

France



Name: French Tunnelling and Underground Space Association (AFTES)

Type of Structure: Non-profit, open association

Number of Members: 1045 members (including 124 corporate members and 138 young members and students)

ASSOCIATION ACTIVITIES DURING 2020 AND TO DATE

Tunnels and Underground Space Magazine

4 quarterly issues:

- TES 271: Special dossier "Ventilation during construction works"
- TES 272: Special dossier "Underground spaces"
- TES 273: Special dossier "Grouting and foundation"
- TES 274: Special dossier "Tribute to Pierre Duffaut"
- In the 4 publications: Specific information sheets about TBMs

Technical

Seventeen active Working Groups and five recommendations published:

- WG3: Vibrations with use of explosives
- WG4: State of the art in TBM
- WG12: Organisation of emergency services during underground works
- WG24: Geological, hydrogeological and geotechnical investigations for tunnel design

- WG30: Bolting: Design and dimensioning

Education on Tunnelling

4 main actions:

- Support of the INSA-ENTPE post-graduate master's course "Tunnels and underground structures from design to operation" and to the University Le Havre - Pro Licence "Underground Works and Geotechnical Works"
- Open several continuing education sessions for all professionals
- Promote know-how and trades in the underground to students
- Reinforce the bridge between the professionals and the academic research community

Underground Space

Coordination of several activities:

- Organisation of a competition in the field of architecture: "Underground space and innovations"
- Finalisation of the national research project - Ville10D

- Preparation of publications and papers to promote underground use

Young Members

- Consolidation of the YM Committee
- Development of the YM network
- Organisation of technical events (visits and technical sessions)
- Involvement in the EUTF Young members activities

Materials, Equipment And Products

- Actions for the promotion of manufacturers and innovative products:
- Gather innovative solutions and feedback from worksites
- Preparation of the AFTES exhibition in the 2020 WTC (finally cancelled for Covid reason)

Technical Events and Visits

Conferences (25th February 2020):

- The guide to testing and acceptance for tunnel equipment
- What's new in formwork?
- An innovative solution for the traceability of excavated material
- Webinars
- Information on the new AFTES recommendations (22 et 23 September 2020):
- New recommendations on grouting
- BIM: IFC for tunnel construction works
- New recommendation on vibration thresholds and impacts management
- New recommendation on geotechnical investigation for tunnel design
- New recommendation on rescue organisation in tunnel construction worksite
- New recommendation on bolting: design and dimensioning
- State of the art in TBM
- Consequences of the Covid epidemic on underground construction sites (17th November 2020)
- The durability of concrete in tunnels (8 and 9 September) – contribution to the technical event organized by PoCES

International Partnership

AFTES International Congress

The AFTES International congress initially planned for September 2020 has been postponed to the 6-8th September 2021 in Paris, Porte Maillot

EUTF – European Underground and Tunnel Forum

Main actions:

- Consolidation of the EUTF priorities for action
- Discussion with ITA regarding the ITA



strategy and organisation

- Coordinated contribution to conferences and webinars

Conferences and webinars

- 26th November: Webinar on the major road projects in Norway
- 27th November: Webinar "Beyond a tunnel vision – the 2nd European conference on tunnel renovation" organized by
- COB – Netherlands with the contribution of EUTF

ITA-AITES

- Participation to the 16th September General Assembly
- Active contribution to the animation and production of several ITA working Groups and committees
- Specific involvement in ITA-CET: committee for training and knowledge sharing

CURRENT AND FUTURE TUNNELLING ACTIVITIES

Grand Paris Area: 21 TBM running in 2020

Metro Line 11: 1 TBM in course

- TBM Sofia (3km) between Mairie des Lilas and Rosny Bois-Perrier

Metro Line 14 South: 3 TBM in the final rush

- TBM Claire (4km), TBM Koumba (4km) and TBM Allison (4.8km) for the link to Orly Airport.

Metro line 15 South: 8 TBM in course in 2020

- TBM Laurence (4.2km) between Pont de Sèvres and Fort d'Issy/Vanves/Clamart.
- TBM Ellen (4km) and TBM Amandine (3.4km) between Fort d'Issy/Vanves/Clamart and Villejuif.
- TBM Aby (4.3m) and TBM Marina (2.6km) between Villejuif and Créteil-Lachât
- TBM Camille (4.2km) and TBM Aïcha (3.1km) between Créteil-Lachât and Bry/Villiers/Champigny.
- TBM Malala (4.7km) between Bry/Villiers/Champigny and Noisy-Champs.

Metro Lines 16 – 17 Common stretch: 4 TBM in course

- TBM Valérie (1.7km), TBM Sarah (2.6km), TBM Dorine (1.3km) and TBM Bantan (3.8km) between le Bourget
- RER and Saint Ouen

Metro line 16: 3 TBM

- TBM Inès (3.1km) and TBM Armelle (3.3km) between Le Bourget RER and Le Blanc Mesnil.

- TBM Houda (5.8km) between Le Blanc Mesnil and Clichy-Montfermeil

Metro line 17: 1 TBM

- TBM Florence (3.4km) between Bonneuil and Le Bourget.

RER Line EOLE: 1 TBM

- TBM Virginie (8km) between la Défense and Gare Saint-Lazare

In 2021, 3 additional TBM will be launched

Lyon – Travaux 2020 - 2021

Metro line B: TBM Céline (2.5 km) between Saint-Genis Laval et Oullins. The TBM will complete its task in 1st semester of 2021

Toulouse – Project

3rd metro line: 27km – 21 stations – Design process underway

TELT – Tunnel Euralpin Lyon Turin

By March 2020, more than 30km of tunnel are already excavated (meaning 18.5% of the 162km), including a 9km long stretch for investigation purpose.

In 2021, the tender phase for the construction of the main international tunnel (57km, 2 tubes)