

ICE Pre-packaged Zinc Anodes

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Zinc Sacrificial Anodes for Cathodic Protection of Buried Structures

1. Chemical analysis:

Anodes shall conform to ASTM B 418, and shall be a pre-packaged zinc alloy ingot of the following chemical composition:

ASTM-B-418 TYPE II (Soil resistivity <1000ohm-cm)

Fe: 0.0014% Max.

Pb: 0.003% Max.

Cu: 0.002% Max.

Al: 0.005% Max.

Cd: 0.003% Max.

Zn: Remainder

2. Electrical properties:

2.1 Anode Potential: -1.10 Volts

2.2 Ampere hours / Kg: 780 (min.)

3. Physical properties:

3.1 Anode Weight:

Standard weight is 13.2 Kg from single anode; however any weight or size can be prepared upon request.

3.2 Anode Size:

Any size is available upon request; however the standard size is 35x35mm x 1500mm length

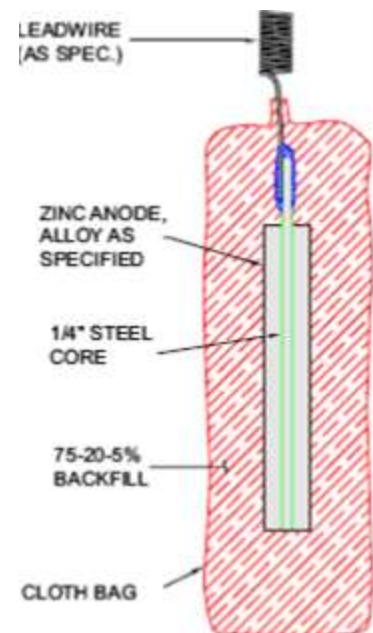
3.3 Anode Backfill:

Each zinc anode shall be prepackaged in a permeable cloth bag with a backfill of the following composition:

1. Gypsum 75%

2. Powdered Bentonite 20%

3. Anhydrous Sodium Sulfate 5%



3.4 Steel Core:

Anode shall be cast full length with a galvanized 6mm diameter steel core which shall be exposed at one end for connection of the anode lead wire.

3.5 Anode Lead Wire:

Anode lead wire shall be 4 mm² XLPE/PVC stranded copper wire with XLPE/PVC insulation.
Wire shall be attached to the steel core with a copper crimp type mechanical connection and silver solder.

4. Installation:

Zinc soil anodes can be vertically or horizontally installed in native soils and should be wetted before burial.

The anode cable can either be connected directly to the structure or through a cathodic protection test station.

Typical cable-to-structure connection methods include welding or mechanical attachment.

5. Limitations:

Zinc is not recommended in environments where the pH is over 8, or where the temperature of the electrolyte is over 120 degrees F(50° C).

6. Other zinc uses:

Zinc anodes are popularly used as grounding cells and in low resistance soils where driving potential isn't a major factor in a system design.