Elex® B 7016

Basic electrode

Classification

AWS A5.1 :E 7016
EN 499:1994 :E 42 3 B 22 H10

General description

Basic, low hydrogen electrode (H_{DM} <10ml/100 g)
Excellent for general purpose welding
Will run on low open circuit voltage (min. OCV 55 V)
Good side wall wetting
Impact toughness down to -30°C

Welding positions

ISO/ASME	PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up

Current type

DC electr.+/-

Approvals

ABS	BV	DNV	LR	RINA	TÜV
3H,3Y	3,3YHH	3YH5	3,3YH5	3,3YH5	+

Chemical composition (w%),typical,all weld metal

C	Mn	Si	S	P
0.08	1.1	0.5	0.01	0.015

Mechanical properties,all weld metal

		Condition	Yield strength, (N/mm^2)	Tensile strength (N/mm^2)	Elongation (%)	Impact (ISO), J -20°C	Impact (ISO), J -30°C
Required	AWS A5.1		min.400	min.490	min.22	min.27	
	ISO 2560-A		min.420	500-640	min.20		min.47
Typical values after welding		AW	490	560	28	100	80

Packaging,available sizes and identification

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit:	Pieces / unit (nominal)	136	120	90	65
Box	Net weight/unit (kg)	2.5	4.3	4.8	6.3

Identification Imprint: **Elex® B 7016** Tip colour: silver

Elex® B 7016 :rev. EN 20

Elex® B 7016

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM A 131	Grade A, B, D, AH32 to EH36
Cast steel	EN 10213-2	GP 240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415, L445
	API 5LX	X42, X46, X52, X60
	EN 10216-1/	P235T1-P355T1, P235T2, P355T2, P275T1
	EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	EN 10113-2	S275, S355, S420
	EN 10113-3	S275, S355, S420, S460

Calculation Data

Sizes Diam.x length (mm)	Current range (A)	Current type	Arc time - per electrode at max.current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ 1 kg weldmetal (1/N)
2.5x350	55-80	DC+	59	100.6	0.71	18.5	86	1.59
3.2x350	60-120	DC+	68	179.9	1.02	30.3	52	1.57
4.0x350	120-170	DC+	77	258.7	1.5	48.7	31	1.51
5.0x450	160-240	DC+	93	591	2.6	96.7	15	1.44

* stub end = 35 mm

Welding parameters,optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2 F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	85	85	85	75	85	75
3.2	120	115	115	115	115	115
4.0	170	170	170	140	140	140
5.0	230	220	210	200		

Application Advice

Electrodes after removal from packing redry 2-4h 350 ± 25°C