

Strains and displacements in a new type of slurry wall: research field (2)



EpsilonRebar: Case Study

The subject of the project was the slurry wall made of new type of material: fiber-reinforced concrete mixed with the ground. This economic technology must be carefully checked before widespread use. The **EpsilonRebars** once again were used for this purpose. The structural performance of the wall was monitored during deeping the excavation as well as during the mechanical load tests. Thanks to **Nerve-Sensors** it was possible to detect cracks but also to calculate horizontal displacements.



Benefits of application

- Distributed measurements of **strains, cracks and displacements** at the same time
- Full **deformation and temperature control** along the entire length of slurry wall
- Simultaneous analysis of **both compression and tension zone**
- Measurements during **deeping the excavation** and **mechanical load tests**

Example results

The slurry wall was loaded using the hydraulic jackets. The figure shows example horizontal displacement profiles calculated based on strains measured by **EpsilonRebars** during subsequent load steps. The structural performance of the Nerve-Sensor system was proved up to the total failure of the wall. A very good agreement with reference techniques was obtained.



12 800 measurement points



128 m of sensing path



16 x EpsilonRebar



construction & load tests



project
partner:

