

Slovenia



Name: Slovenian Society for Underground Structures

Type of Structure: Non-profit, open association

Number of Members: 100 members, 50 young members

ASSOCIATION ACTIVITIES DURING 2021 AND TO DATE

Events:

- 13th International Tunnelling and Underground Structures Conference (17th – 19th November 2021, Ljubljana, Slovenia).
- Excursion – tour of the construction site of the Karavanke tunnel (22nd September 2021)

Publications:

Proceedings - 13th International Tunnelling and Underground Structures Conference.

CURRENT TUNNELLING ACTIVITIES

Karavanke Tunnel

The start of construction for upgrading the existing single bidirectional transalpine base tunnel with a second tube to form a twin highway tunnel tube system. The total tunnel length is 8km with more than 1000m of overburden.

The tunnel passes through very heterogeneous rock materials from Permian, Carboniferous to Triassic formations, squeezing ground and difficult hydrogeological conditions. Construction of the tunnel started in the second half of the 2020. Currently the excavation is at around 1800m from the Slovenia side, with

around 1600m of the excavation left to the breakthrough.

Second track of the Divača-Koper railway line

The start of construction for the upgrade of the existing single track railway between Divača and Koper with a second track. The new railway line passes through eight tunnels (T1-T8) with a total length of 38km. All of the tunnels are single-tube. T1, T2 and T8 are designed with service tubes, which are to be used for rescue operations, while tunnels T4 and T7 have transverse exit tubes.

The route of the second track runs on different formations of carbonate rocks characterised by numerous karstic features (sinkholes, cracks, caverns, tunnels, underground caves, chasms etc.).

Pekel Tunnel

The start of construction of a 1.5km long double-track railway tunnel, as part of the upgrade of railway line on the Maribor – Šentilj – state border. The tunnel has a cross section of about 135m

and a maximum overburden 90m, which reduces to 10m when crossing highway H2. Construction of the tunnel started in the first half of the 2021 with 1200m currently excavated. The tunnel is being excavated from both sides (South and North). There is still around 300m to go to the final breakthrough.

FUTURE TUNNELLING ACTIVITIES

Third Development Axis - North

The design for the Third Development Axis – North covers the execution of a new road link from the Koper – Šentilj motorway A1 near Šentrupert to Slovenj Gradec. The total length of the planned expressway amounts to 31.5km, and it will have four cut-and-covers over a total length of 1,840m and six tunnels for a total length of 3,700m.

Third Development Axis – South - Tunnel Gorjanci

The design for the Third Development Axis – South covers the execution of a new road link from the Ljubljana–Obrežje motorway

near Novo mesto to Maline. The total length of the planned expressway amounts to 17.9km, and it will have three bridges, four viaducts, two cut-and-covers tunnels, a 2,341m long tunnel under the Gorjanci hills, 10 overpasses, nine underpasses and two lay-bys.

Left track of the new Divača-Koper railway line

Preliminary design for the upgrade of the currently under construction railway line from Divača – Koper. The new left track has a total length of the planned tunnels of 17.05km.

STATISTICS

1. Length or volume excavated - % mechanized / % conventional during 2020

3500m (100% conventional)

2. Amount (USD or EUR) of tunnelling/underground space facilities awarded in 2021

628.3M

3. List of tunnels under construction

Second tube of Karavanke Tunnel; Pekel Tunnel; Second Track of the Divača-Koper railway line; Lokev Tunnel; Beka Tunnel; Stepani Tunnel; Tinjan Tunnel; Osp Tunnel Mlinarji Tunnel; Škofije Tunnel

EDUCATION ON TUNNELLING IN THE COUNTRY

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