



Saint-Béat Tunnel

Underground structures

2012 - 2014



FRANCE - Haute-Garonne

Client

SOLETANCHE-BACHY TUNNELS

Project manager
DIR Sud Ouest

Project owner
DREAL Midi Pyrénées

Miscellaneous

1018 m long road tunnel,
Traditional excavation method,
2 safety tunnels



Description of the project

The upgrading of the RN 125 main road between Saint-Béat and Arlos in the French Pyrenees will enable to bypass the village of Saint-Béat by means of a tunnel through the Cap de Mount mountain.

The village is renowned for its quarrying of white marble, the formation constituting most of the massif through which the tunnel is built.

Key features

- Geotechnical and civil engineering detailed design of the tunnel

Description of the mission

The GUINTOLI – SOLÉTANCHE – SOLÉTANCHE BACHY TUNNELS – PIZZAROTTI consortium has contracted TERRASOL and BMCI (a subsidiary of SETEC TPI) for the geotechnical and civil engineering detailed design of the tunnel. The 1018 m long tunnel was excavated by the traditional method using explosives, with a support mainly comprising bolts and shotcrete.

Despite a geology favorable to tunnelling (Marmorean limestone and good-quality marble, with limited fracturing), the works gave rise to some surprises : karsts at the northern portal, and substantial water inflow on the southern face.

The main difficulty of the project, clearly identified by the first explorations, was the interception by the northern safety tunnel of a glacial furrow filled with alluvial materials. Analysis of additional explorations from the tunnel and from the surface resulted in the proposal to cross this geological irregularity by means of an arched support reinforced by forepoling. The excavation of the main tunnel was completed in December 2013.

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