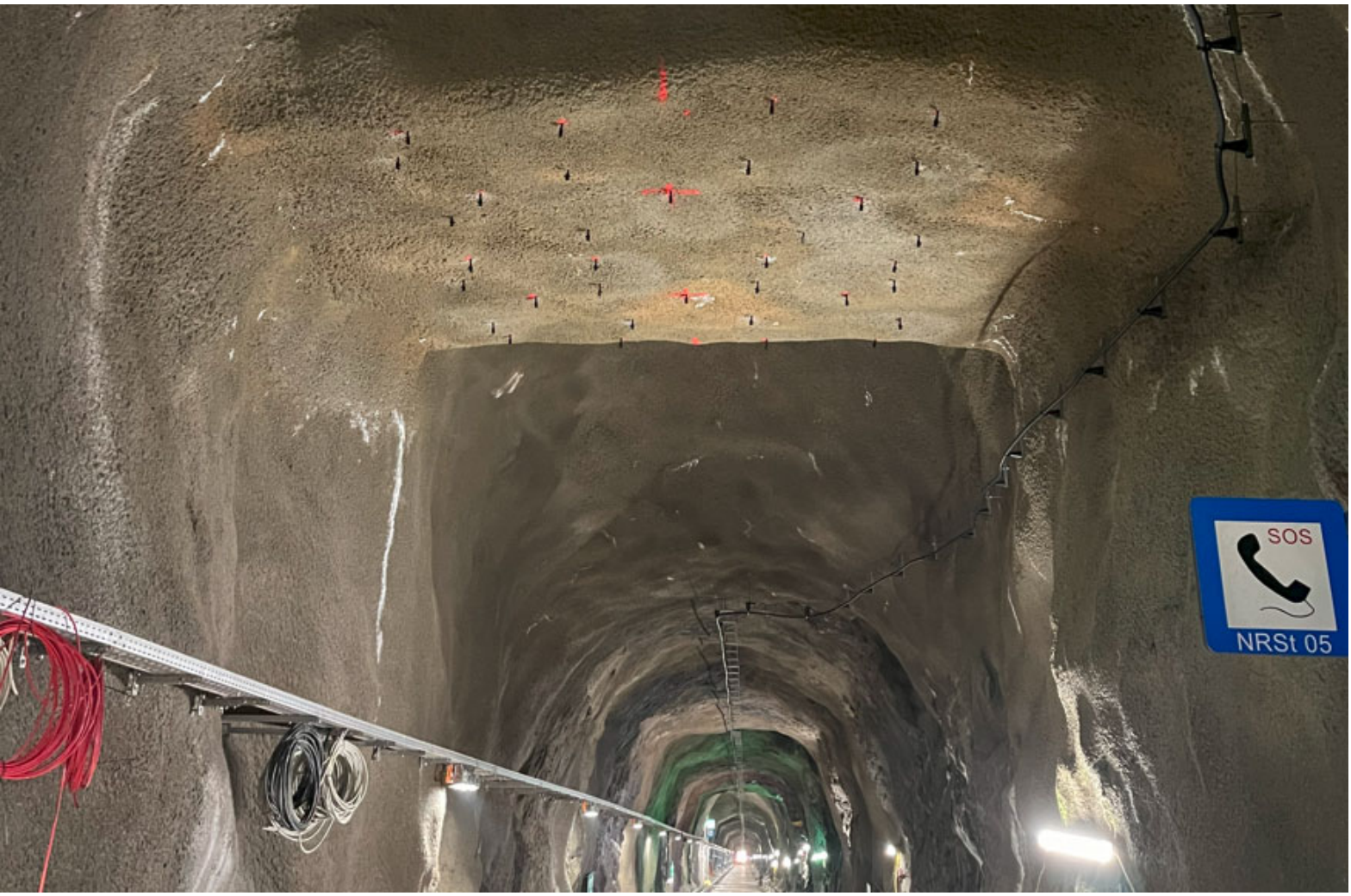


B 169 Harpfnerwandtunnel (AT)
Rehabilitation-Grouting

Country	Austria (AT)
Type	Rehabilitation, Road tunnel, power plant
Client	Verbund
Main Contractor	Felbermayr Bau GmbH & Co KG, Salzburg
Execution of the work	Renesco GmbH
Designer	IL - Ingenieurbüro Laabmayr & Partner
Construction Period	2023-2024

Renesco Group, Seedorffeldstrasse 21, CH-3302 Moosseedorf, Phone: +41 (0)31 388 74 20
info@renesco.com, www.renesco.com

Project Description

The 2,597m long tunnel is a single-lane road tunnel between the towns of Mayrhofen and Ginzling in the Zillertal.

It was built in 1965 as part of the construction of the Zemm hydro-electric power plant to handle site traffic. Most of the tunnel was built without an inner lining; some areas were provided with mortar protection. The clearance profile was designed for the transport of power plant components. The tunnel is currently under modernization/ rehabilitation to increase the safety standards.

The main power station in Mayrhofen (670 million kWh) consists mainly of the Stillup reservoir, which is the key point of the Zemm-Ziller power plant group, and a working water conduit that supplies water to the power plant in Mayrhofen.

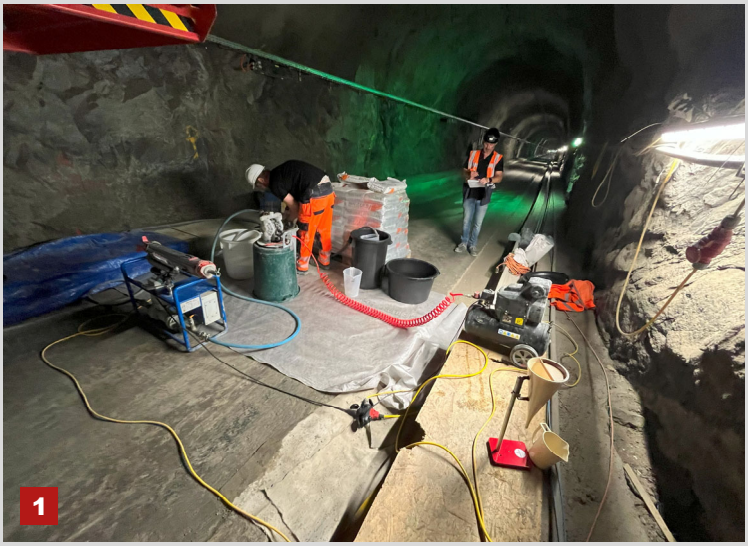
Reinforced shotcrete as a primary and secondary (final) inner liner, in some areas underlined with a dimple sheet membrane for drainage.

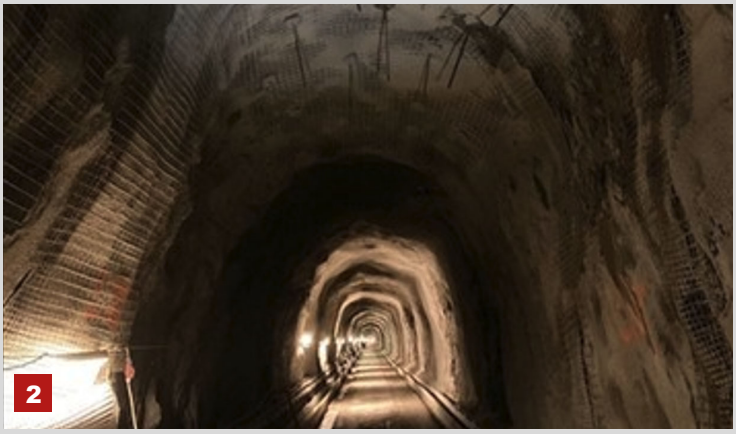
Scope of Service

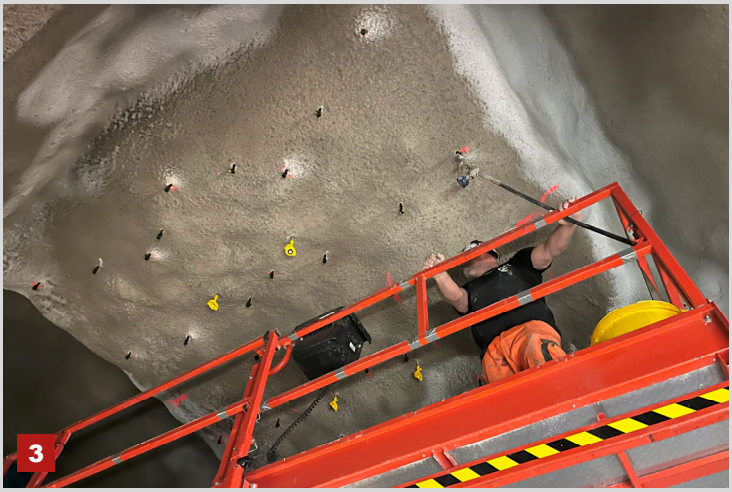
As a consequence of geological and process-related excavations with overbreak, shotcrete fillings of up to 1.2m in the area of some ventilation fixations have become necessary a) to ensure a force-fitting connection of all the subsequent fillings and b) to guarantee a passive corrosion protection of all the steel parts.

Hereby the shotcrete filling is mainly used as a load-bearing component (substrate) for the permanent anchoring of the ventilation system.

- Inspection drilling
- Grouting & Drilling works
- Approx. 10 tons of microfine cement with a w/c-ratio of 0,43 (approx. 13.000 litre)
- Quality management including product control/ testing, digital control, etc.







1. Grouting works
2. Tunnel Niche with overbreak
3. Grouting works at tunnel crown