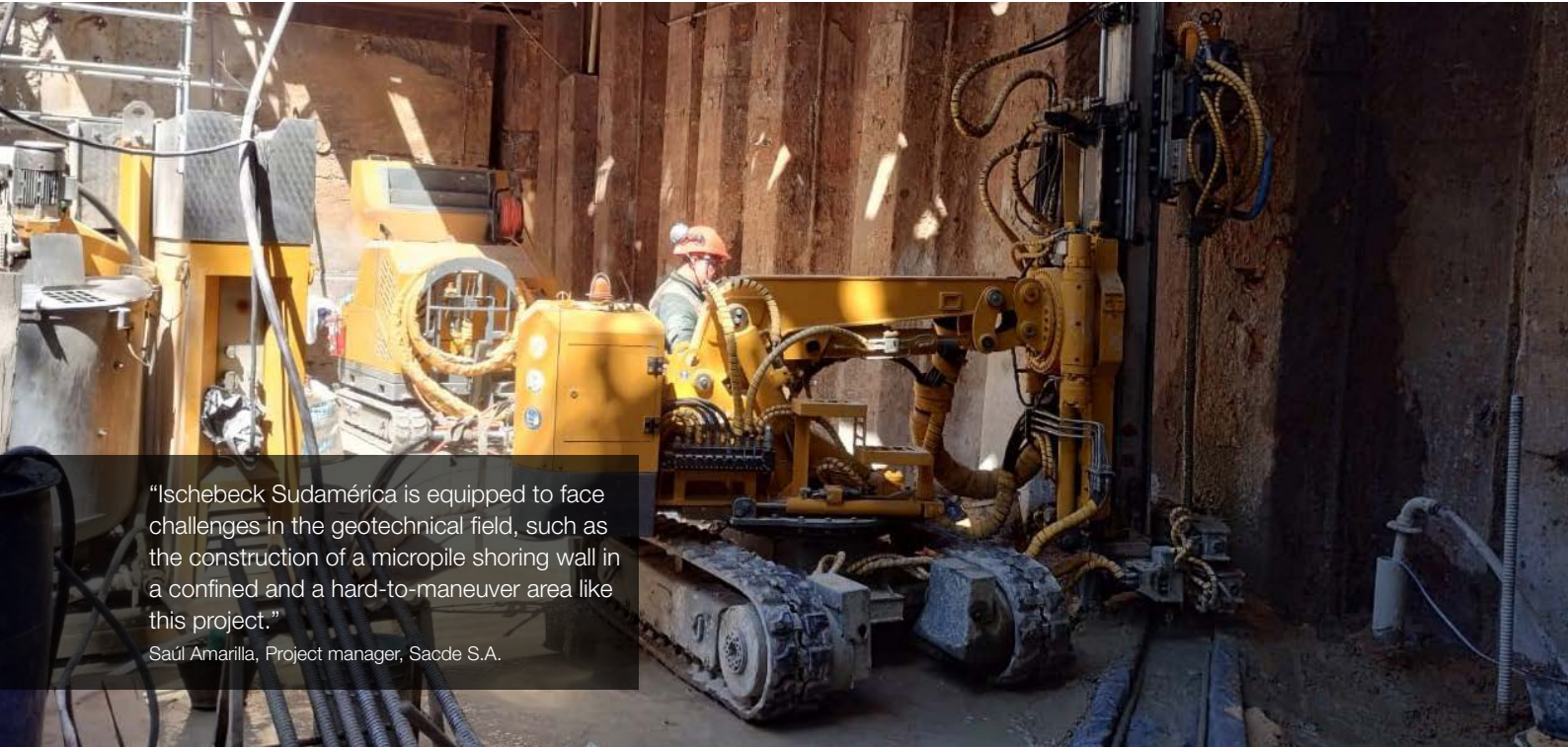


Brigadier López Plant Pump House: Micropiling in Confined Spaces

Micropile wall for excavation shoring and tension micropiles to resist uplift



“Ischebeck Sudamérica is equipped to face challenges in the geotechnical field, such as the construction of a micropile shoring wall in a confined and a hard-to-maneuver area like this project.”

Saúl Amarilla, Project manager, Sacde S.A.

Ischebeck Sudamérica S.A. supplied TITAN material to the main contractor SACDE S.A. to drill a micropile shoring wall to reinforce an existing sheet pile shoring wall at the pump house of the Brigadier López Thermoelectric Power Plant at Río Coronada, located in the Sauce Viejo industrial park, Santa Fe. This reinforcement was necessary to prevent water ingress as the existing sheet piles were driven to a length shorter than the design length determined by calculations. Additionally, a TITAN micropile grid was installed to resist potential uplift of the ground slab due to ground water pressure.

This power plant is owned by the electricity generating company Central Puerto S.A. The project's significance lies in its contribution to the efficiency of Argentina's electricity generation system, making it one of the most efficient in the country. Its strategic location enables access to natural gas from the Vaca Muerta deposits, further enhancing its importance.

The Challenge

This project presented several challenges, as all work had to be carried out in a very

constrained space, both horizontally and vertically. The work area was laterally confined by the sheet piling on one side and a concrete slope on the other, while it was vertically constrained by the bracing of the underground retaining system.

Furthermore, due to the confined and limited working space, it was imperative to minimise the amount of drilling waste produced. This required rethinking the methodologies for transporting materials for drilling and grout injection and for managing and disposing of excess cement suspension and mud mixture.

The Solution

To address these challenges the entire surface was covered with insulation. A brick channel was constructed to direct drilling residue into a skip, which was then removed from the area using a crane for proper treatment and disposal. Similarly, the crane was also used to supply materials and tools to the confined workspace. TITAN micropiles proved ideal for this project due to their suitability for tight spaces and high load-bearing capacity in challenging conditions.

Project:

Brigadier López Thermoelectric Plant Pump House, Santa Fe, Argentina

Construction period:

September 2024 – October 2024

Client:

Central Puerto S.A.

Principal Contractor:

SACDE S.A.

Products used:

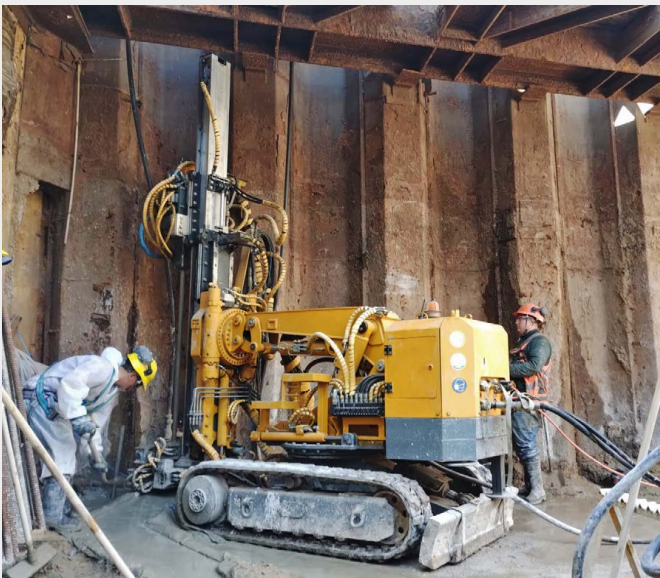
- 18 x TITAN micropiles 73/56
- 3 x TITAN micropiles 52/29
- 24 x TITAN micropiles 52/26
- 19 x TITAN micropiles 40/20
- TITAN hardened clay bit
Ø 400 mm



Work zone limited by the driven sheet pile wall and the underground retaining system



Team carrying out the construction tasks efficiently in coordination



Micropile installation



Confined drilling area, showing the drilling equipment in position and the pieces of a TITAN micropile ready to be installed

Would you like to find out more about TITAN micropiles?

We would be happy to advise you about your project. Simply get in touch with us. We look forward to hearing from you.