

AC-10 Portable Current Density Coupon

Simple to Use | Durable | AC Current Density Readings

Induced AC

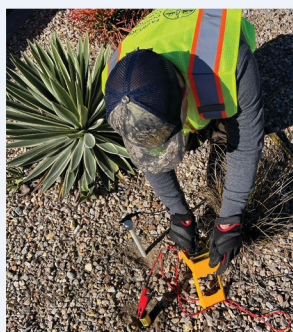
Induced AC on pipelines is a potential shock hazard and a source of corrosion damage. The electromagnetic fields associated with high-power AC transmission lines can cause unwanted voltage to 'appear' on a pipeline or structure close to energized power lines.

Monitoring Induced AC

Monitoring current density (in addition to AC voltages) is a key factor in assessing the AC current-related corrosion risk. A simple and effective method of determining AC current density is to install permanent steel coupons along the pipeline, where current density readings are taken through a current measurement shunt or meter. Yet, permanent steel coupons can be costly when considering materials, planning, permitting, mobilization, equipment and labor.

A New Solution

The Farwest AC-10 is an efficient way to measure AC current density, on demand, during a normal pipeline corrosion survey. Similar to a soil pin, the AC-10 is driven into the soil and functions like a permanent AC current density coupon. The portability and simplicity allow CP technicians to measure AC current density along a pipeline where permanent coupons do not exist.



Advantages & Features

- Simple to use
- Obtain AC current density readings within seconds
- Durable steel construction
- Multiple cable connection options
- Replaceable 10cm² conical tip for soil contact
- Cost Effective

Operation

- The AC-10 conical tip must be in good contact with the soil to obtain an accurate measurement
- The coupon is provided with a hardened-steel driving pin for creating a "pilot hole" in hard soil
- Current density measurement is taken via a digital multimeter (DMM) and wire connection to the AC-10 coupon and the pipeline
- The conversion from AC milliamps (mA) to AC Amperes/Meter² is a direct numeric conversion

Find more information about the
Farwest AC-10 Portable Current Density Coupon
at FarwestCorrosion.com or call Farwest and order yours today!



**FARWEST CORROSION
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AC-10 Portable Current Density Coupon

ORDERING THE AC-10 PORTABLE CURRENT DENSITY COUPON

Part Number	04-32150
Equipment Provided	<ul style="list-style-type: none">• 1 - AC-10 drivable coupon with conical tip with conical tip and cable connection points• 1 - Spare 10cm² conical tip• Hardened steel drive-pin
Warranty	1-year against defects in materials and workmanship
Instructions	Included



Induced AC Current Background

Concerns with induced AC on metallic structures

- Induced voltages can present a shock hazard to technicians who physically touch a structure (pipeline) or other metallic device (including test lead wires) in contact with the structure when induced AC is present
- AC is known to be the direct cause of soil-side corrosion on buried and submerged structures, similar to DC corrosion

AC current can cause corrosion on cathodically protected steel structures. The corrosion that can occur is not necessarily proportional to the induced voltage. Knowing the magnitude of the induced AC current density is key in evaluating the probability of induced AC corrosion.

AC corrosion is similar to DC corrosion in that the AC discharges at the coating flaws (holidays). The better the coating yields smaller areas of bare metal in contact with the earth, which results in higher current densities per unit area of the steel surface.

AMPP (formerly NACE International) publication 35110 indicates the effects of AC current density levels on the corrosion rates of buried steel surfaces

- Less than 20 A/m² = No induced AC corrosion issues
- Greater than 20 A/m² but less than 100 A/m² = Unpredictable corrosion influenced by many environmental factors
- Greater than 100 A/m² = Likely to occur on the structure

Reducing the AC voltage potential to 15 volts or lower, the safety recommendation by AMPP, is not necessarily sufficient to mitigate AC corrosion on the structure. That is why it is important to determine the AC current density. The Farwest AC-10 Portable Current Density Coupon can provide this information quickly and efficiently.

About Farwest Corrosion Control

Farwest Corrosion Control is an industry pioneer and leader in comprehensive cathodic protection and corrosion control products, services, and solutions to protect critical infrastructure in the gas, oil, water, wastewater, power, marine and construction industries. Services include product distribution and fabrication, turn-key system installation, engineering design, and technical field services. With the largest inventory nationwide, Farwest can provide same-day shipping and one-to-three-day delivery to most areas in the US.

Founded in 1956, the firm is a Minority Business Enterprise headquartered in Downey, CA. Farwest has seven regional operations, over 170 employees nationwide and is known for its outstanding reputation, quality work, technical expertise and customer trust.

Secure AC Readings in Seconds.

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