

IMPRESSED CURRENT ANODES

Graphite

Solid Rod Anodes

Protection for Arid Environments

Choosing the right impressed current anode for a particular protection project is highly dependent on the environment which surrounds a buried or submerged structure. In relatively dry soils, graphite anodes have proven to be an ideal choice. Corrpro manufactures a complete line of graphite anodes, which are produced according to strict quality control guidelines. The anodes are composed of high quality petroleum coke, which is mixed with coal tar binders and extruded into various diameter rods. The rods are heated repeatedly at temperatures in excess of 2,600°C and then cooled. The end result of this manufacturing process is an anode with a high percentage of carbon, which can deliver effective protection at a relatively low consumption rate. In buried soil electrolytes, this consumption rate varies between 0.4 and 2.0 lbs./amp.-yr. The recommended current density for graphite anodes is 0.5 amp./ft.² Due to the fact that graphite anodes are inherently very porous, Corrpro treats its graphite anodes with a microcrystalline wax. This wax inhibits moisture from penetrating the anode and causing mechanical and chemical decomposition.

A quality connection is an integral part of any high-performance graphite anode. In addition to offering a standard end connection, Corrpro also produces a low-resistance center connection. Center wire connections were developed to compensate for end effect. In this phenomenon, increased consumption occurs at the longitudinal ends of an anode. Corrpro's center connection



compensates for this effect. It uses a specially designed screw, which bores into the graphite anode for a strong mechanical bond. Corrpro's center connection is established by a hole drilled only half way through the anode. The connection made will withstand a minimum pull-out strength of 300 lbs. and possess a wire connection resistance under 0.004 ohm.

Typical Applications

While graphite anodes will operate in aqueous environments, they perform best under dry soil conditions. Use of a backfill effectively increases the graphite anode's discharge surface area and lowers anode-to-earth resistance. The anodes have been successfully used in both conventional and deep groundbed applications, and demonstrate exceptional protection in high-chloride environments.



Corrpro Companies Europe Limited

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Graphite Solid Rod Anodes

Ordering Procedure

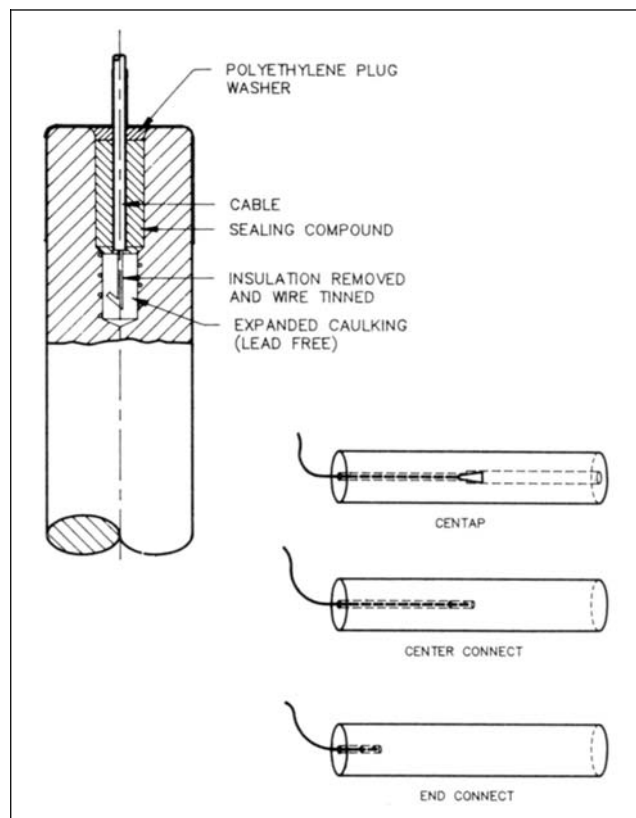
Corrpro graphite anodes are available bare and prepackaged in a Spira-Pak® container filled with a coke breeze backfill. To order the required anode for your structure, indicate that you need a graphite anode and specify the quantity desired, the anode type, the connection type, the lead wire length, size, and insulation, and whether it should be packaged or bare. An example is provided to help illustrate this process.

Ordering Procedure Example

ITEM	EXAMPLE
Quantity	200
Anode Material	Graphite
Anode Type	3 x 60 in.
Connection (Center or End)	Center
Wire: Length	20 ft.
Size (#8 = Standard)	#8 AWG
Insulation (HMWPE = Standard)	HMWPE
Packaging: Bare or Packaged	Packaged

CHEMICAL COMPOSITION

Element	Content %
Carbon	99.80%
Ash	0.20



Standard Dimensions and Shipping Wts.

ANODE TYPE DIMENSIONS in. (mm)				BARE WT.	
Ø		L		lbs.	(kg)
3	(76.2)	30	(762)	13	(5.9)
4	(101.6)	40	(1,016)	35	(15.9)
3	(76.2)	60	(1,524)	27	(12.3)
4	(101.6)	80	(2,032)	70	(31.8)



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