

PROFILE

Established in 1989, Electro Corr-Damp Pvt. Ltd. (ECD) is a premier provider of cathodic protection technologies, offering a wide spectrum of comprehensive design and engineering services, as well as complete cathodic protection solutions across India. We deliver a full array of services, including material supply, installation, testing, commissioning, monitoring, maintenance, post-commissioning surveys, and total project management.

ECD provides advanced corrosion control solutions for oil and gas production and transportation systems throughout India. Our corrosion management system integrates cutting-edge laboratory techniques and best-in-class field applications to help our valued customers protect their assets and the environment.

We support your goals of asset preservation and environmental protection. Our relentless pursuit of new technologies and techniques is grounded in the understanding that corrosion prevention is integral to integrity management. This focus improves the reliability and safety of your operations, reduces costs, and delivers a competitive advantage in a rapidly evolving industry. ECD is forward-thinking, always advancing, and constantly evolving. Our extensive resources and state-of-the-art research, development, and testing capabilities ensure optimal results.

We believe the best solutions for corrosion problems come from a team-oriented approach, where our experienced personnel, innovative and practical technology, unwavering service commitment, and clear communication work seamlessly together to boost your performance and profitability.

CATHODIC PROTECTION SYSTEM

The cathodic protection system is a key component in effective and efficient corrosion prevention technology.

SPECTRUM OF SERVICES

- Selection of CP system materials and equipment
- CP system engineering design and execution
- Impressed current/sacrificial cathodic protection systems
- Inspection and testing of CP systems on-site
- CP system management and in-service inspections
- Supply of CP materials
- Coating surveys (CIPL, CAT, DCVG/ACVG, Soil resistivity)
- AC-DC interference surveys and mitigation
- Internal corrosion monitoring
- External Corrosion Direct Assessment (ECDA) and Internal Corrosion Direct Assessment (ICDA)

VARIOUS APPLICATION

- Cross-country pipelines
- Plant pipelines
- Mounded bullets
- Underground vessels
- Above-ground tanks of various types
- Jetties & Offshore structure
- Sub sea pipelines
- Reinforced concrete structures

CORROSION PROTECTION

- Design & Detail Engineering
- Monitoring & Maintenance of CP Systems
- Supply of CP Materials
- Installation of SACP & ICCP System
- Testing & Commissioning of Cathodic protection System.

Corrosion leads to the deterioration of material properties due to environmental reactions, such as metals losing electrons when exposed to water and oxygen. The economic impact of corrosion is significant, accounting for at least 2-4% of the gross national product, with 25% of this loss preventable through proper corrosion-control technology

KEY PROTECTION MEASURES

- Introducing electrical current to buried pipes to minimize metal loss.
- Protecting above-ground storage tanks from corrosion to prevent leaks.
- Employing advanced coatings and cathodic protection systems for mounded bullets.
- Implementing preventive maintenance and scheduled inspections to detect and mitigate corrosion damage.
- Utilizing corrosion monitoring programs to optimize maintenance intervals.



ECD's leadership in corrosion engineering is unmatched. Our engineering team develops cost-effective solutions tailored to specific project requirements, offering services that may include:

PRE - INSTALLATION TESTING & DIAGNOSTIC ENGINEERING

- Soil surveys and corrosion diagnostics for underground structures
- Material analysis and equipment evaluation
- Cathodic protection system audits
- Preliminary corrosion mitigation measures
- Preliminary CP system design
- Corrosion analysis for process equipment, vessels and tanks
- AC mitigation studies and stray current investigations

DESIGN

- SACP & ICCP cathodic protection systems
- AC-DC current mitigation systems
- Corrosion monitoring solutions

INSTALLATION

- Sacrificial Anode Cathodic Protection (SACP) systems
- Impressed current cathodic protection (PCP) systems
- AC-DC mitigation solutions
- Internal corrosion monitoring systems

POST-INSTALLATION ENGINEERING

- Testing and commissioning of CP System
- Troubleshooting
- As-built drawings and documentation
- Ongoing monitoring and maintenance
- CP system health checks
- Panel meter calibration
- Coating repair

PIPELINE INTEGRITY MANAGEMENT

ECD helps to develop the pipeline integrity management regulations and provides consulting services e.g.

- Close Interval Potential Survey (CIPL)
- Current Attenuation Test (CAT)
- Direct Current Voltage Gradient Survey (DCVG)
- Alternating Current Voltage Gradient Survey (ACVG)
- Soil resistivity survey and analysis
- AC-DC interference survey
- External & Internal Corrosion Direct Assessment (ECDA & ICDA)
- Long range ultra sonic testing (LRUT)

SUPPLY & IN-HOUSE MANUFACTURING

Modern day Cathodic Protection calls for a wide range of Cathodic Protection Material & Equipment.

ECD assists you as a one point solution to all your cathodic protection equipment & materials needs.

ECD can help you to source / supply a wide range of cathodic protection equipment & material as Under

CATHODIC PROTECTION TRANSFORMER RECTIFIER UNIT

- High quality automatic and manual transformer rectifier unit (TRUs) for cathodic protection application to buried structures, storage tanks at storage terminals / refineries and cross country pipelines.
- TRUs are rugged in construction, designed to withstand harsh condition in which they operate.

AUTHORISED DISTRIBUTOR FOR





RANGE AND TYPES OF TR UNITS

- **AC Operated Transformer Rectifier Unit**
Input Supply : Single Phase Or Three Phase
Output Supply : Upto 100 V DC And 1000 Amps DC
- **DC Operated CPPSM Unit**
Input Supply : Up To 18V DC
Output Supply : Up To 50V DC & 50Amps DC
- **AC/ DC Operated Rectifier Unit**
Input Supply : Single Phase / Three Phase AC Supply Or Upto 48V DC Supply
Output Supply : Upto 50V DC & 50Amps DC
- **Salient features of cathodic protection TRU**
Air Cool and Oil Cooled Versions
Enclosures Suitable For Ingress Protection - IP3, IP41, IP42, IP55 & IP65
With Different Types Of Controls -
Current Interrupter With / Without GPS Interface
Constant Voltage Constant Current
Auto Reference & Selection Control
Remote Monitoring Through GSM Data Logger

ANODES

- **ICCP Anodes**
- **High Silicon Cast Iron Anodes**
- **Mixed Metal Oxide Anode**
Strip anodes, rod anodes, tubular anodes, ribbon anodes & mesh anodes of different dimensions & rating to suit your requirements.
- **Sacrificial Anodes**
Low potential & high potential magnesium alloy anode
Zinc anodes for application in marine environments
- **Zinc Ribbon Anodes**

CABLE & WIRES

- Single & multi core, PVC / XLPE / PVS, HMWPE, kynar, FRLS cable for DC applications
- Cooper & aluminum conduction steel / GI wire factory fitted tail cable of required length for soil application
- Portable & permanent ag / agcl RE & zinc RE for soil & water application

REFERENCE ELECTRODES

- Portable & permanent cu / cuso4 RE along with factory fitted tail cable of required length for soil application
- Portable & permanent ag / agcl re & zinc RE for soil & water application

JUNCTION BOXES

- Various junction boxes like anode junction boxes, cathode junction boxes, Power Distribution Boards 7 test station used in CP system
- IP xx rating & suitable for gas group IIA / B classifications
- With internal shunts, resistors custom designed to the requirements

SPECIAL EQUIPMENT LIKE

- Surge Diverters
- Polarization / Kirk Cells
- Corrosion Coupons
- ER Probe
- Solid State Decoupler Device

ANODE BACKFILL MATERIALS

- Backfills with high carbon content and low contact resistance
- Backfill materials for ICCP anodes (Petroleum Coke Breeze) & sacrificial anodes (Gypsum, Bentonite & Sodium Sulphate)
- Backfill material supplied with canisters & cotton bags

ICS GROUP OF COMPANIES



INTERNATIONAL CERTIFICATION SERVICES

ICS was established as an independent certification & verification body with its main objective to safeguard life, property & environment through quality assurance & total quality management system.
Web : www.icspl.org



ICS TECHNOLOGIES

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Offers its services in testing, calibration, third party inspection, survey for offshore activities & training to satisfy the needs of INDIAN industry.
Web : www.icstechnologies.org



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