Conarc® 49

Basic electrode

SMAW

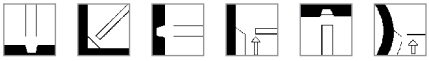
Classification

AWS A5.1-91 : E7018 H4R
EN 499-94 : E 46 3 B 32 H5

General description

Most suitable universal basic electrode for shipbuilding and light general construction work
Welding characteristics come very close to the welders ideal electrode
Almost no spatter, nice wetting and full weld pool control
One current setting for all positions possible
Perfect welding and 120% recovery contributes to high productivity

Welding positions



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

Current type

AC / DC electr. + / -

Approvals

ABS	BV	CTL	DB	DNV	GL	LR	RINA	RMRS	TÜV
3H,3Y	3,3YHH	+	+	3YH5	3YH10	3,3YH5	3YH5	3-3YH5	+

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

C	Mn	Si	P	S	H_{DM}
0.09	1.1	0.6	0.015	0.01	4 ml/100 g

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm^2)	Tensile strength (N/mm^2)	Elongation (%)	Impact ISO-V(J) -20°C	-29°C	-30°C
Required: AWS A5.1-91		min. 399	min. 482	min. 22		min. 27	
EN 499-94		min. 460	530-680	min. 20			min. 47
Typical values	AW	480	560	28	140		

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0	4.0	5.0	6.0
	Length (mm)	350	350	350	450	450	450
Unit: box	Pieces / unit (nominal)	118	120	85	85	55	45
	Net weight/unit (kg)	2.7	4.5	4.6	5.9	6.0	6.3

Identification Imprint: 7018/Conarc49 Tip colour: green

LINCOLN® ELECTRIC

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM A131	Grade A, B, D, AH32 to EH40
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415
	API 5LX	X42, X46, X52, X60
	EN 10216-1/	P235T1, P235T2, P275T1
	EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	EN 10113-2	S275, S275, S355, S420
	EN 10113-3	S275, S355, S420,

Calculation Data

Sizes Diam. x length	Current range	Current type	Arc time - per electrode at max. current -	Energy	Dep.rate	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
(mm)	(A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
2.5 x 350	70 - 80	DC+	58	120	0.85	23.1	73	1.7
3.2 x 350	110 - 130	DC+	68	194	1.3	36.8	41	1.5
4.0 x 450			98	429	1.8	69.5	20	1.4
5.0 x 450	160 - 240	DC+	117	619	2.3	107.3	13	1.4
6.0 x 450	250 - 300	DC+	106	976	3.5	136.9	10	1.33

* stub end 35 mm

Welding parameters, optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	95	95	90	90	85	85
3.2	140	130	130	120	120	110
4.0	180	180	180	160	150	160
5.0	230	230	230	180		
6.0	300	290				

Application Advice

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