

STELTH®

Reference Electrodes

~ Covers everything from water tanks to AC mitigation monitoring ~

Moisture Retention Membrane MRM™

The Moisture Retention Membrane traps moisture and the internal chemistry inside the cell. This is critical in dry soil conditions. Also, the MRM prevents contaminated ground water from entering the reference electrode.

Hydrogen Sulfide and Chloride Ion Trap (Integral to Electrolyte)

Second, we employ a chloride ion trapping system that removes chloride ions that penetrate the CuSO₄ chemistry of the Stelth Reference Electrode before these ions can cause damage.

Chloride levels of only 200 parts per million will alter the chemistry of a Cu-CuSO₄ reference cell, causing a complete breakdown, resulting in a loss of stability and finally a total shut down.

100% Testing of Each Stelth Reference Electrode

Each cell is individually calibrated against a calomel reference under field conditions. They are then tested for internal resistance, continuity, IR Drop, sensitivity, stability, and finally serialized. "Certification Certificates" are provided for each cell to the end user. This calibration method is impossible to do with the old-fashioned plaster backfilled reference electrodes.

The Stelth® Reference Electrodes Can Now Be FROZEN

With the development of the Moisture Retention Membrane MRM™, the Stelth reference electrodes can now be used in frozen environments without concern of damaging the cell. Through extensive testing with hundreds of cells in Russia, Sweden, and Alaska, the MRM™ has proven to eliminate failures from freezing.

Chloride Ion Trap (Membrane Impregnated)

First, we impregnated a trapping material into the ceramic sensing tube that traps chloride ions before they reach the chemistry of the Stelth Reference Electrode.

A Major Breakthrough – The Hydro-Carbon Proof Stelth That Can Be Used In All Environments

Our BRAND NEW Stelth® HCP™ Hydrocarbon Proof™ reference electrode has just completed extensive field testing and will be available this fall. If you have facilities contaminated by gasoline, crude oil, brake fluid, transmission fluid, et cetera and are unable to get a reference cell reading, the Stelth® HCP™ stationary or portable reference electrode will solve your problem.



The Stelth 7 IR-Free Cell

- The Stelth 7 IR Free and Stelth 7 IR Free Rocket reference electrodes were developed to take IR-Free on-potential and off-potential readings of a structure without having to shut down or to turn off any interference systems such as your own system rectifier, other rectifiers in the area, electric trains and subways, electrical transmission lines, etcetera, while reading only the single worst potential that exists on that structure.
- The Stelth 7 IR Free and Stelth 7 IR Free Rocket reference electrodes have a minimum design life of 30 years and an indefinite shelf life.
- The Stelth 7 IR Free and Stelth 7 IR Free Rocket reference electrodes will maintain a stability of 5 millivolts with 20 mega ohms impedance over 30 years.
- The Stelth 7 IR Free and Stelth 7 IR Free Rocket reference electrodes will operate in all ranges of soil and water conditions, from desert dry soils to flood zones, swamps, sea and fresh water environments.
- Eliminates expensive interrupters. Eliminates the tedious procedure of synchronizing a series of interrupters.
- Allows you to take off-potential readings on rectifiers that have high amperage outputs which are beyond the handling capacity of the interrupters on the market today.
- This technology easily allows any remote monitoring and control system (process control system) to automate the IR Free on-potential and off-potential readings of a structure.
- On-potential and off-potential measurements can now be taken with a total disregard for any and all outside influences, such as your own rectifier, neighboring rectifiers, anode beds, electric transmission lines, trains and subways, steel in concrete, etcetera.
- Now, with the Stelth 7 and the Bullet® Box IR Free interrupter you can read the current required to protect the holiday with the worst potential on your structure in the area being monitored.
- Can be reused and taken out of service as many times as desired.
- Shipping weight is only 3 pounds.

About **BORIN Manufacturing**

It is no surprise that **BORIN Manufacturing**, a long-time leader in the cathodic protection industry, is at the forefront of reference electrode technology. **BORIN** continues to be the largest and most innovative manufacturer of reference electrodes in the world with Stelth® standard and IR-free coupon electrodes, along with their full line of Bullet Box® CP test stations and line markers. **BORIN** expects their new Stelth HCP™ "miracle" line of reference electrodes to gain a solid foothold on the reference electrode market.

In **BORIN's** more than 38 years in this industry, they've sold more than 200,000 Remote Monitoring Units worldwide. Their **Comanche®** RMU is the most sophisticated unit on the market, and its capacity ranges from 1000s of channels – for complex applications like airports – to 1 single 1-task channel.



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BORIN's new
Stelth 7 using
the HCP™ chemistry