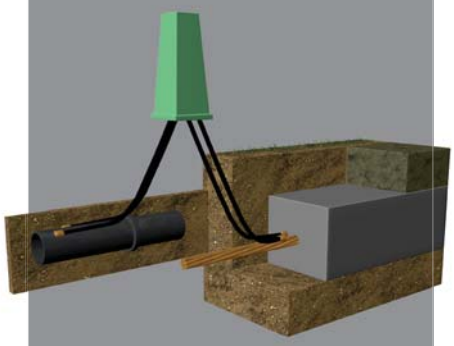
- Reduces Electrode Corrosion
- Extended Electrode Life
- Low Lifecycle Cost



AC Mitigation

Outstanding electrical performance

Land management regulatory bodies are requiring utility and transportation corridors to be shared by a number of corridor services. Potent electromagnetic fields in the utility corridors can cause serious corrosion and safety consequences where electrical transmission lines are co-located with metal infrastructure like pipelines.

SAE AC Mitigation will:

- Minimize the risk for personnel injury due to electrical shock.
- Prevent accelerated pipeline corrosion processes (due to high induced voltages on the pipeline produced by co-located electrical transmission towers).
- Decrease the risk of catastrophic explosion or fire due to lightning strikes.

Features

Some of the unique characteristics of SAE AC Mitigation (ACM) solutions are:

- Large diameter electrodes consisting of a copper core embedded in a solid Conducrete® backfill.
- The large surface area of SAE electrodes easily handle the dissipation of large amounts of induced current, whether from electrical transmission lines or from lightning strikes.
- The AC current is dissipated electronically through the solid Conducrete® backfill to the soil, giving ACM electrodes extremely long lifetimes.
- Installed electrodes are environmentally friendly with very low corrosion rates.

Benefits

- Excellent electrical performance with low impedance, high capacitance electrodes that feature large surface areas and cross-sections.
- Large cross-section efficiently dissipates high surge currents.
- Robust electrode design resists damage from heavy service vehicles on the right-of-way.
- The SAE electrode design permits fewer or shorter electrode runs compared to traditional Zinc Ribbon systems.
- SAE ACM Systems provide extended longevity of up to 20x that of traditional systems.

Technology

- Engineered and constructed using Conducrete®, a hygroscopic carbonaceous material that "sets up" to form solid, robust electrodes resistant to damage.
- ACM electrodes are water impermeable, significantly reducing deterioration and corrosion of the copper core.
- ACM electrodes maintain their excellent electrical performance characteristics over extended lifetimes that is up to 20x greater than typical ACM solutions.
- ACM electrodes are pH neutral and chemically stable for low environmental impact.
- Systems are engineered to meet or exceed NEC and CEC requirements.

Financials

Lower total cost of ownership improves bottom-line financial results with cumulative savings from:

- Better personnel safety and lower injury liability risks.
- Reduced risk and potential liability costs of a catastrophic pipeline failure due to lightning or fault current.
- Prolonged pipeline and infrastructure service life by reducing the destructive effects of corrosion due to induced AC currents.
- Lower maintenance, operational and replacement costs due to extended longevity of ACM electrodes.