

CCTA

# Modelling the cathodic protection of facilities

Cathodic protection protects compressor plants against ground corrosion. In order to meet GRTgaz demand and make sure that the protection is efficient, CCTA called on digital simulation.



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calculations by means of cartography of the potential reached on structure surfaces and the electric currents induced in all zones of the plant. These values are necessary to assess the efficiency of cathodic protection as well as its service life.

Then, the analysis of calculation results allows the formulation of modification proposals with a view to optimising the cathodic protection recommended. The information obtained from digital simulation may also be compared to measurements on site.

In fact, the implementation of a cathodic protection is accompanied by the installation of an in situ monitoring so as to ensure the correct operation of the system at anytime.

## OUR CLIENT

**Corporate name**  
CCTA

**Activity**  
Cathodic protection of buried or submerged works, mainly piping belonging to network managers in France and abroad.

**Workforce**  
20 people

**S**tarted in 2006, the Oscar programme of GRTgaz (GDF Suez group) aims at modernising the compressor plants. Objective: to reduce the gas releases in the atmosphere, to renew the pool of compressors and to meet the needs for development of network capacities.

The programme provides for the building or renovation of eight compressor plants, whose commissioning takes place between 2008 and 2011. The machines are installed inside the buildings whereas steel pipings are buried.

*"In order to ensure the safety of these plants, GRTgaz requires that engineering studies be carried out with a digital modelling of the cathodic protection, indicates*

Philippe Le Hô, CEO of CCTA (*Contrôle chantiers et techniques anticorrosion* - Anti-corrosion techniques and worksite check), a design office specialising in anticorrosion and cathodic protection. *This is why we call on Cetim for each installation or renovation project for the plant."*

## Optimising the protection

From the basic data (nature of the cathodic protection, ground resistivity, quality of piping coating, type of anode devices, etc.), the Procor software for dimensioning and simulation of cathodic protections allows the main values required to optimise the protection system to be checked. It also allows the validation and engineering

## Cetim's strong point



The Cetim has the means and skills required to model a

cathodic protection system before its installation. Developed in collaboration with the DCNS, the DGA, the Ifremer and Total, Procor is one of the very few software able to perform this modelling.