



Product Data Sheet

E 'Manual metal-arc welding'

OK 67.55

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007237	Cancelling EN007117	Reg date 2016-05-12	Page 1 (2)
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REASON FOR ISSUE

Approvals revised. DNV amended to DNV-GL.

GENERAL

Basic coated electrode especially designed for welding duplex stainless steels i.e. UNS S31803. Suitable for applications where the requirements on the mechanical properties are high.

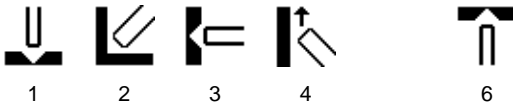
Polarity: DC+

Alloy Type: Austenitic CrNiMo

Coating Type: Basic

Ferrite Content: FN 35-50

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 22 9 3 N L B 2 2
SFA/AWS A5.4 E2209-15
Werkstoffnummer 1.4462

APPROVALS

DNV-GL Duplex
Seproz UNA 272580
VdTÜV 06774

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.04	
Si	0.20	0.80	
Mn	0.5	1.2	
P		0.020	
S		0.015	
Cr	21.5	23.5	
Ni	8.5	10.0	
Mo	2.8	3.3	
Cu		0.75	
N	0.12	0.18	
Ferrite FN			41



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO	
	Min	Typ
Rp0.2 (MPa)	450	650
Rm (MPa)	690	800
A5 (%)	20	28
Z (%)		50
Charpy V at 20°C (J)	80	100
Charpy V at -20°C (J)	60	85
Charpy V at -40°C (J)	50	75
Charpy V at -60°C (J)	47	65

Comments:

Interpass temp. < 150 °C.

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 300	50	80	1.8	106	0.59	96	0.8	49	23	1,2,3,4,6
3.2 x 350	65	115	3.4	106	0.59	50	1.2	61	24	1,2,3,4,6
4.0 x 350	80	140	5.1	106	0.60	33	1.5	74	24	1,2,3,4,6

W = Weight (kg / 100 electrodes)

η = Efficiency (g weld metal x 100 / g core wire)

N = Effective value (kg weld metal / kg electrodes)

B = Changes (number of electrodes / kg weld metal)

H = Deposit rate at 90% of max current (kg weld metal / hour arc time)

T = Fusion time at 90% of max current (s / electrode)

U = Arc voltage (V)

OTHER DATA

Hardness data:

Weld metal, as welded condition, matching base material, V-joint, transverse cross section, indents along vertical line (3 indents): 254 - 262 HV10, average 255 HV10

Weld metal, matching base material, V-joint, wall thickness 21mm, OK Tigrod 2209 in the root and hot pass, filling and cap layer OK 67.55, transverse cross section (4 indents): 256 - 270 HV10, average 261 HV10, hardness in the root: 284 HV10

Corrosion test results:

CPT according to ASTM G 48: 27.5 °C.

PREN value calculated according to the formula: %Cr + 3,3%Mo + 16%N is minimum 35,0.

Redrying: 200 °C, 2h.