



## Renewal Ritom Hydroelectric Power Station (CH) Contact Grouting

<b>Country</b>	Switzerland
<b>Type</b>	Hydroelectrical Power Station
<b>Client</b>	Ritom SA, c/o FFS SA
<b>Main Contractor</b>	Consortium Marti-Ferrari Ritom
<b>Execution of the work</b>	Renesco GmbH/ Renesco AG
<b>Designer</b>	Consortium Ritom Ticino (CRT), c/o IM Maggia Engineering SA
<b>Site Supervisor</b>	Consorzio Ingegneri CORI, c/o Renzo Tarchini Canttieri & Contratti SA
<b>Construction Period</b>	2025-2026

## Project Description

The renovation of the historic Ritom hydroelectric power plant in the canton of Ticino is a significant project that optimizes the use of water from Lake Ritom for the electricity supply of the Swiss Federal Railways (SBB) and the canton of Ticino. The new power plant will include two turbines with a total output of 60 megawatts and is intended to improve the electricity supply for the Gotthard line. The investment costs amount to around CHF 300 million, and the concession application was approved in 2012 to allow the use of Ticino's waters for another 80 years. The project aims to increase the flexibility and efficiency of electricity supply and contributes to environmental sustainability.

The project includes the construction of a pressure shaft/tunnel, a new power station and an equalizing lower reservoir with a capacity of 100,000m<sup>3</sup>. The renewal of the power plant, which was built in 1917, will last until spring 2026.

The new pressure tunnel consists of three sections. The upper section with a length of 150 m and the lower section with a length of around 650 m are constructed by drill and blast. The middle section, about 1,500 m long, are excavated as an inclined tunnel with a TBM.

## Scope of Service

Contact grouting measures - for the steel lining - from inside the pipe channel under harsh environment - up to 20 bar water pressure (mountain water), restricted space (approx. 2 m in diameter) and a shaft incline of 42° are challenging work conditions besides the logistic and the safety.

- Drilling Works from inside the steel pipe
- Supply & Apply of Cementitious Grout
- Area of grouting, after evaluation of the site conditions: 1) between steel lining & cementitious backfill; 2) between backfill & rock formation and 3) inside the rock as sealing block/curtain.



1. Pressure tunnel /shaft, excavation via TBM
2. Upper reservoir, Lake Ritom
3. Working inside the pressure pipe, penstock