



Vridi Energy Production Plant CIPREL IV

Buildings and Industrial installations

2011 - 2013



IVORY COAST -

Abidjan

Client

CEGELEC

Project owner

Compagnie Ivoirienne de
Production d' Electricité
(CIPREL)

Miscellaneous

Power: 111MW,
Concrete: 4500m3



Description of the project

The thermal power plant operated by the Compagnie Ivoirienne de Production d'Electricité (CIPREL) is located to the south-east of Abidjan, in the region of the Vridi Canal which links Ebrié Lagoon to the Atlantic Ocean.

CEGELEC was chosen by CIPREL for the turnkey construction of a fourth-unit extension of the existing plant, enabling the production capacity to be increased by an additional 111 MW.

Key features

- Definition of the soil investigations program
- Geological and geotechnical synthesis
- Project design and optimization
- Analysis of liquefaction risk

Description of the mission

At the request of SETEC ENERGY SOLUTIONS, which provides CEGELEC with technical assistance for aspects related to civil engineering, TERRASOL was called upon for the (G2) project geotechnical studies.

TERRASOL intervened first of all with the definition of the geotechnical campaign and a mission to follow-up this campaign in June and August 2012. The soil-testing campaign was marked by the setting up of Cross-Hole tests, the conducting of which was a major first in Ivory Coast. Analysis of the tests enabled the risk of liquefaction due to the turbine vibration phenomenon to be ruled out.

In a second phase, TERRASOL designed the foundations of the various structures (turbine, steel structure, chimney, buildings, etc) adapting the techniques used on a case-by-case basis in accordance with the loading levels and strict differential settlement criteria (shallow raft foundations, micropiles, raft foundation combined with shells executed by cutting, etc).

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