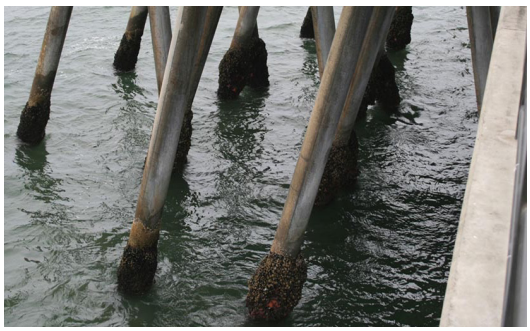
BADGERCAST®

For many years American Carbon Company has been manufacturing high quality, highly affordable BADGERCAST® high silicon cast iron (HSCI) anodes. All of our anodes are manufactured using a proprietary manufacturing process which guarantees the optimum chemical composition within the parameters of ASTM Standard A518 grade 3. Furthermore, the BADGERCAST stick anodes utilize a complex casting procedure to optimize metal structure while allowing for great consistency in weight and dimension. Our BADGERCAST tubular anodes are cast using centrifugal casting techniques that have been a staple in the Cathodic Protection industry for years, and proven to be the most effective casting method for tubular anodes once installed. Click below to learn more about BADGERCAST high silicon cast iron anodes.



APPLICATIONS:

BADGERCAST High Silicon Cast Iron anodes are in service all across the United States. Since they are quite stable and have a long life they are usable in many different conditions.

Most are installed in deep ground beds that are commonly known for their occurrence of natural groundwater. Almost all of these installations are in conjunction with a carbonaceous backfill to ensure that good surface contact between the anode and the surrounding earth is achieved; however there are select instances with the correct soil composition where HSCI anodes may be installed without a coke backfill.

Deep groundbeds with multiple layers of groundwater are especially suited to BADGERCAST anodes where anodes can be staged in the water layers.

In larger than standard sizes (available upon request), BADGERCAST anodes do exceptionally well in seawater environments as well.

Installation Environment	Current Density (Amps/SF)	Consumption Rate (lb/Amp/Year)
Fresh Water or Bare Soil	0.25 - 0.5	0.25 - 0.45
Sea Water	0.9	0.75 - 1.1
Carbonaceous Backfill	0.7 - 1.0	0.15 - 0.30

CONTACT INFO:

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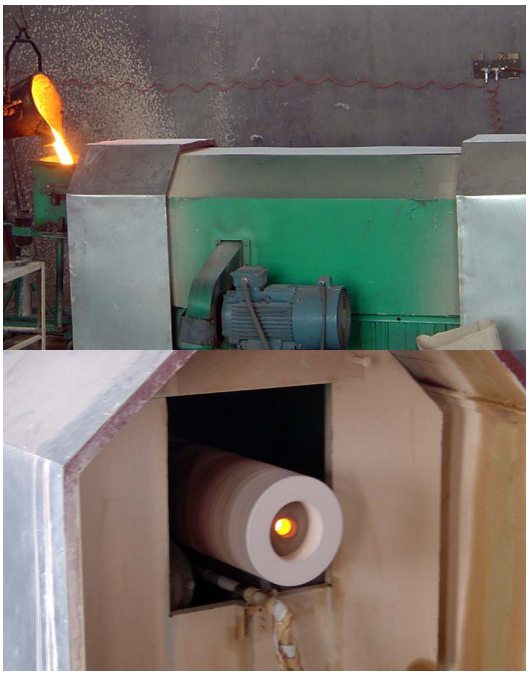
MANUFACTURING PROCESS:



High Silicon Cast Iron anodes were first used in Cathodic Protection in the mid 1950's. This generation of anode performed well in a fresh water environment, but extensive pitting corrosion appeared prematurely in sea water applications or generally in water containing chloride ions. To combat this early failure, the alloy was revised in 1959 to include elevated levels of chromium for increased performance in water rich with chloride ions. This increased the life and slowed weight loss considerably while not affecting the discharge rate.

The long life of BADGERCAST HSCI anodes is due in part to the oxidation that occurs on these anodes. A film of silicon dioxide forms on the exterior of the anode. This film slows the rate of material loss, but it also is porous and semi-conductive. Accordingly, these anodes have a slower degradation rate, and the discharge rate can be held stable over the life of the anode without a significant change in resistance.

By using a centrifugal casting process, BADGERCAST Tubular anodes are even more efficient than traditional sand or chill cast tubular anodes at maintaining low resistance from the anode to soil connection. Two very specific advantages of the centrifugally cast process is the determining factor in anode shape is measured by weight - rather than filling a mold until it overflows and hoping there are no voids or air pockets in the casting. The second primary advantage is the spinning during the cooling process moves heavier elements to the exterior of the anode. This translates to longer life and a denser grain structure.

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