Rebar corrosion is one of the factors that must be considered in studies prior to the renovation of structures. Corrosion is one of the main causes of structural failure and damage in reinforced concrete objects, and it can considerably increase restoration and maintenance costs. It must therefore be monitored to forestall future damage. The Galvapulse GP500 is a device based on polarising rebars by applying a small direct current.

This equipment can measure potential, electrical resistance and the degree of corrosion. These data can then be used to estimate whether bars are currently corroding and to predict via the degree of corrosion how long remains before they fail if current temperature and humidity conditions remain unchanged.

This test must be seen as supplementary to the other tests needed to assess the real condition of a structure (bridge, building, etc), such as core sampling, analysis of drilling dust, checks on linings, carbonatation depth and subsequent laboratory testing (chemical analysis, compression strength, examinations microstructure, etc). All these tests can also be handled by Euroconsult Nuevas Tecnologías.

The equipment comprises:

- Reference electrode.
- PSION PDA.
- Current generator.