Product Data Sheet

E 'Manual metal-arc welding'

OK 48.00

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
A-C Thorsson	P-O Oskarsson	J-P Ernoult	EN007671	EN006953	2018-01-05	1 (3)

REASON FOR ISSUE

DNV-GL and RINA approvals.

GENERAL

A reliable, general purpose electrode for manual metal arc welding of carbon steels, carbon manganese steels and fine-grained carbon manganese steels with elevated yield strength. OK 48.00 deposits a tough, crack-resistant weld metal. The coating is of the low moisture absorption type.

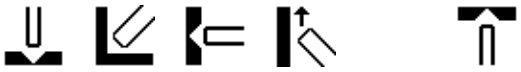
High welding speed in the vertical-up position. OK 48.00 is insensitive to the composition of the base material within fairly wide limits.

The electrode can be used for welding structures where difficult stress conditions cannot be avoided.

Polarity: DC+(-)

Alloy Type: Carbon Manganese
Coating Type: Basic covering
Diff Hydrogen: < 4.0 ml/100g

WELDING POSITIONS



1 2 3 4 6

CLASSIFICATIONS Electrode

SFA/AWS A5.1	E7018 H4 R
EN ISO 2560-A	E 42 4 B 42 H5

APPROVALS

ABS	3Y H5
BV	3Y H5
CE	EN 13479
DB	10.039.12
DNV-GL	3 YH5
LR	3Ym H5
PRS	3Y H5
RINA	3Y H5
RS	3Y H5
VdTÜV	00690

APPROVALS (SPECIFIC)

NAKS/HAKC	2.0-5.0 mm

APPROVAL COMMENT

Approvals Specific: Valid for lot numbers starting with SF

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CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C	0.02	0.10
Si	0.30	0.70
Mn	0.90	1.40
P		0.02
S		0.015
Cr		0.1
Ni		0.1
Mo		0.06
V		0.04
Nb		0.02
Cu		0.1
Al		0.03
Sn		0.02
Ti		0.03
Pb		0.02
As		0.03
Mn+Ni+Cr+Mo+V		1.75

MECHANICAL PROPERTIES OF WELD METAL

	ISO			AWS	
	As welded			As welded	
Properties	**Min**	**Max**	**Typ**	**Min**	**Typ**
Rp0.2 (MPa)				400	
ReL (MPa)	420		475		
Rm (MPa)	530	640	565	490	
A4 (%)				22	
A5 (%)	22		29		
Charpy V at -30°C (J)			130	27	130
Charpy V at -40°C (J)	47		115		
	Comments: EN standard requires Rm min 500 Mpa and A5 Min 20%.			Comments:	

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ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U	Welding
Ø x Length	Min	Max								Positions
1.6 x 300	30	55	0.9	127	0.59	192	0.38	50	24	1,2,3,4,6
2.0 x 300	55	80	1.4	128	0.65	125	0.63	45	22	1,2,3,4,6
2.5 x 350	70	110	2.5	129	0.67	65	0.96	57	24	1,2,3,4,6
3.2 x 350	90	140	3.7	123	0.70	42	1.24	68	23	1,2,3,4,6
3.2 x 450	90	140	4.7	124	0.73	31	1.33	85	23	1,2,3,4,6
4.0 x 350	120	190	5.5	118	0.70	29	1.63	75	24	1,2,3,4,6
4.0 x 450	120	190	7.0	118	0.71	22	1.76	92	24	1,2,3,4,6
5.0 x 450	190	260	10.6	119	0.75	13	2.61	99	24	1,2,3,4
6.0 x 450	220	340	14.6	120	0.80	9	3.88	97	26	1,2,3
7.0 x 450	280	410	19.6	118	0.79	7.0	4.83	104	27	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)