



Product Data Sheet

E 'Manual metal-arc welding'

OK 63.30

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007305	Cancelling EN007242	Reg date 2016-07-18	Page 1 (2)
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REASON FOR ISSUE

Minimum tensile strength increased from 510MPa to 520MPa.

GENERAL

Extra low carbon stainless steel electrode for welding steels of the 18Cr 12Ni 2.8Mo-type.

Also suitable for welding of stabilized stainless steels of similar composition, except when the full creep resistance of the base metal is to be met.

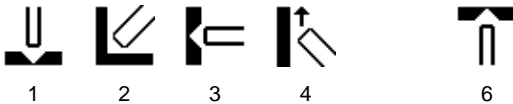
Min AC OCV: 50

Polarity: DC+, AC

Alloy Type: Austenitic CrNiMo

Ferrite Content: FN 3-10

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN ISO 3581-A E 19 12 3 L R 1 2
SFA/AWS A5.4 E316L-17
CSA W48 E316L-17
Werkstoffnummer 1.4430

APPROVALS

ABS SFA/AWS A5:4,
 E316L-17
BV 316L
CE EN 13479
CWB CSA W48: E316L-17
DB 30.039.06
DNV-GL VL 316 L
LR 316L
NAKS/HAKC 2.5-4.0 mm
Seproz UNA 272580
VdTÜV 00262

APPROVAL COMMENT

NAKS/HAKC: Valid for lot numbers starting with SB

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max	Nom
C		0.030	
Si	0.50	1.00	
Mn	0.5	1.2	
P		0.025	
S		0.020	
Cr	17.0	19.0	
Ni	11.0	13.0	
Mo	2.5	3.0	
Cu		0.2	
N		0.15	
Ferrite FN			6



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MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO		AWS
	As welded Min	Typ	As welded Min
Rp0.2 (MPa)	320	460	320
Rm (MPa)	520	570	520
A4 (%)			30
A5 (%)	27	40	
Z (%)		60	
Charpy V at 20°C (J)	47	60	
Charpy V at -20°C (J)		55	
Charpy V at -60°C (J)	32	43	

Comments:

Interpass temperature maximum 150 °C.

Hardness weld metal 180 - 220 HV.

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
1.6 x 300	30	45	0.7	95	0.56	250	0.4	37	29	1,2,3,4,6
2.0 x 300	45	65	1.1	104	0.60	147	0.6	39	29	1,2,3,4,6
2.5 x 300	45	90	1.9	100	0.55	96	0.9	45	29	1,2,3,4,6
3.2 x 350	60	125	3.5	100	0.55	52	1.4	57	30	1,2,3,4,6
4.0 x 350	70	190	5.3	100	0.56	34	2.0	57	32	1,2,3,4,6
5.0 x 350	100	280	8.3	100	0.56	21	3.0	63	32	1,2,3

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, transverse cross section of a V-joint, matching base material, no buttering, five indents: 181 - 203 HV10, average 190 HV10

Redrying: 350 °C, 2h.