

Korea



Name: Korean Tunnelling and Underground Space Association

Type of Structure: Non profit open association

Number of Members: 2832 members, 72 corporate members

ASSOCIATION ACTIVITIES DURING 2018 AND TO DATE

Established in 1992 as a non-profit incorporated association, KTA is the tunnel-oriented national organization that complies 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 2018, KTA hosted several domestic conferences and forums. The short list is as follows:

- 2018 KTA General Assembly & Annual Conference
2018.04.12, Seoul (207 domestic participants)
Election of the new KTA president, Prof. Hankyu Yoo
- The Joint-Forum on Tunnel Safety and Future Technology
2018.09.14, Seoul (333 domestic participants)
- KTA-Kwater MOU
2018.10.05, Seoul
- 2018 KTA Tunnel Construction Policy Forum
2018.11.08, Seoul (105 domestic participants)
- 2019 KTA Training Course: Sustainable Development of Future Underground Space
2019.02.14-15, Seoul (54 educatees/trainees)
- A total 11 Working Groups in KTA
- KTA-Annual WG Activity Reports: 7 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

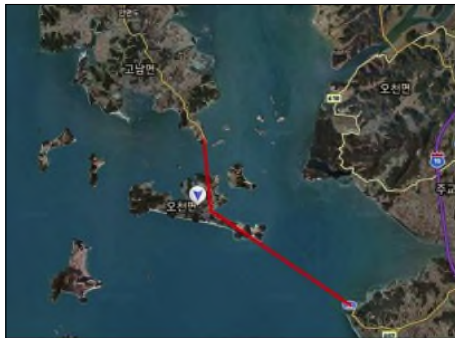
Boryung-Taean Subsea Road Tunnel Construction

- NATM passing through highly fractured faults

- Undersea route length of 6.92km connecting Route 77
- Max. depth of 80m

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



Boryung-Taean Subsea Road Tunnel Construction

FUTURE TUNNELLING ACTIVITIES

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

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

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 after previous two long-span marine bridges
- Consideration of transport security and weather accident



Youngjong Island 3rd Connection Way Project

STATISTICS

1. Length or volume excavated - % mechanized / % conventional during 2018

Railroad tunnel: 69km
Road tunnel: 185km

2. Amount (USD or EUR) of tunnelling/ underground space facilities awarded in 2018 - About 6.4bn USD

3. List of tunnels completed:

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

4. List of tunnels under construction

- Boryung-Taean Subsea Road Tunnel
- Jinhae-Guyjae Main Gas Pipe Line Tunnel
- Yulchon Thermoelectric Power Plant Tunnel
- Gunjang Energy GE-3 PJT Subsea Tunnel
- Daegok-Sosa Railway Tunnel

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 educatees/trainees)