

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



## EpsilonRebar: Case Study

The subject of the project was a slurry wall made of a new type of material: fibre-reinforced concrete mixed with the ground. As this technology must be carefully checked before use, **EpsilonRebars** were used for this purpose. The structural performance of the wall was monitored during the deepening of 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.

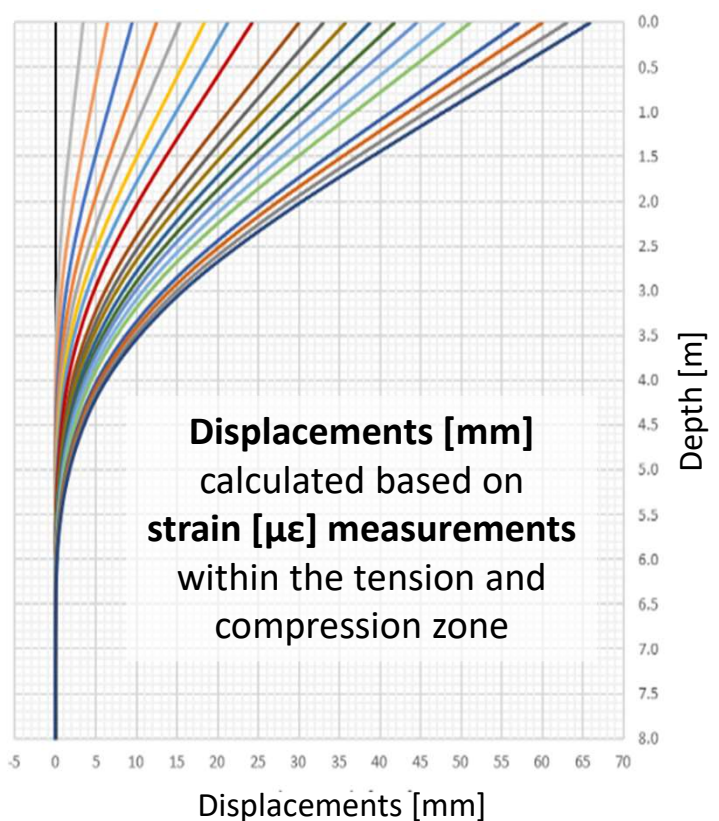


## Benefits of application

- 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 **deepening of the excavation** and **mechanical load tests**

## Example results

The slurry wall was loaded using 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 point 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:

