

3D – Laserscanning in Mining and Tunneling

With 3D-Laserscanning object geometry is digitally measured by laser beams. Thereby a huge amount of three-dimensional points is generated, called point cloud. Point clouds can be effectively analyzed in manifold manners.

Compared to conventional object survey, laserscanning offers significant advantages:

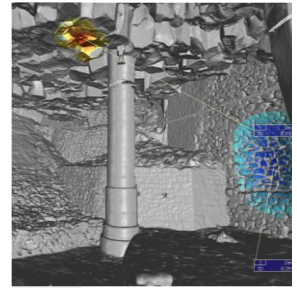
- Fast, simple and complete 3D object acquisition for digital solutions
- Independent from lighting conditions and surface texture
- Similar high reliability and accuracy
- Manifold options for visualization and analysis of the measured data (3D, virtual reality, video, CAD etc.)

Chosen Applications:

- As-build documentation for billing
- Basis for maintenance, reparation and reconstruction /reverse engineering
- Determination of cross and longitudinal sections
- Determination of clearance diagrams
- Spatial deformation analysis (comparison of different campaigns or as target/actual comparison)
- Volume calculation



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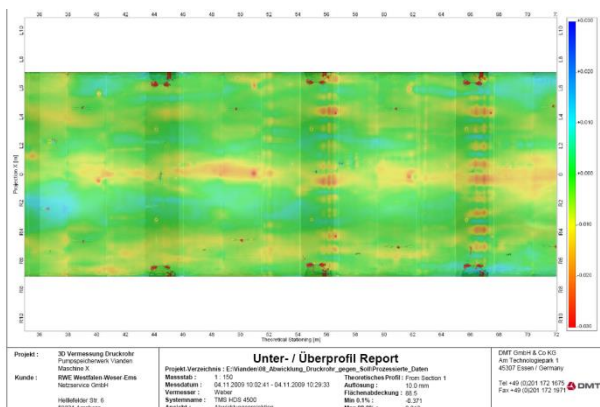
Deformation analysis



Point cloud of a tunnel



Pipes and tubings



Unwrapped data of a comparison with a target profile

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