

Ceneri Base Tunnel: Landfill Sigirino

Sigirino, Switzerland (2010 - 2016)



Long-term geodetic monitoring

Object

Ceneri Base Tunnel, Sigirino

Project description

The bigger part of the Ceneri Base Tunnel is excavated by drill-and-blast advance from the intermediate access point at Sigirino. The material which cannot be used further is stored in a landfill which is supported by a reinforced wall of soil facing the construction site. To assure the safety of the construction site, the reinforced wall and the surrounding buildings are geodetically monitored.

Instrumentation

- Amberg ARGUS GeoMonitoring System with
 - Measuring and control center
 - Communication via WLAN and LAN
- 3 Leica total stations, up to 100 control points

Analysis / Delivery of data

The coordinates of the daily measurements are stored in a database. From this data, diagrams and tables are compiled directly after the measurements and are provided to the client by the internet platform GEOvis. In case of an exceedance of limits an automated notification is sent by email to a predefined group of people. Based on the available measurements, adequate actions can be initiated.

Customer value

- Safety through automated alerting
- 24h-availability of the data on the GEOvis internet platform
- Amberg ARGUS GeoMonitoring System can be easily restocked and altered anytime via remote control
- Guaranteed reliability through redundant architecture of the measurement system and bridging of power outages
- Excellent price-performance ratio

Principal

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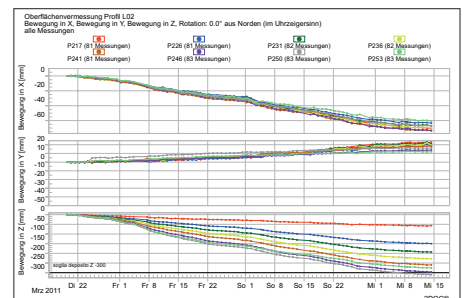
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Wall of reinforced soil



X-, Y- and Z-movements of 8 control points over a period of three months