BACSOFT
MONITORING AND CONTROL OF REMOTE CATHODIC PROTECTION

THE CHALLENGE

Thousands of miles of pipes are buried underground, leaving them susceptible to the soil's corrosive effects. Without intelligent technology it is almost impossible to prevent corrosion, which eventually leads to the pipe's complete deterioration. Protecting these pipes is a priority for many utility companies. Advance warning of deterioration protects the infrastructure and prevents losses for oil gas and water distributors.
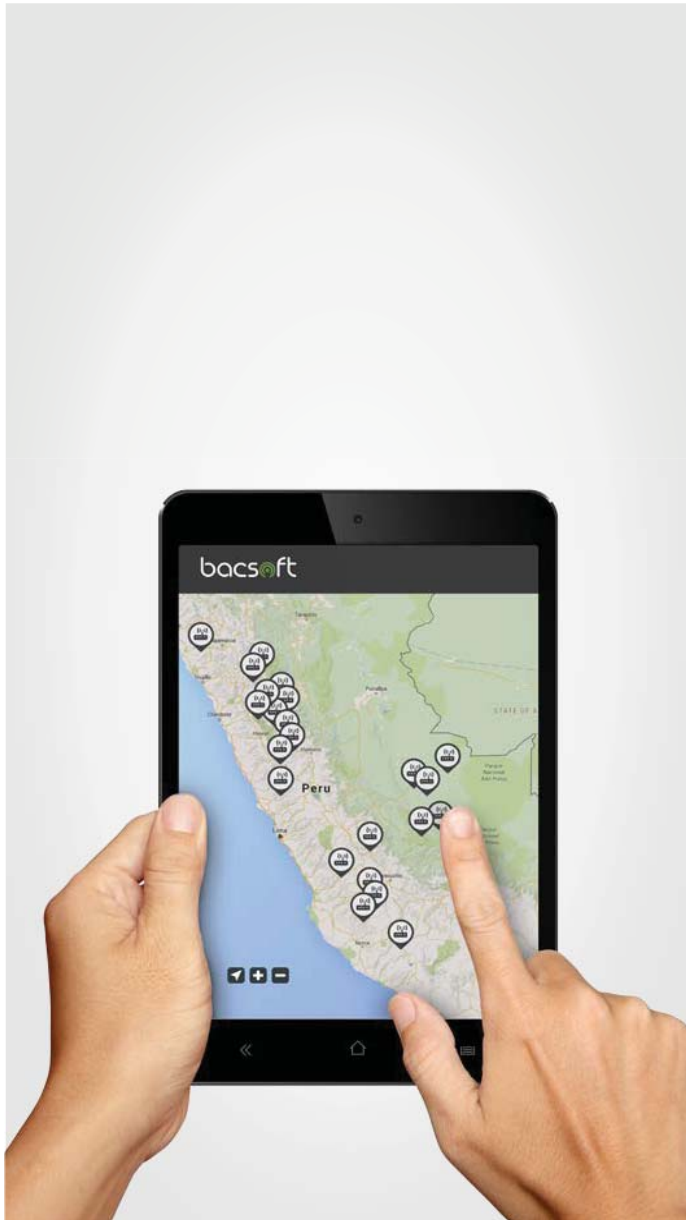
THE SOLUTION

Bacsoft's remote monitoring and control solution for cathodic protection provides engineers with full control over rectifiers deployed from hundreds of miles away. Bacsoft's Smart Controller seamlessly integrates into the rectifier cabinet and provides full visibility and configuration control via the Bacsoft HMI or a SCADA interface.

The cathodic protection solution includes:

- Real-time monitoring:
  - Output current and voltage
  - Measured potential to reference cell
  - Ambient temperature and more
  - All parameters are automatically stored to allow trend analysis

- Real-time configuration:
  - Regime of work (CC, CV, CP)
  - GPS-based Interruption, CIPS ready
  - Output current and voltage

- Real-time alerts:
  - High voltage
  - High potential
  - Low current
  - Threshold breach

- Remote closed-loop control to allow automatic adjustment of rectifier current or voltage output based on remote measurement of potential across the pipe.

SPECIFICATIONS FOR MEASURING POINTS

- Bacsoft Smart Controller: Low Energy 5-7 year battery operated. IP68 casing; Digital, Analog, Serial
- Up to 4 Analog inputs (+/- 2000 mV), 20 bits resolution. Input impedance greater than 1 G OHM
- Measurement parameters: potential to reference cell, Rectifier Vout and Iout
- GPS (synchronize to the rectifier in a different location)

SPECIFICATIONS FOR RECTIFIERS

- Bacsoft Smart Controllers connect to all types of rectifiers:
  - Legacy Rectifiers: connected to output current and output voltage for remote monitoring only
  - 2nd Generation Rectifiers: connected via serial ports by digital connection for remote monitoring and control/adjustment
- Remote closed-loop control to allow automatic adjustment of rectifier current or voltage output based on remote measurement of potential across the pipe.

WEB ACCESS

MOBILE ALERTS

ADMINISTRATION TOOL

CONTROL ROOM

Bacsoft IOT Cloud

SMART CONTROLLER

ELECTRODE

RECTIFIER

ELECTRODE

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