

Korea (South)



Name: Korean Tunnelling and Underground Space Association

Type of Structure: Non profit open association

Number of Members: 3055 members, 73 corporate members

ASSOCIATION ACTIVITIES DURING 2020 AND TO DATE

Established in 1992 as a non-profit incorporated association, KTA is the tunnel-oriented national organization to comply with the international aims of ITA. Most of the KTA members are tunnel engineers, but not limited to the civil engineering field and recent expansion into the field of fire, disaster prevention and ventilation within tunnels, among others, are noteworthy.

In 2020, KTA held a president election at 9. April - Prof. Seokwon Lee was inaugurated as a 14th president.

In addition, KTA hosted several domestic conferences and forums. The short list is as follows:

- 2020 KTA General Assembly
2020.04.09, Seoul (117 domestic participants)
- 2020 KTA Tunnel Construction Policy Forum & Annual Conference
2020.11.06, Seoul (180 domestic participants)
- The KTA Technical Forum on TBM Tunnel
2020.02.25~02.26, Seoul (70 domestic participants)

KTA hosted 5 continuing education and training courses during the last year - The list follows in the section 'Education on Tunnelling in the Country'

A total 11 Working Groups in KTA - KTA-Annual WG Activity Reports: 11 WG activity reports, 3 WG technical reports

Publications

- Domestic technical journal "Journal of Korean Tunnelling and Underground Space Association" (6 issues with 44 papers in 2020)
- Quarterly magazine "Nature, Tunnel and Underground Space"

CURRENT TUNNELLING ACTIVITIES Daegok-Sosa Railway Tunnel Construction

- TBM + NATM hybrid construction
- Dia. 8.1m twin shield TBM tunnel crossing through Han River
- Total length of 18.36km (2.85km in section of Han River)



- Corner stone of South-North Korea economic cooperation
- Photo_1.doc

Kimpo-Paju 2nd Seoul Outer-ring-road Project (passing Han River section)

- Connecting the 2nd Seoul outer-ring-road
- Total length of 25.3km (Passing Han River section of 4km)
- Project cost will be about \$1.3bn

FUTURE TUNNELLING ACTIVITIES Youngdong Main Street Underground

- Complex Development Project
- Maga-Underground Space in Seoul Metropolitan
- Total underground space of 0.41Mm²
- Project cost will be about \$1.5bn

Honam-Jeju Subsea Tunnel Project

- Connecting the Korean Peninsula and Jeju Island
- Total length of 167km (Undersea section of 73km)
- Project cost will be about \$15bn

Youngjong Island 3rd Connection Way Project

- Connecting Incheon hub airport and Seoul metropolitan area
- The 3rd connection way after previous two long-span marine bridges
- Consideration of transport security and weather accident

Gangneung~Jejin Single Line Railway Construction Project

- Railway along the east coast in Korea
- Total length of 111.7km (Undersea section of 50.9km)
- Project cost will be about \$2.5bn

STATISTICS

List of tunnels completed

- Wonju-Gangneung High-speed Railway Tunnel
- Jinhae-Guyjae Main Gas Pipe Line Tunnel
- Gunjang Energy GE-3 PJT Subsea Tunnel

List of tunnels under construction

- Yulchon Thermoelectric Power Plant Tunnel
- Boryung-Taeon Subsea Road Tunnel
- Daegok-Sosa Railway Tunnel
- Kimpo-Paju 2nd Seoul Outer-ring-road Project

EDUCATION ON TUNNELLING IN THE COUNTRY

KTA Continuing Education and Training Course

- 2020.09.03, Seoul (71 educatees/trainees)
- Tunnel blasting technology
- New technology in tunnel rock determination field

- 2020.10.08, Seoul (88 educatees/trainees)
- TBM design basics
- TBM construction basics

- 2020.11.12, Seoul (88 educatees/trainees)
- Mechanical excavation for urban tunnel
- Eco-friendly blasting and excavation in urban areas

- 2020.12.03, Seoul (online courses)
- Latest trends in road tunnel ventilation technology
- Latest trends in road tunnel disaster prevention guidelines

- 2021.01.21, Seoul (online courses)
- Latest Trends in Underground Safety Management System
- Review of standard manual for preparation of underground safety impact assessment report