



Product Data Sheet

E 'Manual metal-arc welding'

OK 63.85

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007109	Cancelling EN006116	Reg date 2016-02-24	Page 1 (2)
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REASON FOR ISSUE

N and Ferrite FN added under Chemical Composition. Hardness data added under Other Data.

GENERAL

Basic MMA-electrode for welding Nb-stabilized stainless steels of 18Cr 12Ni 3Mo-type.

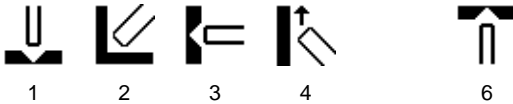
Polarity: DC+

Alloy Type: Nb-stabilized austenitic CrNiMo-type

Coating Type: Lime Basic

Ferrite Content: FN 5-10

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 19 12 3 Nb B 42
SFA/AWS A5.4 E318-15
Werkstoffnummer 1.4576

APPROVALS

Seproz UNA 272580
VdTÜV 05662

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.060	
Si	0.20	0.70	
Mn	1.30	2.00	
P		0.025	
S		0.020	
Cr	17.5	19.5	
Ni	11.0	13.0	
Mo	2.5	3.0	
Nb		1.00	
Cu		0.5	
N		0.080	
Nb+Ta		1.00	
Ferrite FN			5

Comments:
%Nb > 8 x %C



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO	AWS	
	As welded Min	As welded Min	Typ
Rp0.2 (MPa)	350	400	490
Rm (MPa)	550	560	640
A4 (%)		25	35
A5 (%)	25		
Z (%)		40	50
Charpy V at 20°C (J)		47	65
Charpy V at -120°C (J)		32	45

Comments:

Interpass temperature max. 150 °C.

Hardness weld metal HV 190 - 225.

Quench annealed 1050 °C, quenched in water, KV -196 °C: 45J

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	1.9	115	0.66	81	1.0	45	22	1,2,3,4,6
3.2 x 350	65	120	3.6	115	0.64	43	1.5	58	23	1,2,3,4,6
4.0 x 350	75	160	5.5	115	0.64	28	2.0	64	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, no buttering, transverse cross section: 216 - 240 HV10

Redrying: 200 °C, 2 h