

General

Silicon iron anodes are applied in impressed current cathodic protection plants in horizontal and deep groundbeds. Can be used in marine and other various environmental conditions. More than 80 years of application in the cathodic protection field is a guaranty of this anodes effectiveness.

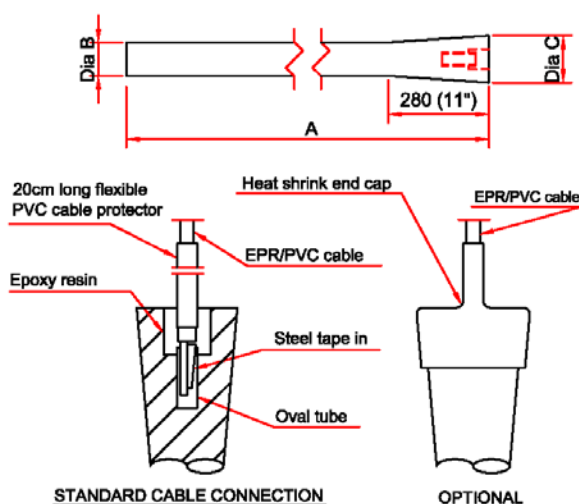
Connection between cable and anode

Whilst the connection between cable and anode can be supplied in accordance to particular customers requirements, the standard arrangement has the merit of simplicity and is based upon an effectiveness of many years. The epoxidic sealant used, has been carefully selected for an optimum adesion and for aggerssiveness enviroments resistance. Heat shrink and caps are available as an optional. They are supplied with a standard cable of 10 mm² and 2 meters lenght.

Alloy composition

Two alloy compositions are available:

- "N" type for general use
- "C" type (containing 4,5% of chromium), more suitable where exist chloride or other aggressive agents.



CHEMICAL ANALYSIS:		
	Tipo 'N'	Tipo 'C'
Silicon	14,2 ÷ 15,2	14,2 ÷ 15,2
Chromium	---	4 ÷ 5
Manganese	0,4 ÷ 0,8	0,5 max
Carbon	0,75 ÷ 1	1,4 max
Iron	Remaining	Remaining

Consumption

Consumption of silicon iron anodes is changing with current density, and enviroment laying conditions. The bottom table shows some significative data.

ENVIRONMENT	CURRENT DENSITY A/m	CONSUMPTION RATE Kg/Ampere-year
Fresh water (type "N")	10 ÷ 30	0,15
Salte water (type "C")	10 ÷ 50	0,50
Wet carbonaceous backfill	10 ÷ 50	0,10
Dry carbonaceous backfill	10 ÷ 50	NEGLIGIBLE

A		B		C		NOMINAL AREA SURFACE		AMPS OUTPUT AT VARYING CURRENT DENSITIES				APPROX WEIGHT	
mm	inc	mm	inc	mm	inc	m ²	Sq. ft.	10A/m ²	20A/m ²	30A/m ²	40A/m ²	Kgs	Lbs
915	36	25	1.00	51	2.00	0,08	0,9	0,8	1,6	2,4	3,2	7	15
		38	1.50	63	2.50	0,12	1,3	1,2	2,4	3,6	4,8	7,5	17
		51	2.00	76	3.00	0,16	1,7	1,6	3,2	4,8	6,4	13,5	30
		63	2.50	89	3.50	0,20	2,1	2,0	4,0	6,0	8,0	19	42
		76	3.00	102	4.00	0,23	2,5	2,3	4,6	6,9	9,2	27	60
1220	48	25	1.00	51	2.00	0,11	1,2	1,1	2,2	3,3	4,4	8	18
		38	1.50	63	2.50	0,16	1,7	1,6	3,2	4,8	6,4	10	22
		51	2.00	76	3.00	0,20	2,2	2,0	4,0	6,0	8,0	16,5	36
		63	2.50	89	3.50	0,25	2,7	2,5	5,0	7,5	10,0	25,5	56
		76	3.00	102	4.00	0,30	3,3	3,0	6,0	9,0	12,0	38	80
1525	60	25	1.00	51	2.00	0,13	1,4	1,3	2,6	3,9	5,2	10	22
		38	1.50	63	2.50	0,20	2,1	2,0	4,0	6,0	8,0	13	28
		51	2.00	76	3.00	0,25	2,7	2,5	5,0	7,5	10,0	20,5	45
		63	2.50	89	3.50	0,32	3,4	3,2	6,4	9,6	12,8	32	70
		76	3.00	102	4.00	0,38	4,0	3,8	7,6	11,4	15,2	45,5	100

Note

Other shapes and size of anodes are available upon request, including "canister" prepacked configuration.