

## SAE Inc.

### It can be done.

#### Why Choose SAE

- Experts at what we do since 1990.
- Improve financial results and ROI.
- Increase infrastructure RELIABILITY and performance.
- Lower risk of catastrophic failures and service outages.
- Reduce legal liability of personnel safety and environmental damage.

SAE is a leading best-in-class manufacturer that specializes in Electrical Grounding, AC Mitigation, and Cathodic Protection. SAE's innovative products are currently used to prevent the theft and corrosion of buried metallic electrodes.

#### ELECTRICAL PROTECTION & GROUNDING... WHAT WE OFFER

SAE offers the engineering, product and project expertise to provide effective, long-life electrical protection systems that incorporate:

- Over 2 decades of engineering experience and building electrical protection and grounding systems that work.
- Innovative design techniques and product technologies combining the best of leading-edge academic knowledge with extensive field experience.
- Comprehensive solutions that combine high performance external electrodes with surge protection and effective inside grounding concepts.
- SAE outside ground electrodes are built with a copper core embedded in a Conducrete® layer, to maximize the surface area and the ability to safely and effectively dissipate large amounts of energy without damage (lightning routinely generates energy levels > 1 Gigawatt).



- Outside electrodes that feature low impedance, low resistance (R) value, high capacitance operational characteristics.
- Outside electrodes designed for extremely long lifetimes of 25+ years and maintenance free operation, and are inherently resistant to theft.
- Inside grounding systems designed using single-point concepts and techniques that eliminate damaging ground loops, reduce EMF radiation, protect against power surges from whatever source, and integrate efficiently with outside electrodes.
- Inside grounding systems that incorporate properly grounded surge protection devices (SPDs) on all metallic conductors that enter the building.
- An engineering design process that integrates site geography, soil characteristics and soil resistivity data with advanced computer modeling tools to ensure that client electrical protection and ambient noise mitigation specifications are met or exceeded.

## PRODUCTS

**Conducrete®** is a conductive cementitious and carbonaceous material that dramatically enhances the performance, reliability and longevity of grounding systems and cathodic protection systems. Conducrete® is sold in powder form. It is easy to install dry directly from the bag or mixed with water in a slurry format and pumped into the trench or hole.

**ConduFlow™** is a dust free, conductive carbonaceous pourable backfill material that is installed as a liquid and cures as a solid. ConduFlow™ eliminates health and safety concerns associated with current powdered backfill materials and provides corrosion and theft protection. With an expected in-service time that is up to 20x the industry standard, electrode corrosion is virtually eliminated.

**ConduForm™** is a dust free, conductive carbonaceous backfill material that is installed as a liquid and cures as a solid. ConduForm™ is designed for applications where overburden is shallow or non-existent. It provides superior corrosion and theft protection. It can be poured on exposed rock surfaces to protect conductors and improve grounding where trenching is not possible. With an expected in-service lifetime that is up to 20x the industry standard, electrode corrosion is virtually eliminated.

**ConduDisc®** is a conductive carbonaceous polymeric grounding plate that dramatically enhances the performance, reliability and longevity of utility pole grounding systems. The ConduDisc® ground plate virtually eliminates electrode corrosion and lasts up to 60 years -- the life of a utility pole.

## SERVICES

SAE offers full turnkey EFI (Engineer, Furnish and Install) grounding services. Our services include the following:

- Data Acquisition & Analysis
- Engineering & Design
- Computer Modeling Tools
- Installation & Construction
- Project Management