BASENNOVA

PRODUCT DATA SHEET

Prepackaged High-Silicon Cast Iron Anode

Prepackaged high-silicon cast iron (HSCI) anodes serve as the critical auxiliary anodes within Impressed Current Cathodic Protection (ICCP) systems. They utilize a discharge core made of high-silicon cast iron rods or tubes containing approximately 14%–17% silicon. Connected to the positive terminal of a power source via a lead cable and multi-layer sealed joint, these anodes release electrons through electrolytic reactions at their surface, polarizing protected steel structures—such as buried pipelines and storage tank bottoms—to prevent corrosion. The core is factory-centered within a steel casing, surrounded by compacted petroleum coke backfill, and equipped with a vent pipe. Supplied as ready-to-install pre-assembled units ("prepackaged in cans/tubes"), they are hoisted into position onsite and connected to a potentiostat/rectifier to form either shallow-bed or deep-well anode grounds. This robust solution is widely deployed in scenarios demanding long-term, stable current output, including long-distance oil/gas pipelines, municipal networks, large-scale storage tank farms, stations, and port engineering projects.

KEY FEATURES

1.Rapid Installation & Deployment Efficiency
2.Lower & More Stable Groundbed Resistance
3.Extended Anode Service Life
4.Integrated Vent Pipe Eliminates "Gas Blockage" Risks
5.Ideal for Deep-Well Installations & High-Resistivity Soils

APPLICATIONS

1.Buried Long-Distance / Municipal Gas Pipelines
2.Storage Tank Bottoms (AGST / UST)
3.High Soil Resistivity Areas
4.Space-Constrained Sites

PRODUCT SPECIFICATIONS

Enclosure: Galvanized carbon steel threaded pipe
Core:high-silicon cast iron anode
Coke Backfill: Calcined petroleum coke
Chemical Composition: Si:14.25-15.25%, Mn:0.5-1.5,C: 0.8-1.4%, Cr:4-5,Fe: remainder
Current Density:10-20 A/m²
Consumption Rate:0.1- 0.5 kg/A·a
Cable:HMWPE / PVDF insulation;Conductor Cross-Section: 10 mm² / 16 mm² / 25 mm²
Service Life:≥20years
Anode Rod Diameter:Φ50-100mm
Anode Rod Length: 1000-1500mm
Canister Outer Diameter:Φ150-200mm
Canister Overall Length:1200-1800mm

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