

Brenner Base Tunnel – Exploration Drifts Innsbruck – Ahrental and Wolf – Vibration Measurements

Client:

BBT SE

Country:

Austria, Tyrol /Italy

Duration:

from November 2009 to December 2015

Services:

Vibration monitoring during construction

Project objectives

The Brenner base tunnel is a central element of the new high-capacity axis for the Berlin-Palermo railway line and is meant primarily for goods transport. The exploratory tunnels are being excavated for the purposes of geological and hydrogeological prospecting and exploration. This preliminary research will help to minimise construction costs and risks.

Project description

The environmental impact assessment of the Brenner base tunnel resulted in the requirement for continuous vibration monitoring during the construction of the exploratory tunnels. This involved the placement of monitoring devices in residential buildings and in various installations. Data were transferred by remote data link to a central data base and could be accessed by the project team via an Internet platform.

Project data

Base tunnel:

Length from Tulfes portal (Innsbruck bypass) to Franzensfeste: 62.7 km

and from Innsbruck portal to Franzensfeste: 55 km

Longitudinal grade: 0.4% – 0.67%

Project specifics

A web-based data base had to be programmed specifically for the project. This data base displayed all monitoring data – including concluded measurements – for the client, designers and contractors. Some measurements had to be performed under very difficult conditions.

Services

Vibration monitoring, reporting, consulting of the client regarding vibrations, public information.

