



Pump Storage Plant Nant de Drance (CH) Shaft Grouting

Employer	Nant de Drance SA, Finhaut
Client	ARGE Schacht NdD
Execution of works	Renesco GmbH, Abt. Marti Geotechnik
Designer	Pöyry Schweiz AG
Construction Period	2013 - 2014
Contract Sum (grouting only)	CHF 1.250.000

Project Description

The 900 MW Nant de Drance pumped storage station was built near the French border in the Swiss Canton of Wallis. Centerpieces of the project are the 190 m long and 52 m wide machine caverns, the pressure water tunnels and two vertical shafts with breakout diameters of 8.20 m, internal diameters of 7 m and depths of 403 m each

Scope of work

Systematic contact grouting over the entire shaft height:

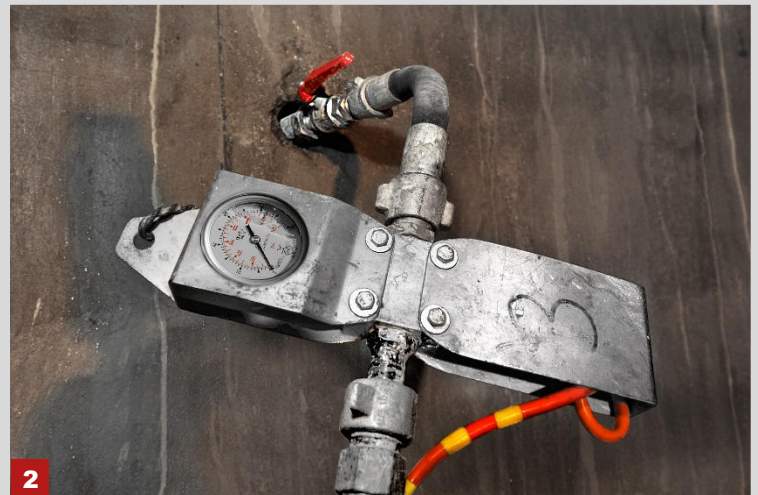
- Boreholes: approx. 1 200 in each shaft
- Borehole depth: up to 30 cm into the rock

Consolidation grouting area by area, depending on geology:

- Boreholes: approx. 450 per shaft
- Borehole depth: up to 12 m into the rock

Grouting concept

- Distance of grout rings: 3 m
- Boreholes per grout ring: 8 nos.
- Primary and secondary boreholes
- Primary and secondary rings



Front page: BR-3000 crawler drill

1. Mixing and stirring station, grout pumps with control panel
2. Connection of a packer to an external pressure encoder
3. Management and recording of grouting process