Strains and cracks in a new type of slurry wall: research field (1)

nerve-sensors.com

EpsilonRebar: *Case Study*

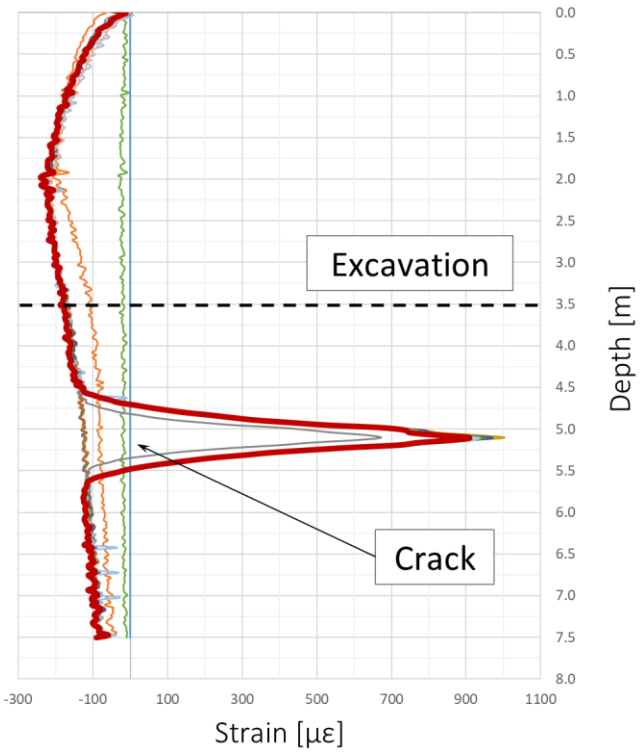
The subject of the project was the slurry wall made of new type of material: fiber-reinforced concrete mixed with the ground. This economic technology must be carefully checked before widespread use. The EpsilonRebars were used for this purpose. The structural performance of the wall within the research field was monitored during deeping the excavation as well as during the load tests. Thanks to Nerve-Sensors it was possible to detect cracks and fractures invisible for other techniques.

Benefits of application

- Distributed measurements of **strains and cracks** invisible to the naked eye
- 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 **load tests**

Example results

The slurry wall was loaded using the concrete slabs. The figure shows example strain profiles obtained from EpsilonRebar during subsequent load steps. It can be clearly observed, that fracture inside the wall was detected under the excavation level, so where there was no access for visual inspection. No other technique was able to provide such key info.



7 200 measurement points

72 m of sensing path

9 x EpsilonRebar

construction & load tests

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