

Korea (South)

Name: Korean Tunnelling and Underground Space Association

Type of Structure: Non profit, open association

Number of Members: 2,957 members (73 corporate members)



ASSOCIATION ACTIVITIES DURING 2019 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 2019, KTA hosted the ITA endorsed international conference on Jeju Island

The 2019 International Conference on Tunnels and Underground Spaces, ICTUS19

- 2019.09.18~19, Jeju Island (62 international participants)
- Two honourable keynote lectures:
 - Prof. Jamal Rostami: Underground Construction on the Moon
 - Prof. Thomas Marcher: Long infrastructure tunnels/future trends and challenges

ITA Tunnelling Award 2019 Final List

The Seoul Metropolitan High-Speed Railway Construction Project (Yulhyeon Tunnel)

- Presented by Korea Rail Network Authority
- 2019.11.18, Miami, USA
- Entry Category, over €500M

In addition, KTA hosted several domestic conferences and forums:

- 2019 KTA General Assembly & Annual Conference, 2019.04.25, Seoul (170 domestic participants)
- The 2019 Domestic Seminar on tunnel technology
 - 2019.07.04, Seoul (112 domestic participants)
 - Tunnel segment lining design practice based on international design standards
- The KTA Special Lecture delivered by Prof. Jamal Rostami
 - 2019.09.20, Seoul (55 domestic participants)



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

- The use of discrete event modelling and process simulation in estimating TBM utilization
- The 3th Joint-Forum on Tunnel Safety and Future Technology
 - 2019.09.29, Daejeon (360 domestic participants)
- KTA-Korea Land & Housing Cooperation(LH) MOU
 - 2019.10.21, Seoul
- The KTA Technical Forum on Tunnel and Underground Safety
 - 2019.10.22, KyunggiDo (333 domestic participants)

- 2019 KTA Tunnel Construction Policy Forum
 - 2019.11.14, Seoul (105 domestic participants)

A total 11 Working Groups in KTA

- KTA-Annual WG Activity Reports: 2 WG activity reports

Publications

- Domestic technical journal "Tunnelling Technology" (6 issues with 78 papers in 2018)
- Quarterly magazine "Nature, Human Being and Tunnel"

CURRENT TUNNELLING ACTIVITIES

Daegok-Sosa Railway Tunnel Construction

- TBM + NATM hybrid construction
- Dia. 8.1m twin shield TBM tunnel crossing the Han River
- Total length of 18.36km (2.85km under the Han River)
- Corner stone of South-North Korea economic cooperation

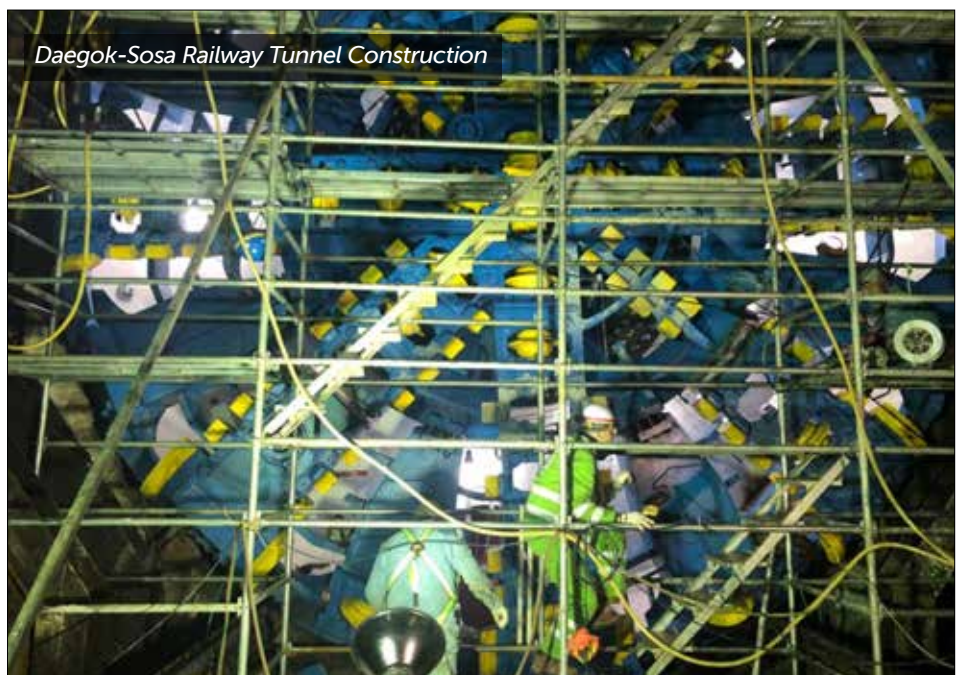
Kimpo-Paju 2nd Seoul Outer-Ring Road Project (passing the Han River section)

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

FUTURE TUNNELLING ACTIVITIES

Youngdong Main Street Underground Complex Development Project

- Mega-Underground Space in the Seoul Metropolitan area



Daegok-Sosa Railway Tunnel Construction

- 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 the Seoul metropolitan area
- The 3rd connection after two long- span marine bridges



Youngdong Main Street Underground Complex Development Project

STATISTICS

1. List of tunnels completed

- Wonju-Gangneung High-speed Railway Tunnel
- Inje-Yangyang road tunnel
- Incheon (North Port) Subsea Road Tunnel
- Boryung-Taeon Subsea Road Tunnel

2. List of tunnels under construction

- Jinhae-Guyjae Main Gas Pipe Line Tunnel
- Yulchon Thermolectric Power Plant Tunnel
- Gunjang Energy GE-3 PJT Subsea 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

2019 KTA Training Course:

Sustainable Development of Future Underground Space. 2019.02.14-15, Seoul (54 attendees)