

Specialist Press Release

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Return to the Dominican Republic: Bauer Spezialtiefbau completes follow-up order on the Monte Grande dam

Dominican Republic – The Monte Grande dam in the southwest of the Dominican Republic serves as a key element of the country’s infrastructure – for controlling the Yaque del Sur River's water level, flood protection and generation of electrical energy. Tourism and using dammed water for irrigation of agricultural land also play a significant role.

Diaphragm wall as erosion protection

BAUER Fundaciones Dominicana S.R.L., the Dominican subsidiary of BAUER Spezialtiefbau GmbH, was commissioned in 2019 to construct a cut-off wall to seal off the dam base. By May 2020, Bauer constructed around 26,000 m² of cut-off wall over a length of 1,350 m, down to an average depth of 23 m and with a thickness of 800 mm underneath the dam foundations. In May 2022, Bauer returned to the Monte Grande dam for Phase II which consisted of the construction of a reinforced diaphragm wall acting as a flip lip for the dam spillway, protecting the toe of the dam from erosion.

Panels in different shapes

In total, 55 panels were installed with a thickness of 800 mm. Panel lengths varied between 2.8 m for a single-bite panel up to 7.1 m for a triple-bite panel. A BAUER polymer-based stabilizing slurry was used to assist the excavation work with two rope grabs. Depending on the requirements, different panel shapes were constructed including straight panels as well as L- and V-shaped panels. “In total, we constructed 7,828 m² of diaphragm wall with a total length of more than 320 m. The excavation depth was 24.5 m. Temporary flat steel stop-ends with installed water-bar made of rubber were used, followed by reinforcement cages of up to 15 t per panel. Highly fluid (high slump flowable) concrete was used as the filling material,” remarks Project Manager Nuno Pires.

High rock strength

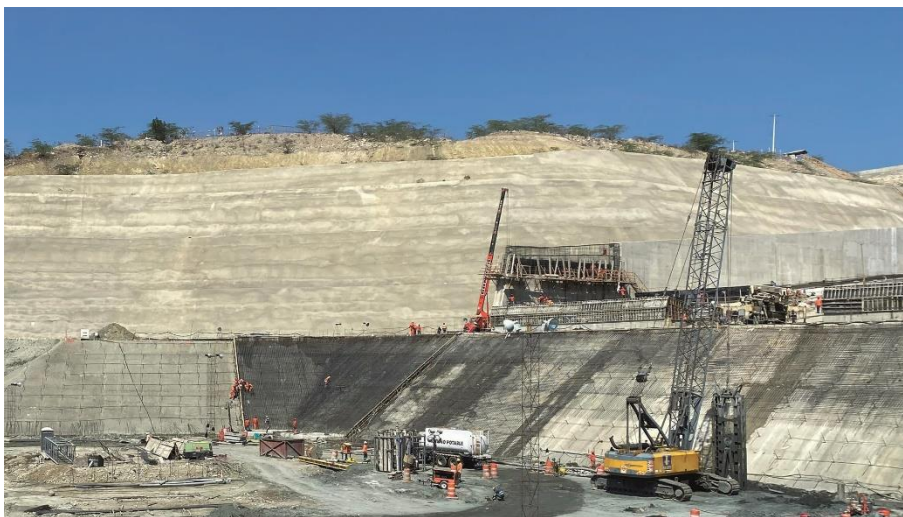
One particular challenge during this project was the excavation of the existing hard soil and rock layers. The geology encountered was very heterogeneous and the strength of rock, particularly the limestone and sandstone, was very high with values up to 45 MPa. To enable the excavation of the panels with rope grabs, pre-drilling was carried out in some cases. This made it possible to relax the strength of the rock and minimize wear and tear on the grabs as far as possible.

Project Manager Nuno Pires sums it up enthusiastically: “We are very proud of our fantastic team. The work executed by Bauer was successfully completed in March 2023.”

Photos: 2023-06_bauer-monte-grande-dam-diaphragm-wall-dominican-republic...



(1) From May 2022 to March 2023, Bauer constructed a total of 55 diaphragm wall panels.



(2) Due to the high rock strength up to 45 MPa, pre-drilling was necessary in some cases.

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About BAUER Spezialtiefbau Group

BAUER Spezialtiefbau GmbH, the original parent company of the BAUER Group, has been a major driving force in the development of specialist foundation engineering. It carries out all of the customary processes of foundation engineering, primarily for excavation pits, foundations, cut-off walls and ground improvements on a worldwide basis. In doing so, BAUER Spezialtiefbau GmbH works closely together with their over 50 subsidiaries and branches across the globe. Regional networks around the world allow for the quick and flexible application of machines, teams and expertise. Bauer Spezialtiefbau offers their customers individual, creative and economical specialist foundation engineering solutions for demanding construction projects, from planning through to execution. More at bst.bauer.de

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. The Group can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments with high synergy potential: Construction, Equipment and Resources. Bauer profits enormously from the collaboration of its three business segments, enabling the Group to position itself as an innovative, highly specialized provider of products and services for demanding projects in specialist

foundation engineering and related markets. Bauer therefore offers suitable solutions to the world's greatest challenges, such as urbanization, the growing infrastructure needs, the environment, as well as water. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2022, it employed about 12,000 people and achieved total Group revenues of EUR 1.7 billion worldwide. BAUER Aktiengesellschaft is listed in the Prime Standard of the German Stock Exchange. More information can be found at www.bauer.de. Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!