ETES Cathodic Protection Rectifiers.

Cathodic protection rectifiers are the external power source used in impressed current Cathodic protection systems (ICCP) to convert alternating current (AC) to direct current (DC). In ICCP systems, current is discharged off of the anode and onto the structure to prevent corrosion. **ETES** offers Cathodic protection rectifiers (CP rectifiers) in every standard configuration, including air-cooled, oil cooled and explosion proof. The rectifiers are available in almost any voltage and current output.

Applications

CPR are used to prevent submerged (Soil or water) metallic structures from corrosion. All submerged Pipelines (Oil, water etc.), concrete structure of bridges/ buildings / sea ports etc. can be protected from corrosion by doing CP.

CPR impresses DC Currents in to the Carbon-steel/steel structure to be protected in opposite direction to the galvanic corrosion currents & protects the structure from corrosion.

To obtain the optimum level of protection under varying conditions, it is necessary to vary the impressed current continuously so as to maintain a constant level of protective potential at the structure. This continuous monitoring and control can be achieved by providing an automatic control for the cathodic protection system.

ETES offers several types of CPR which are designed, manufactured and tested under strict quality assurance system to achieve highest quality standards.

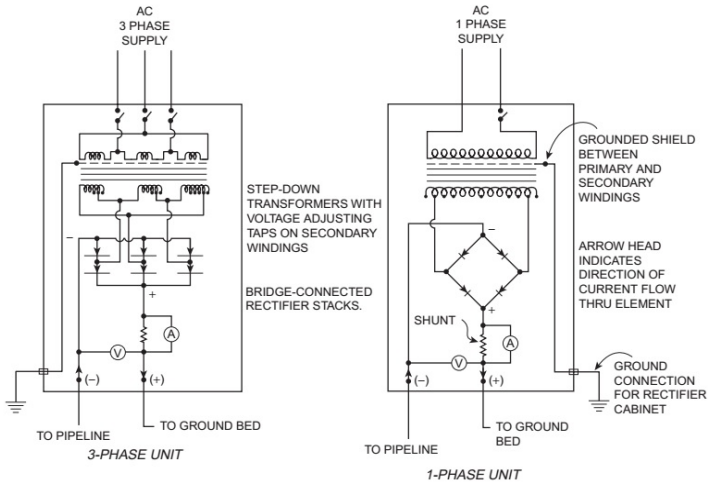
Transformer

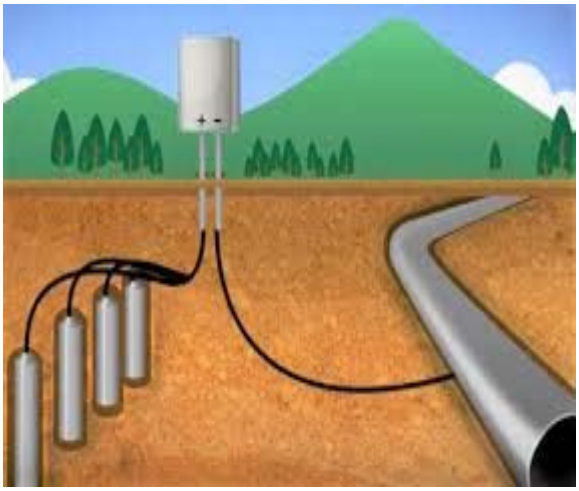
All the Transformers used in CPR are designed to give high efficiency with low loss. The coils are wound with high conductivity, annealed, insulated electrolytic copper and core material is high permeability, low loss CRGO/CRNGO. The insulation material used is of high standard Class F. Designed and tested as per IEC 76/IS 2026 standards.

Rectifier

Rectifiers are based on internal quality standards and our own make Diodes / Silicon Controlled Rectifiers. Rectifier circuits have different topology depending upon the load requirements.

Designed and tested as per IEC146/IS 3136 standards.





Modes of Operation

Auto Reference Mode

The operation of the CPR in this mode will be fully Automatic and will be controlled by reference electrode feedback. The unit will automatically maintain reference voltage or P.S.P. within ± 15 mv of the set value under all conditions.

Manual Mode

The DC output voltage of CPR will be controlled in 24 symmetrical steps by means of a separate Autotransformer with Coarse & Fine tapping.

CVCC Mode

The unit will be operated in Constant Voltage or Constant Current mode.

ETES rectifiers come standard with features that are only available as options on some competing rectifiers. Every part of a **ETES** rectifier is covered by our One-year guarantee, and the transformer comes with an industry leading One-year warranty. **ETES** Cathodic Protection rectifiers can include:

Efficiency Filter:

Increases the efficiency of single-phase rectifiers by converting the AC ripple to DC power, using less AC.

Cross Arm Mounting Bracket:

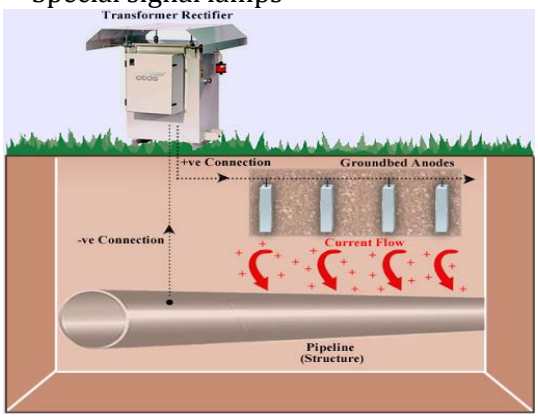
Used for extra rigidity on air-cooled CP rectifier units or for pole mounting oil-cooled rectifiers

Pedestal Mounting:

Standard on oil-cooled rectifiers, but may be ordered as an option on air-cooled models

Other Available CP Rectifier Options

Non-standard steel, aluminum or stainless enclosure
Enamel (specify color)
Digital meters
Sunshade
Non-standard knockouts
Hour meters
Additional shunts or terminals
Galvanized or powder coating
Hot-dipped galvanized case
Multi-circuit output
Cooling radiator
Interrupter circuit
Viewing windows
Special signal lamps



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EVENCE TECHNOLOGY & ENGINEERING SERVICES.