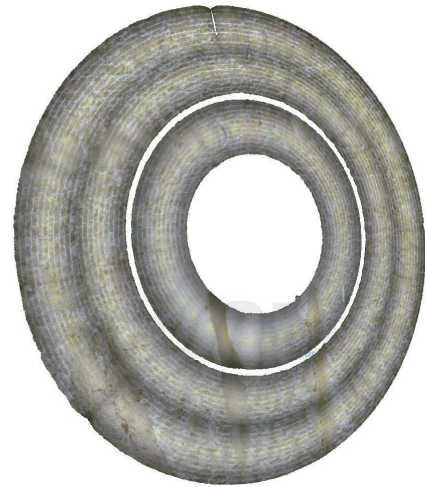


Tunnel face documentation

Geometric and geologic documentation for hard rock TBMs



Concept

One or more autonomous imaging units are installed at inspection openings during maintenance shift. By turning the cutter head digital imagery is taken. Advanced software generates scaled and oriented 3D images.

The 3D images provide high quality documentation and also allow for geometric rock mass characterisation.



Features

- Permanent objective **documentation** of rock mass conditions
- Overbreak quantification
- **Geometric** measurements
- Geologic mapping
- Quick application

Requirements on site

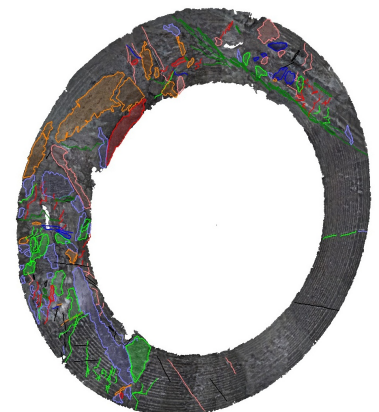
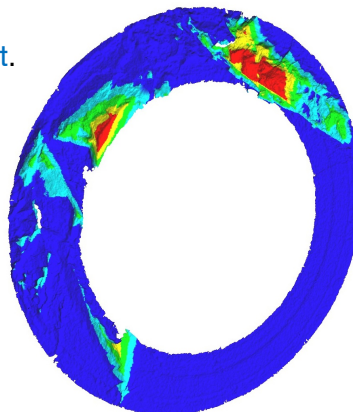
- **Access** to the service and mucking openings for installing and dismantling TBM imaging units.
- **One full rotation** of the cutter head for scanning a part of the tunnel face.
- Data acquisition works are usually performed during **maintenance shift**.

Components

- Autonomous TBM imaging units
- Software bundle including the generation of 3D images and their geometric analysis including geological mapping.

References

- Follo Line, Norway
- Koralm, Austria
- Bözberg, Switzerland
- Semmering, Austria



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