Substations and lines

Construction and refurbishment of HV/MV facilities

Construction of HV/MV facilities
- Execution of earthmoving
- Execution of civil works
- Electromechanical mounting
- Assembly of control, protection and other auxiliary implementations
- Commissioning
- Turnkey construction of substations of different typologies (conventional, mixed, GIS) and voltage levels

Refurbishment of HV/MV facilities
- Reform, expansión and improvement of substations
- Switchgear replacement
- Expansion of positions
- Renewals of control and protection systems
- Commissioning
- Power plant automation projects
- Electrical and automation engineering
- Construction of control and protection cabinets
- Complete assembly of electrical system
- Commissioning tests
- SCADA programming for control center
Comprehensive maintenance of HV/MV facilities

Service offer

- Operación local de la red.
- Reconocimientos reglamentarios, mediciones red de tierras, ensayo de tensiones de paso y contacto.
- Mantenimiento preventivo y predictivo de fuentes seguras.
- Termografías.
- Medidas de carga y calidad de onda.
- Diagnosis de cables.
- Servicio de averías 24h 365días/año.
- Mantenimiento especializado de Transformadores de Potencia.
- Mantenimiento preventivo, predictivo y correctivo de todo tipo de aparamenta y tecnología (Interruptores, Seccionadores, Cabinas, GIS, TT, TI, etc).
- Mantenimiento especializado en protecciones y telecontrol.

Specialized maintenance of HV equipment

Transformadores

- Preventive maintenance of on-load regulator
- Predictive maintenance: electrical, fluid and thermography diagnostic tests
- 24/7 Corrective maintenance: Repair of CTC controls, oil leaks, cooling system failures, un-plugs "on site", machine and environment adaptations.

Switches, Disconnectors, TTs, TIs, GIS and cells

- Preventive Maintenance.
- Predictive Maintenance.
- Measurement of switch actuation times
- Resistance measurement of static and dynamic contacts, switches and disconnectors
- Capacity Measurement and Tg (d)
- Insulation measurement
- SF6 quality analysis
- Analysis of dielectric oils
- Thermographs
- Corrective Maintenance 24/7: adjustment and/or replacement of elements

Maintenance and commissioning of protections, control and telecontrol

Commissioning of protections and telecontrol

- Implementation of electrical substations, verification of the correct functionality of the engineering project, as well as the parameterization and loading of adjustments of protective elements and telecontrol
- Delivery of protocols for commissioning and protective testing of property
- Laboratory availability, to support commissioning

Specialized maintenance in protections and telecontrol

- Ability to test equipment from any manufacturer
- Conduct of scheduled tests per customer
- Breakdown assistance service

Measurement systems

Measurement inspection (LV/HV)
Assembly and maintenance of facilities with measurement equipment (LV/HV)

- Telemetry meters and concentrators
- Communication equipment
- Auxiliary equipment (TI, TT, capacitor banks)
- Network quality analysis equipment
- Photovoltaic installations
- Connection and integration tests in the system

**Grid management**

**Management of incidents and service quality in the Electrical Grid**

- Validation of incidents and verification of all documentation associated with them
- Analysis and verification of the information of incidents with economic penalty, to verify the integrity of their data (Individual Quality)
- Calculation and reporting of TIEPI and NIEPI

**Implementation and maintenance of SCADA Systems**

- Operational control centers of the Electrical Grid
  - AGC System
  - ICCP links
- Design and update of operation schemes
- Verification and telecontrol tests
- Data records
- Design and implementation of alarm management
- Elaboration of formulas for surveillance, alarms, calculation of measurements, quotas, leaks, etc.

- Energy efficiency management
- Supervision of energy installations
- Maintenance of graphical and/or alphanumeric databases