Product Data Sheet OK 76.96

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
P-O Oskarsson	Tero Tolonen	J-P Ernoult	EN006743	EN006470	2015-05-20	1 (2)

REASON FOR ISSUE

Diameter 2.0 mm added. Mechanical properties revised.

GENERAL

OK 76.96 is an LMA electrode containing 9Cr 1Mo for the welding of creep-resistant steels . It is especially suitable for pipe welding. The electrode runs with a quiet , stable arc and give a minimum amount of spatter.
A preheating and interpass temperature of 150-269 °C is normally required .

Polarity: DC+

Alloy Type: Creep resisting
Coating Type: Lime Basic
Diff Hydrogen: <5ml/100g

WELDING POSITIONS

1 2 3 4 6

CLASSIFICATIONS Electrode

SFA/AWS A5.5	E8015-B8
EN ISO 3580-A	E (CrMo9) B 4 2 H5

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C	0.05	0.10
Si		0.8
Mn	0.6	1.0
P		0.020
S		0.020
Cr	8.0	10.0
Ni		0.29
Mo	0.90	1.20
Nb		0.009
Cu		0.29

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MECHANICAL PROPERTIES OF WELD METAL

	ISO	ISO	ISO	ISO	AWS
	PWHT 740°C 1h	Stress relieved 1 650°C 2h	Stress relieved 2 750°C 2h	Stress relieved 3 850°C 2h	PWHT 740°C 1h
Properties	**Min**	**Typ**	**Typ**	**Typ**	**Min**
Rp0.2 (MPa)		730	550		460
ReL (MPa)	530				
Rm (MPa)	620	850	720	> 450	550
A4 (%)					19
A5 (%)	15	17	22	> 20	
Z (%)		59	60	> 70	
Charpy V at 20°C (J)		25	60	80	

Comments:

Interpass temperature 250-300°C ; Cooled down to 500°C in furnace then air-cooled.

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	N	B	H	T	U	Welding
Ø x Length	Min	Max								Positions
2.0 x 300	55	75	1.3	115	0.58	131.0	0.50	49	23	1,2,3,4,6
2.5 x 300	70	100	2.0	110	0.55	92.0	0.80	51	25	1,2,3,4,6
3.2 x 350	90	135	3.6	105	0.55	50.0	1.10	70	26	1,2,3,4,6
4.0 x 450	130	200	6.8	110	0.64	22.5	1.90	80	21	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)