0	350	74524000	130-170	26	0,64	30	2,0	54
5,0	450	74525000	160-220	30	0,64	14	2,7	87