



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

Scope of services

Systematic contact grouting over the entire shaft height:

- Number of bore holes: approx. 1,200 in each shaft
- Bore hole depth: up to 30cm into the rock

Consolidation grouting area by area, depending on geology:

- Number of bore holes: approx. 450 per shaft
- Bore hole depth: up to 12m into the rock

Grouting concept

- Grout rings at 3m intervals
- 8 bore holes per grout ring
- Primary and secondary bore holes
- 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