

Poland



Name: Subcommittee of Underground Construction of Polish Committee on Geotechnics (Polish Tunnelling Committee)

Type of Structure: Non-profit, open association

Number of Members: 69 members, 4 corporate members

ASSOCIATION ACTIVITIES DURING 2019 AND TO DATE

In 2019 the Polish Tunnelling Society (full name: Subcommittee of Underground Construction of Polish Committee on Geotechnics) organized a one day International Seminar endorsed by ITA "Challenges of modern tunnelling". The Seminar took place in the Sheraton, Warsaw on 13th September 2019 and was followed by the ITA Executive Council meeting. 250 participants took part in the Seminar. Honoured speakers were: Jinxiu (Jenny) YAN (Pic.1), Martin Knights, Tarcisio B. Celestino, Giuseppe Lunardi, Randall J. Essex, Andres Marulanda, Jamal Rostami.

The representatives of Poland were

present at ITA General Assembly and attended meetings of ITA Working Groups held during WTC 2019 in Naples: Monika Mitew-Czajewska (president) - WG20, Anna Siemińska-Lewandowska (secretary) - WG15, Dymitr Ganew - WG14.



Road Tunnel in Warsaw – the tunnel passing under the existing metro tunnel

CURRENT TUNNELLING ACTIVITIES

Road Tunnel in Warsaw – as part of the south city ring

2,700m long tunnel, 3 lanes in each direction; construction method - cut and cover. Construction works in progress. Due date end of 2020.

Construction of the 2nd metro line in Warsaw, an extension of the existing central part:

- In the east direction (3 stations, 6.3km) – completed
- In the east-north direction (3 stations, 8km) - Due date 2023.
- In the west direction (3 stations, 7km) – Due date April 2020.
- In the west direction (5+1 stations, 12km) – Due date 2023

Construction method: TBM + cut & cover.

Road Tunnel under Luboń Mały – south Poland

Over 2 x 2km tunnels on the S7 motorway from Kraków to Zakopane (a Polish skiing resort). Construction works in progress, 2200m executed, method of construction - ADECO RS. Due date 2020.

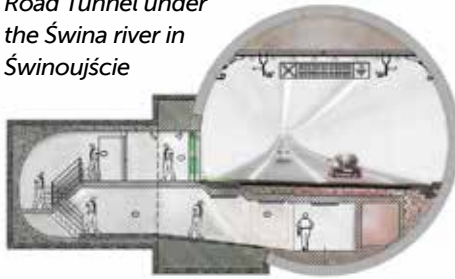


Road Tunnel under Luboń Mały,
Construction site

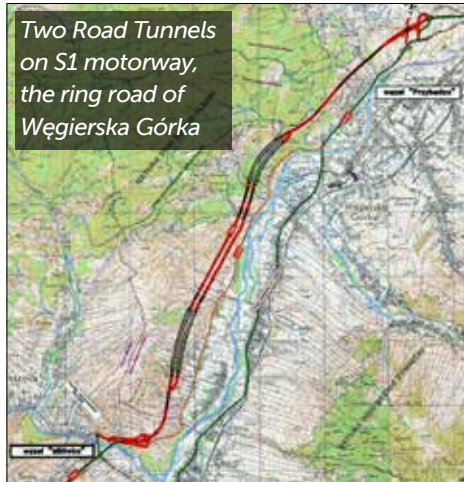


Road Tunnel on S3 motorway Bolków-
Kamienna Góra, Portal visualisation

Road Tunnel under
the Świna river in
Świnoujście



Two Road Tunnels
on S1 motorway,
the ring road of
Węgierska Góra



Road Tunnel on S3 motorway Bolków-Kamienna Góra – south Poland

2,3km tunnel on the S3 motorway from Bolków to the state boarder. Design and build. Contract was signed in September 2018, design works begun. The method of construction – NATM. Due date end of 2023.

Road Tunnel under the Świna river in Świnoujście – north Poland

The 1.44km long tunnel will connect the islands of Uznam and Wolin. Construction method TBM – 12m diameter. Due date end of 2022. Design works begun, TBM ordered.

Rail Tunnel in Łódź – Tunnel connecting Łódź Fabryczna and Łódź Kaliska stations

Length of the tunnel – 3km of double track tunnel, 4.5km of single track/tube tunnels; 2 underground stations; Construction method TBM + cut & cover. Due date 2022. Design works are completed. Two TBM's – diameter 13.04m and 8.76m were ordered. Construction of shafts begun in 2019, first TBM should start operation in summer 2020.

Two Road Tunnels on S1 motorway, the ring road of Węgierska Góra – south Poland

Two road tunnels (830m and 980m) on the S1 motorway from Bolków to the state border as a design and build

contract. Tunnels will be constructed using Sequential excavation method or ADECO. Due date 2022.

FUTURE TUNNELLING ACTIVITIES

Four Road Tunnels on the S19 motorway, Via Carpatia, section Rzeszów - Barwinek

Four road tunnels (1.35km, 1.75km, 1.6km, 1.2km) on the S19 from Rzeszów to the state border. The conceptual design is in progress. Construction time 2020-2025.

2 Road Tunnels on the S7 motorway in Warsaw

2 road tunnels; 2 x 3 lanes in each direction, in preliminary design

Eleven Rail Tunnels – 12km length in total on the planned 58km long new rail route Podłęże-Piekietko in the south of Poland. Also two Rail Tunnels – 5.8km length in total on the rail route Chabówka – Nowy-Sącz will be modernized.

Environmental decision obtained. The design works are in progress. Preparatory works and the design are to be completed by 2021. The construction and modernization is planned for 2020-2026

Two short rail tunnels in Górki (0.22km) and Maksymilianowo (0.11km)

A lot of short tunnels, under rail tracks, are being built across Poland.

STATISTICS

1. Length or volume excavated
 - 75% mechanized, 25% conventional during 2019
2. Amount (USD or EUR) of tunnelling/underground space facilities awarded in 2019
 - €500,000
3. List of tunnels completed:
 - 1, East extension of the 2nd metro line in Warsaw
4. List of tunnels under construction
 - 8 + 19 in the design stage

EDUCATION ON TUNNELLING IN THE COUNTRY

Basics of Underground Structures

(1st degree studies), Underground Structures I and II, Fire safety in tunnels – 2nd degree studies – Warsaw University of Technology, Faculty of Civil Engineering

Underground Construction (1st degree studies), Geotechnology of underground structures and tunnels, The impact of underground construction on surface and surrounding rock mass, Ventilation in selected underground facilities – 2nd degree studies – AGH University of Science and Technology, Faculty of Mining and Geoengineering

Underground Structures – 2nd degree studies – Wrocław University of Science and Technology, Faculty of Civil Engineering

Tunnels and underground passages – 2nd degree studies – Cracow University of Technology, Faculty of Civil Engineering

Elements of rock mechanics and underground structures – 2nd degree studies – Faculty of Civil and Environmental Engineering, Warsaw University of Life Sciences – SGGW

Underground structures – (1st degree studies) – Silesian University of Technology, Faculty of Civil Engineering

Underground structures (2nd degree studies) – Białystok University of Technology, Faculty of Civil and Environmental Engineering