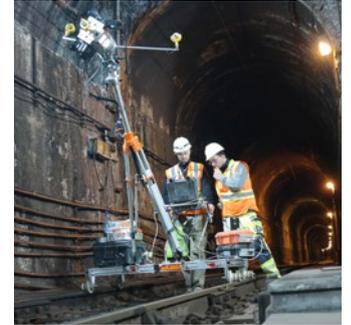


## REHABILITATION / MODERNIZATION

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 easy, quick and versatile data evaluations. Building-owners, contractors, designers, and construction su-

persors 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

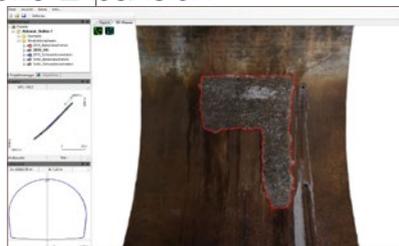
### Recording before Rehabilitation / Modernization

- 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

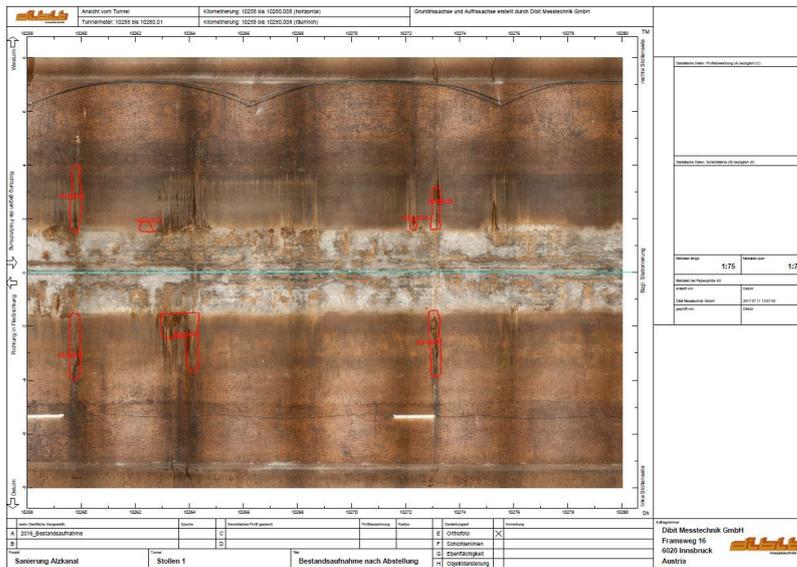
- analysis of the tunnel surface in 2D- and 3D-views
- complete profile checks
- collision warning at clearance diagram check
- exact determination of layer thickness
- exact quantity survey
- true-color image documentation
- supports easy export of coordinates
- data export to AutoCAD

### RESULTS

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

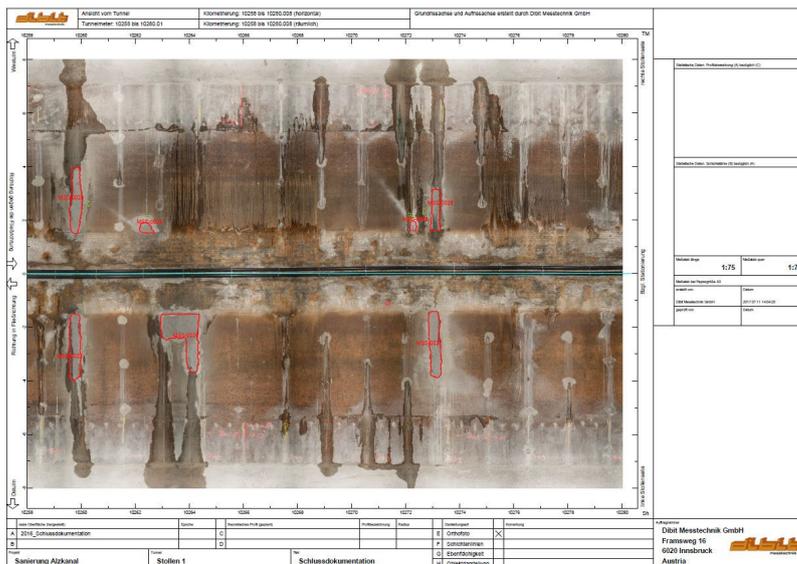
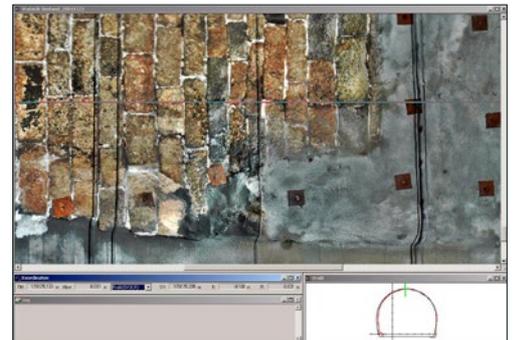


## REHABILITATION / MODERNIZATION



Recording before Rehabilitation/  
Modernization

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



Recording after Demolition

- ortho-image depiction of the new shotcrete tunnel vault
- automatic report generation with comparison of the various measurement epochs

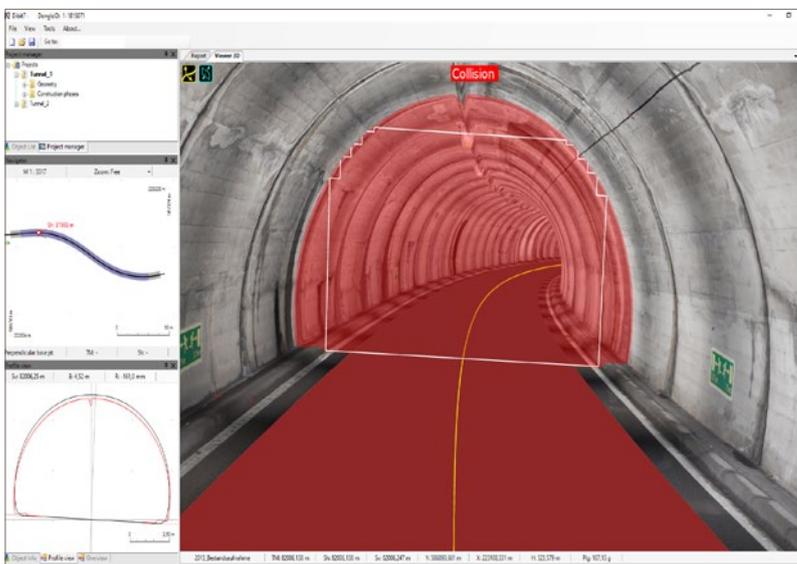
**Mauerwerksschadstelle-MSS-0025**

Position 3D (Koordinaten, yxh)	54423,6926; 36815,7959; 415,5245
Position 2D (Station)	10263,87 m
Länge	7,5652 m
Fläche	1,7623 m <sup>2</sup>
Volumen	0,084 m <sup>3</sup>
Maximaler Abtrag	0,092 m
Durchschnittlicher Abtrag	0,025 m
Kl. umschr. Rechteck - Länge	2,2284 m
Kl. umschr. Rechteck - Breite	1,4680 m
Kl. umschr. Rechteck - Fläche	3,2713 m <sup>2</sup>
Kl. umschr. Rechteck - Umfang	7,3928 m

Aufnahme nach Abstellung


Aufnahme nach Abtrag


Schlussdokumentation

cross profile with clearance profile

- cross-section with clearance profile for final clearance check