



Sealing the subsoil at the Feldsee dam at 2,200m above sea level

Data and facts

Company	PORR Verkehrstechnik GmbH
Type	Special civil engineering, High Alpine construction
Runtime	03.2019 - 08.2019
Principal	Bauunternehmung DI Walter Frey GmbH (on behalf of KELAG)

[Project report online](#)

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Peak performance at high altitudes

A total of around 5,800m of bored piles with a diameter of 120cm were inserted. The piles in the flanks were 5m to 8m long, and over 30m long in the middle of the dam crest. A drilling tolerance deviation of less than 10cm was required to ensure that the bored piles overlapped. The course of the drill pipe was measured for each pile to ensure this. The team succeeded in staying within a maximum pile deviation of 0.5%. The result was a wall in the subsoil that seals off the bottom of the reservoir.

Successful completion despite challenging building conditions

The high alpine location at 2,200m above the Adriatic and the resulting weather conditions, which are often quite harsh, posed a number of challenges for setting up the construction site, transporting the equipment and machinery to the site, the day-to-day logistics, and the construction site crews. The geological conditions and remnants of the previous injection measures made the work even more difficult. The tight construction schedule from March to August and the harsh weather conditions lasting into May made it necessary for the construction site team to work in shifts at high intensity and called for a high degree of responsiveness from PORR's equipment department. Thanks to the team's many years of expertise in specialist civil engineering, all the work was completed to everyone's satisfaction in mid-August, one week before the scheduled end of construction.

Impressions

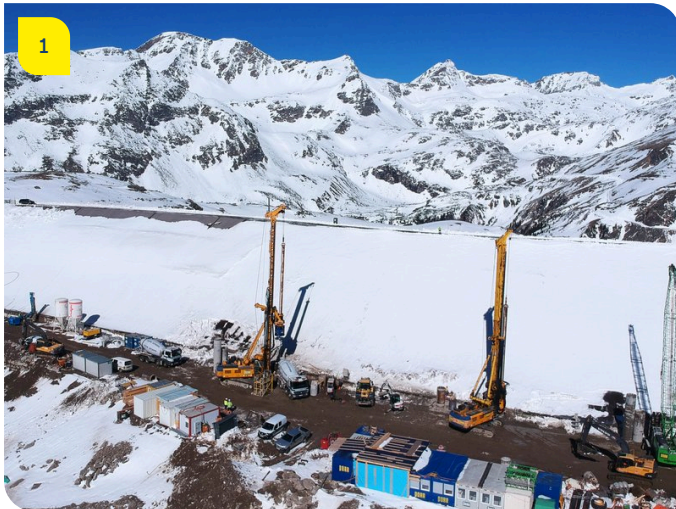


Image notes

1

Special assignment at high altitudes.

The extremely high altitudes and frequently difficult weather conditions were particular challenges.

3

Edging toward the summit, one metre at a time.

The two rotary drilling rigs, weighing more than 80t, were transported over a distance of almost 10km, covering more than 1,000m in altitude at gradients of up to 25%.

2

Creating a watertight seal.

Bored piles with lengths from 5m to over 30m and a maximum diameter of 120cm were used to seal the reservoir.

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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