

Chile



Name: Committee of Tunnels and Underground Spaces (CTES)

Type of Structure: Non profit, open association

Number of Members: 60 Members (48 are companies from the industry)
Corporate Members: 14 Category Gold, 34 Category Associated and 12 Individual members.

ASSOCIATION ACTIVITIES DURING 2020 AND TO DATE

1. Seminars and conferences

- **(Jan.2020):** Closing Activity - Revision of Highway Manual of Chile in tunneling issues. Ministry of Public Works – CTES Chile - Upgrading and results
- **(May.2020):** Webinar – Communication and Remote operation in underground spaces – Lecture 1
- **(May.2020):** Webinar “Cases and Experiences of use of BIM methodology in underground works”
- **(Jul.2020):** Webinar: “TBM Tunneling - Design, construction, services and engineering projects” – Lecture 1
- **(Jul.2020):** Webinar: “Challenges and opportunities related to the development of Underground spaces” - Lecture 1
- **(Aug.2020):** Webinar – Communication and Remote operation in underground spaces – Lecture 2”
- **(Aug.2020):** Webinar: “TBM Tunneling - Design, construction, services and engineering projects” – Lecture 2
- **(Sept.2020):** Webinar: Implementation of the Geotechnical baseline report (GBR) for contracts based on Emerald Book FIDIC
- **(Sept.2020):** TBM Tunneling- Experiences on International Projects” – Lecture 3
- **(Nov.2020):** Webinar: “Uses and

opportunities related to the development of Underground spaces” - Lecture

2. Training

None

3. Technical Lectures

- International Seminar: Experiences on Road tunnels Standards (Visions from Austria, Spain, Switzerland and Norway)
- Webinar: Dramix Steel Fibers for Concrete Reinforcement

4. Other

- Launch of Young Members Group (85 pre-registered)
- Agreement of Partnership with Asociación de Oficinas de Arquitectos (AOA), Consejo de Políticas de Infraestructuras (CPI) and Comité de Infraestructura Públicas – Cámara Chilena de la Construcción (CChC)
- Working group for Underground Space Development (on framework of Agreement above).
- Georeferenced survey of national Underground Spaces (on framework of working group above).

FUTURE TUNNELLING ACTIVITIES

- BIM technologies and innovations in

- underground works projects (Mining / Infrastructure /Road Works)
- Lecture Series - Underground Megaprojects Progress in Chile (Mining / Infrastructure / Road Works)
- Uses and opportunities related to the development of Underground spaces – 2 lectures along year
- Evolution in equipment, accessories and explosives for underground use
- Mining automatization
- TBM and D&B Experiences
- Design and Construction Underground Works with RAISE BORE
- Design of Projected Concrete Support in Underground Excavations
- Evolution of Mining Tunnel Equipment
- Design and Construction of Caverns
- Congress Tunnels and Underground Spaces - Congress
- Drillstring and bolts umbrella; Innovations and their importance in tunnel development.
- Innovations in Mechanized Fortification; with bolts, cables and shotcrete
- Mechanical Excavation (Mobil Mine and Road Headers)

EDUCATION ON TUNNELLING IN THE COUNTRY

1. Postgraduate Diploma in Tunnels and Underground Spaces; Universidad de Chile
2. Diploma in Modern Tunnel Excavation Techniques; Universidad de Santiago de Chile
3. Undergraduate Programs in Civil Engineering Mining (University of Chile, University of La Serena, University of Santiago of Chile, Universidad Adolfo Ibañez and others)