Terrestrial Laser Scanning for the Fire Test on Experimental Building in Mokrsko

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Basic information

- Fire test of experimental building with new construction elements
- International cooperation
- Surveying
  - Laser scanning with Leica HDS 3000
  - Measurement before the fire test
  - Measurement after the fire test
  - Deformations of construction after the fire test
Final point clouds before and after fire test

Data evaluation

- Collapse of the building during the fire test
- Evaluation not collapsed elements of construction:
  - Three ceiling beams
  - Central column
  - Wall constructions
    - Monolithic concrete wall
    - Kingspan sandwich panels
Evaluation of beams

Evaluation of beams - graph

Graph of transverse displacements
Beam WTB 800 no. 2 - left bottom edge

Transverse displacement [m]
Stationing [m]
Evaluation of central column

Evaluation of concrete wall – difference model
Conclusion

- Evaluation of static deformation of the experimental building after the fire test

- Difference models of walls with hypsometric expression of deformation provide unique information about behavior of the building construction

Thank you