



Engineering Structures for Life



ENVIRONMENT - ENERGY

Laúca Hydropower Plant

ABOUT

The Hydropower Plant (HP) in Laúca is an enterprise of the Government of Angola, through the GAMEK office which is responsible for the exploitation of Middle Kwanza. It is located at km 307,5 of the Kwanza river, about 47 km downstream from the Capanda hydropower facility, near the town of N'Hangue Ya Pepe. Laúca means "fall" in the local dialect known as Kimbundo, in allusion to the rocky outcrop overlooking the river.

At the HP Laúca site, the Kwanza River develops in a valley surrounded by sub-vertical rock slopes, with more than 100 m of height, and with a natural drop in the stream of nearly 100 m along 2 km. The hydropower facility comprises a Roller Compacted Concrete (RCC) Dam, with a height of 132 m and a length of 1.100 m, which is located upstream of the natural drop, forming a lake with 188 km² and a volume of 5.621 m³. It consists of a hydraulic generation circuit formed by the water intake, forced tunnels, underground main plant and restitution tunnels on the right bank. The total power installed will be 2.069,5 MW, being 2.004 MW from the Main Powerhouse and 65,5 MW from the Green Plant.

The Laúca project began in 2012 and is scheduled to begin to generate electricity in 2017. The design has been developed by Intertechne Consultores, S.A. for the constructor Odebrecht Angola. Intertechne has a technical team on site, called Resident Engineering Group (REG), whose mission is to provide an interface between the construction and the design team. GER is also responsible for the monitoring and definition of technical solutions on site.

GEG is participating in this project by providing several geologists for incorporating the REG team, developing geological mapping activities and prescribing initial support actions.

FACTS

Year: 2013-2016

Client: Intertechne Consultores

Services: Consulting and on-site technical support, Geotechnical Engineering, Geotechnical site investigation plan, Geological and geotechnical characterization, Slope stabilisation, Excavations and earthworks design, Foundations design, Instrumentation & Monitoring

TEAM

Sérgio Cunha

LOCATION

Kwanza River, Angola

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