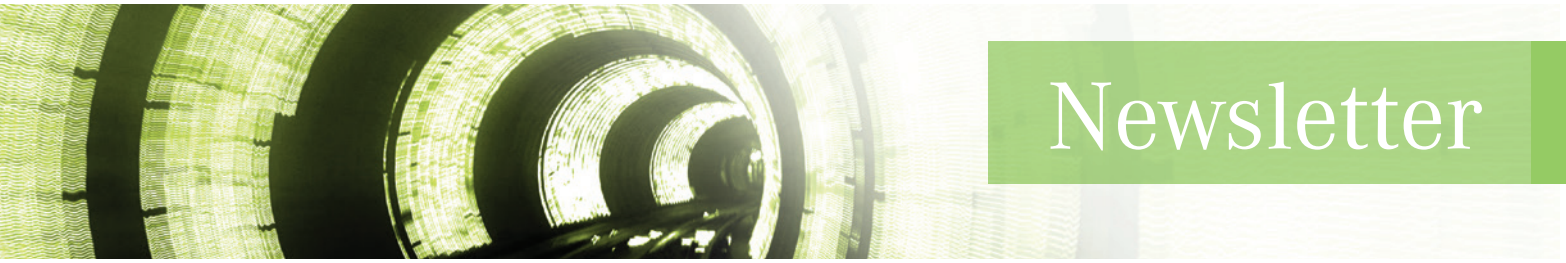

Newsletter

High production rates in mechanised tunnelling with segmental lining and a sustainably high quality of the structure rely on efficient segment manufacturing and logistics. By tracking, controlling, and documenting the production, storage, and usage of each segment including the employed materials, the Segment Documentation System SDS significantly helps in maintaining the Quality Management System.

Segment Documentation System SDS

Quality management for segment production

- Recording for all process steps: Material delivery, segment production, and usage
- Efficient segment storage management, including crane control (upon separate request)
- Real-time evaluation for reliable staff and budget planning as well as scheduling
- Continuous target/actual performance comparison for all parameters to allow specific corrective and optimisation interventions
- Consistent proof based on long-term database archiving

The staff of our global service network will be pleased to assist you in configuring and installing the modules as well as during operation.

Modular and flexible

- SDS modules (SDS.production, SDS.reinforcement, SDS.quality management, SDS.storage, and SDS.on-site) to be used individually or in combination to create a powerful complete solution from a single source
- Interface compatible with supplier and customer systems as well as to tunnelling control systems
- Individual configuration for all tasks to be done: Stationary production or carousel production, on-site factory or prefabricated parts factory as well as warehouse versions
- Data collection by automatic sensor system or manual collection (bar code labels or RFID tags)

SDS at STEP Tunnel Contract (T-02/T-03) Deep Tunnel Sewer in Abu Dhabi

SDS - In use for the Koralm Tunnel project

The Segment Documentation System SDS, which provides an advanced tool for tracking, controlling, and documenting purposes in segment production, is used to assist in tunnelling projects all over the world. For the large Koralm Tunnel project, SDS meets the strict specifications on quality and data management during production and use of the segments for tunnel construction.

- Main structure of the Gdansk (Poland) - Venice (Italy) high-speed railway line
- Total length of the twin-tube tunnel: 33 km
- 2 x double shield TBM (Ø 9.93 m) for 17.1 km or 15.7 km, respectively, of the tunnel construction lot KAT2, tunnelling since spring of 2013
- 103,500 segments and 17,250 inverts in 16 mould sets (Herrenknecht Formwork)

To the full extent, the Segment Documentation System SDS, which has been specifically configured for the Koralm Tunnel project, provides the required database-supported documentation of the entire segment production and use including the materials delivered. To check consistency of the dimensional accuracy of the segments, highly precise 3D measurements are carried out using a VMT laser tracker system which are also documented within the SDS for quality evidence.

Each segment produced is identified by a bar code label that documents all production parameters and replaces the conventional storage of the segments that are sorted based on type and age. SDS implements smart storage management of the segments produced that efficiently uses the limited storage capacity available on the jobsite. Before installation in the tunnel, the erector that is fitted with a scanner uses the bar code to compare the identity of the segment with the database entry. **Thus, any delay caused by incorrect delivery will be avoided and the final installation position in the tunnel structure documented.**

SDS Koralm Tunnel KAT2 in Austria

Projects

Austria | Koralmtunnel – KAT2

Tunnel length: 32,800 m
Segments: 120,000
SDS System: SDS.production + SDS.reinforcement + SDS.tunnel + SDS.on-site + SDS.quality SDS.Dispatch Office + SDS.storage.professional

Australia | Sydney North West Rail Link

Tunnel length: 2 x 15,000 m
Segments: 160,000
SDS System: SDS.production + SDS.Dispatch Office + SDS.reinforcement + SDS.quality + SDS.storage.advanced + SDS.tunnel SDS.on-site storage

Czech Republic | Prag Metro Line V

Tunnel length: 4 x 6,000 m
Segments: 124,000
SDS System: SDS.production + SDS.on-site + SDS.tunnel

Saudi Arabia | Riyadh Metro Line1&2

Tunnel length: 4 x 4,125 m
Segments: 800,000
SDS System: SDS.production + SDS.reinforcement + SDS.quality + SDS.storage.advanced + SDS.Dispatch Office

United Arab Emirates | STEP Abu Dhabi

Tunnel length: 5 x 8,000 m
Segments: 100,000
SDS System: SDS.production

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