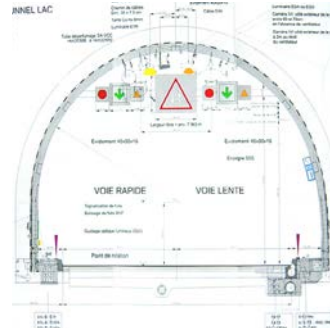


REHABILITATION / MODERNIZATION

The dibit tunnel scanner system provides a complete geometrical and visual depiction of the recorded tunnel surface at a specific time. Tunnel scanner recordings provide a high-quality as-built documentation. The efficient dibit software allows for easy, quick and versatile data evaluations. Building-owners, contractors, designers, and construction

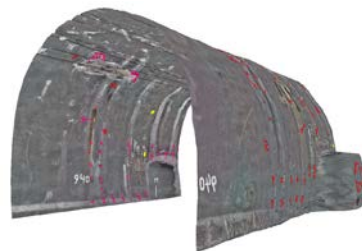
supervisors receive objective comprehensive information about geometry, condition and quality of the rehabilitation works. The dibit tunnel scanner system is highly suited for planning, assessing and supervising the rehabilitation and modernization of a tunnel project.



APPLICATIONS

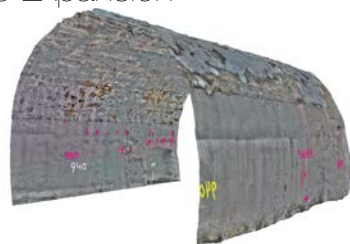
Recording before Rehabilitation / Modernization

- profile recording of the tunnel vault
- geometrical capture of components and installations
- optimization of tunnel axis, nominal profile and clearance diagrams
- quantity determination, e.g., demolition, concrete expenditure, crack lengths, rehabilitation areas



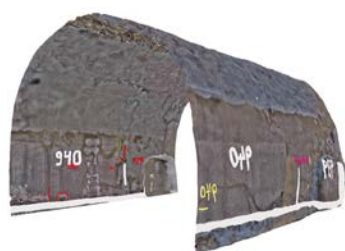
Recording after Demolition / Profile Expansion

- calculation of actual removed quantities
- documentation of the subsoil
- check of compliance to the nominal profile
- determination of final lining concrete quantity



Recording after Completion of Rehabilitation

- profile check of the final lining
- determination of the final lining thickness
- documentation of the rehabilitation locations
- calculation of crack lengths
- calculation of rehabilitation areas



DIBIT SOFTWARE

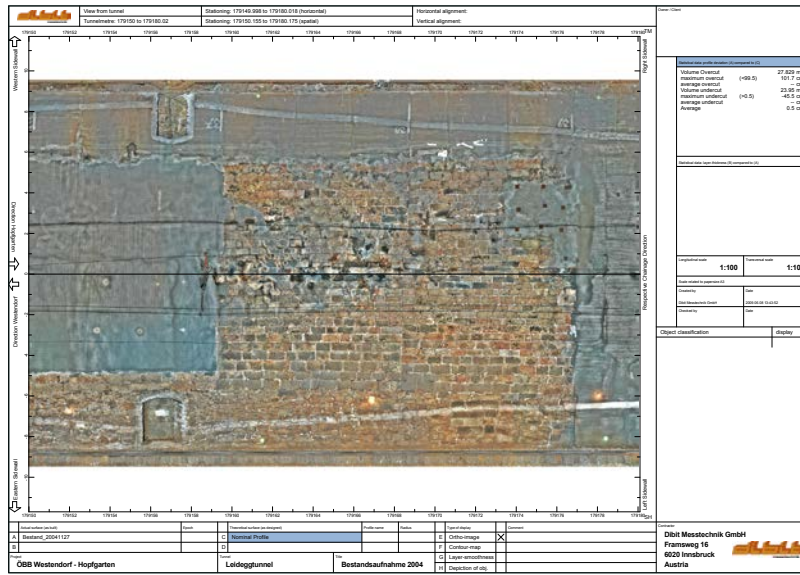
- analysis of the tunnel surface in 2D- and 3D-views
- complete profile checks
- collision warning at clearance diagram check
- exact determination of layer thickness
- exact quantity survey
- true-color image documentation
- supports easy export of coordinates
- data export to AutoCAD

RESULTS

- comprehensive true-color 3D-model
- cross sections
- contour maps
- ortho-images
- lists of calculation results in Microsoft Excel format

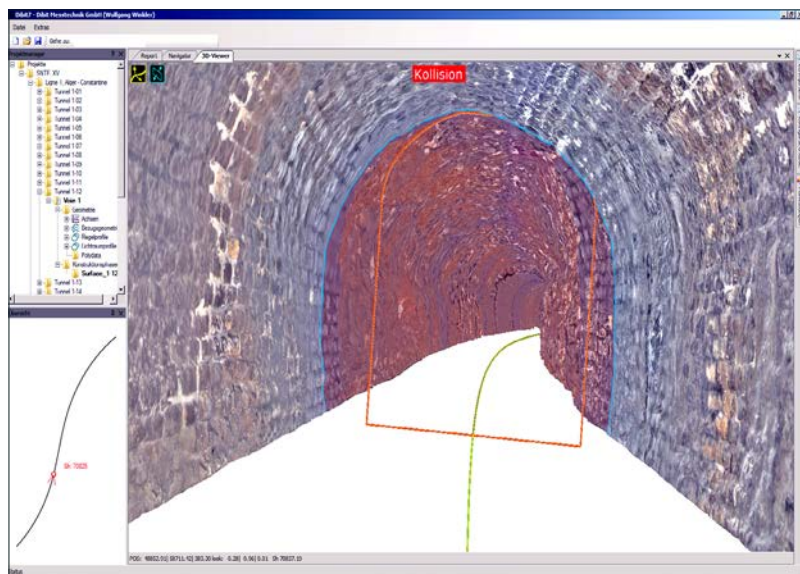
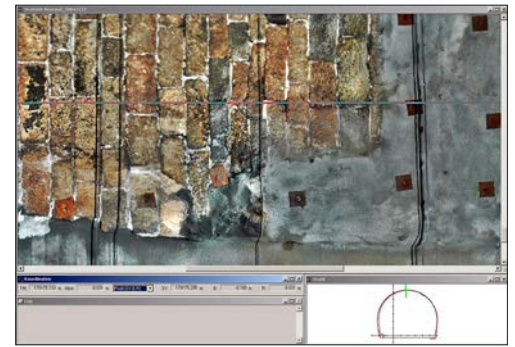


REHABILITATION / MODERNIZATION



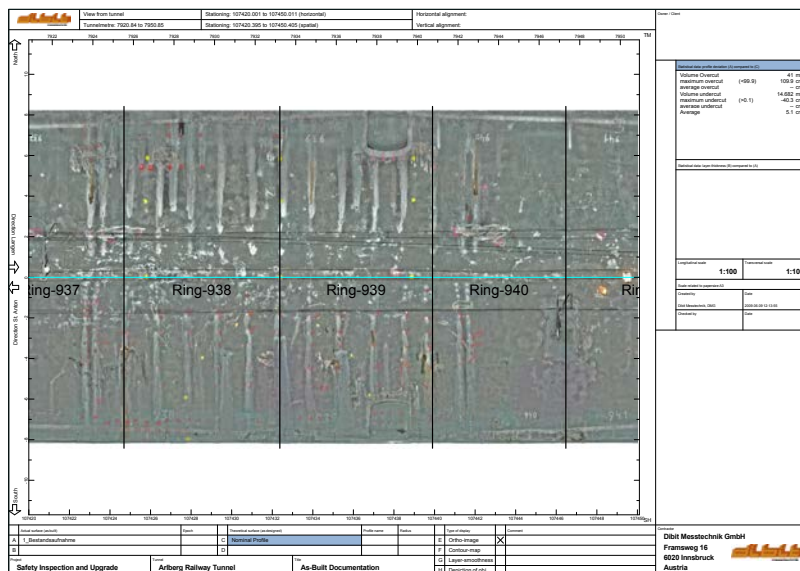
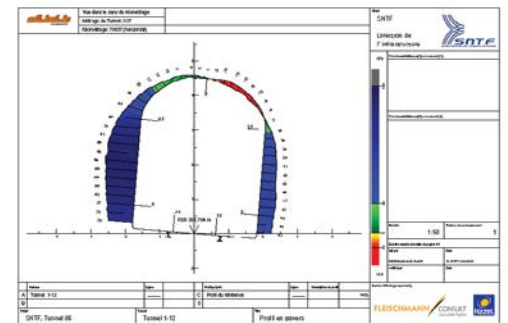
Recording before Rehabilitation/
Modernization

- ortho-image depiction of the tunnel vault
- analysis of the in-situ assessment using dibit software



Recording after Demolition/
Profile Expansion

- false-color contour-maps of clearance check
- cross-sections with clearance profile for clearance check



Recording after Completion of
Modernization

- ortho-image depiction of the new shotcrete tunnel vault
- cross-section with clearance profile for final clearance check

