Geomonitoring

The Circle at Zürich Airport

Zurich Airport, Switzerland (2015 – 2018)



Monitoring at Airport Railway station

Object

At the Butzenbühl area the Zurich Airport builds of approximately 37,000 m2 the service and convention centre "The Circle at Zurich Airport". The project planning also affects the SBB Tunnel, which runs beneath the site and connects the Zurich airport to the cities of Zurich and Winterthur. Amberg Technologies AG is responsible for monitoring measuring in the airport railway station in the IG MonCircle (IG with Basler & Hoffmann).

Project Description

During the construction work there is the risk that the trough structure of the airport station, the mining section of the tunnel and the tracks are exposed to deformations. To ensure that counteractive measures can be taken in time the entire tunnel from km 9.780 to km 9.930 is automatically monitored with the Amberg GeoMonitoring system. Throughout the perimeter more than 200 prisms and 8 vibration sensors were installed to monitor.

Instruments

- Amberg GeoMonitoring-System
- UMTS data transfer
- 2 fully automated Leica TS 30 Total Stations
- Vibration measurement system with 8 geophones

Evaluation

The evaluation of all results is automated. The tracks are evaluated and prepared according to the SBB directive I-50009. All results, tables and graphs are available on the web platform GEOvis around the clock

Customer Value

- Ensuring the operational safety through continuous monitoring and multi stage alarm concept
- Cost savings thanks to installation, measuring and disassembly without restrictions for the current rail operations
- High reliability thanks to redundant system components
- quickly available measuring results
- Easy access via web platform GEOvis

Client

Zurich Airport AG





Installation in 2 night shifts



Track monitoring with total station



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