Product Data Sheet

E 'Manual metal-arc welding'

OK NiCrFe-2

Former OK 92.15

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
A-C Thorsson	P-O Oskarsson	Tapio Huhtala	EN007403	EN006280	2016-11-08	1 (2)

REASON FOR ISSUE

Hardness data added under Other Data.

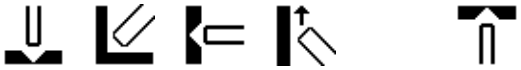
GENERAL

Nickel based electrode for welding Inconel 600 and similar alloys, cryogenic steels (e.g. 9% and 5% Ni steel), martensitic to austenitic steels, dissimilar steels, heat resisting steel castings of limited weldability etc. Good weldability in all positions, including overhead.

Polarity: DC+

Alloy Type: Nickel alloy
Coating Type: Basic
Ferrite Content: FN 0

WELDING POSITIONS



1 2 3 4 6

CLASSIFICATIONS Electrode

SFA/AWS A5.11	ENiCrFe-2
EN ISO 14172	E Ni 6133 (NiCr16Fe12NbMo)

APPROVALS

ABS

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C		0.10
Si		0.75
Mn	1.0	3.5
P		0.025
S		0.015
Cr	14.0	17.0
Ni	62	78
Mo	0.5	2.5
Nb	1.0	3.0
Cu		0.50
Fe	6.0	12.0
Nb+Ta	1.0	3.0

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MECHANICAL PROPERTIES OF WELD METAL

	AWS	
	As welded	
Properties	**Min**	**Typ**
Rp0.2 (MPa)	300	420
Rm (MPa)	550	660
A4 (%)	30	45
Z (%)		55
Charpy V at 20°C (J)	75	110
Charpy V at -196°C (J)	65	90

Comments:

Interpass temp <100 °C.

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U	Welding
Ø x Length	Min	Max								Positions
2.5 x 300	50	80	1.8	110	0.63	91.0	0.90	45	22	1,2,3,4,6
3.2 x 350	70	105	3.4	110	0.62	57.0	1.30	57	23	1,2,3,4,6
4.0 x 350	95	140	4.7	110	0.65	31.0	2.10	58	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

Redrying: 250 °C, 2h.

Thermal expansion coefficient 0 to -196 °C: 0.00001035 / °C.

Hardness data:

As welded condition, transverse cross section of an ISO joint, measurements done along a vertical centre line (8-9 indents) and a horizontal line at top layer (9-10 indents), 2 samples tested: 175 - 226 HV10, average 202 HV10.