Implenia

Reference

Pumpspeicherkraftwerk Nant de Drance









SHORT DESCRIPTION

Construction of an underground pumped-storage power station for the Nant de Drance pumped-storage power plant.

THE PROJECT

The project involves the construction of a pumped-storage power station between the Emosson and Vieux Emosson dams. The new station is situated at an altitude of some 1,700 m. The underground facility is accessed from below via a five-kilometre-long tunnel, and from above the surface via a system of tunnels measuring two kilometres in length. Vertical wells bring the water to the turbines. In addition to the structural work, the contract also includes management of the excavated material and increasing the height of the Vieux Emosson dam.

SERVICES IN DETAIL

- Main tunnel: hard-rock boring machine with grippers.
- Access tunnels and caverns: excavation via blasting.
- Shafts: raise drilling and blasting.
- Lined tunnel: excavation via blasting.

FURTHER INFORMATION

- Total volume of excavated material: 1.5 million m^3
- Total volume of concrete: 390,000 m^3
- Total quantity of steel: 20,000 t
- Complex material preparation
- Working at altitude
- Uphill trajectory for the tunnel boring machine: 11% gradient

FACTS

Location	Finhaut VS (Le Châtelard) , Switzerland
Status	completed
Construction volume (value of our services)	742 M CHF
Start of construction	January 2008
Completion	January 2018
Building owner	Nant de Drance SA, Finhaut VS
Contracting entity	Nant de Drance SA, Finhaut VS
Project designer	AF-Colenco AG, Baden-Dättwil
Construction management	AF-Colenco AG, Baden-Dättwil
Construction management	AF-Colenco AG, Baden-Dättwil

SERVICES

- Tunnelling
- Civil engineering
- Concrete construction
- Power plant expansion
- Caverns, shafts

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