



France

Name: Association Française des Tunnels et de l'Espace Souterrain (AFTES)
Association registered under the 1901 Act

Type of structure: 804 members (collective 128-individual 676)

2016 ORGANISATION

Communication Committee

Bimonthly technical magazine, website, participation in technical events

Education Committee

Post-graduate specialised 'Master' degree – Promotion # 6

Technical Committee

Technical recommendations - 24 active working groups 320 active members

Underground Space Committee

Ville10D National Research Project

Congress Organisation Committee

PARIS, November 13-15th, 2017

Plant-Equipment-Products Committee

Transfer of technology know-how (WTC 2016 in San Francisco, USA)

Regional Delegates

Conferences and visits

2016 ACTIVITIES

Work groups:

- GT3 : Use of explosives
- GT4 : Mechanized tunneling
- GT6 : Rock bolting technology
- GT6A : Shotcrete
- GT8 : Grouting works for soils and rocks
- GT9 : Waterproofing
- GT12 : Rescue service organization and associated means
- GT14 : Method to assist in asset management for underground structures
- GT16 : Taking into account the effects of excavation on the neighboring constructions
- GT24 : Forward probing for tunnel boring machines
- GT25 : Economic control and contractualization
- GT26 : Environment of the construction site in rural areas

- GT27 : Ventilation of underground works during construction
- GT30 : Design of bolting
- GT32 : Geological and geotechnical uncertainties and risks
- GT35 : Management and re-use of excavated materials
- GT36 : Geometry, concrete, formwork and concreting of tunnel linings
- GT37 : Fire resistance of railway tunnels
- GT38 : Design, dimensioning, manufacturing of precast steel fiber reinforced concrete segments
- GT40 : Rail tracks and track beds in tunnels
- GT41 : Underground works and sustainable development
- GT42 : Consideration of the radon factor in a project
- GT43 : Application of the new geotechnical engineering standard to the underground
- GT44 : Asbestos bearing rocks

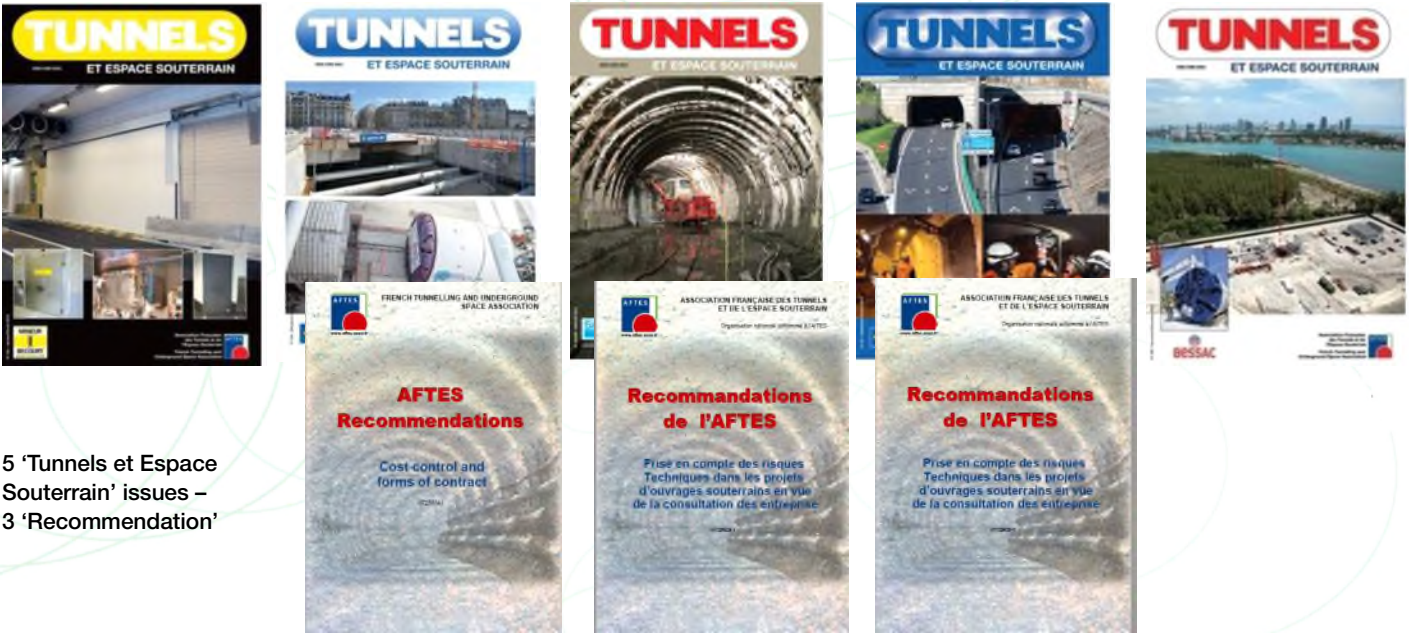
Training:

- **Post-graduate specialised Master's degree TUNNELS AND UNDERGROUND STRUCTURES, from design to operation**
 - 90 professional speakers and professors
 - One semester of coursework (October to February)
 - One semester of internship (March to July)
 - 6th Promotion 2016-2017 :
<https://www.insa-lyon.fr/fr/mastere-ouvrages-souterrains#0>
- **Short intermediate training courses within the Master's degree program**
- **Post-Graduate specialised 'Master' Degree**



5th Promotion 2015-2016





5 'Tunnels et Espace Souterrain' issues – 3 'Recommendation'

Publications:

- Bimonthly technical magazine : 'Tunnels et Espace Souterrain' (T&ES)
N°253-254-255/256-257-258
(More than 30 technical papers –average 70 pages per TES)
http://www.aftes.asso.fr/publications_revue-tunnels.html
- Technical recommendations
GT 09 : Waterproofing techniques for underground structures
GT 25 : Cost control and forms of contract
GT 32 : Geological and geotechnical uncertainties and risks

Aftes Exhibition Booths

- San Francisco WTC 2016



TUNNELS – UNDERGROUND WORKS

Grand Paris Project

From now to 2030:

- 200km of automatic metro will be created
- 68 new stations will connect the main poles of Paris, the 3 airports and the TGV stations -2 million travellers/day will use this new network



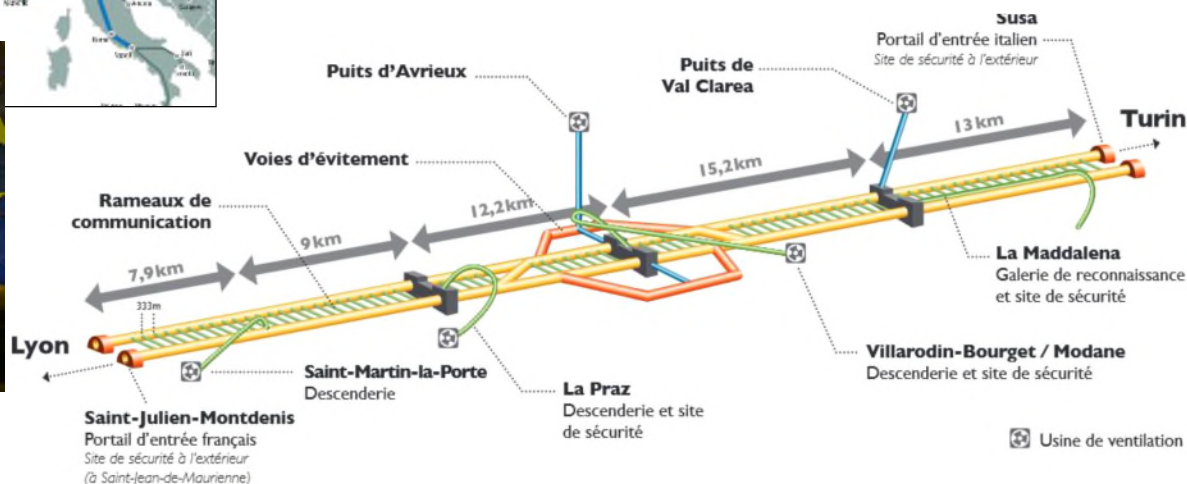
From now to 2030:



TUNNELS – OTHER UNDERGROUND WORKS

TELT (Lyon-Torino Transalpine Tunnel)

(2 x 57km)



SAFETY GALLERIES IN THE "SAVOIE" REGION

Fréjus tunnel
12km



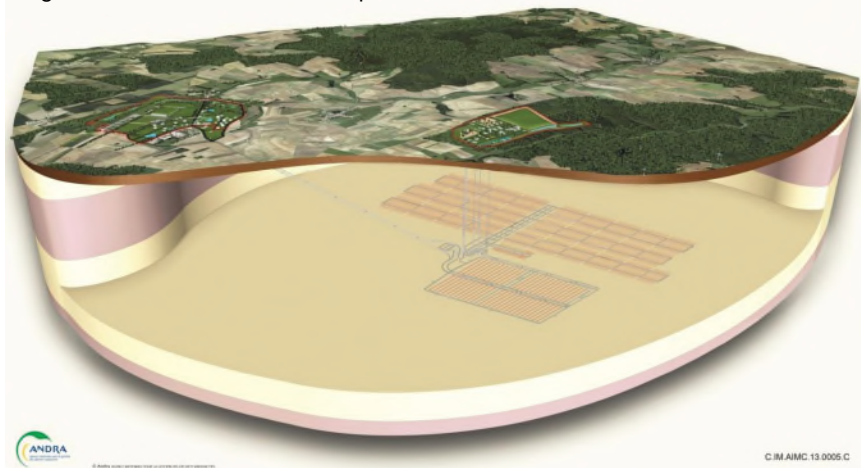
Siaix Tunnel
1.5km



CIGEO/ANDRA PROJECT, BURE, FRANCE

Industrial area for geological storage of nuclear waste

2 above-ground installations
Underground installations at 500m depth



OTHER ACTIVITIES

Conferences and site visits in 2016



March 10, 2016

Paris, extension of metro line 14
Lot 1 from Saint-Lazare rail station to Porte de Clichy Participation: 15 inscrits présents



April 8, 2016

Equipment in road and rail tunnels



April 20, 2016

Visit to the HERRENKNECHT factory, Schwanau (Germany)
Participation : 20 inscrits présents



May 18, 2016

TELT -Lyon-Turin Transalpine Tunnel - Saint-Martin-La-Porte (73)



July 26, 2016

Paris, Mairie des Lilas, extension of metro line 11
Calmette shaft and test gallery
Participation :15 inscrits présents



August 26, 2016

Visit to the Chambon tunnel (38, France)
New side tunnel further to the landslide -RD 1091
Participation : 31 inscrits présents



September 23, 2016

Nice, construction of the tramway West-East line



October 14, 2016

Presentation of some large underground schemes: reality and projects



November 2, 2016

Lyon, visit to the North Orbital Tunnel (construction of connecting galleries)
Participation: 13 inscrits présents



December 2, 2016

Visit to the Chambon tunnel worksite (38)

SOME FUTURE ACTIVITIES

<http://www.aftes.asso.fr/evenements.html>

2017				
Dates		Lieux		Thèmes
17	janvier	Paris	Chantier	Microtunnelier Collecteur Chatenay
27	janvier	Lyon	Conférences (CETU)	Matériels innovants et Expériences
23	février	Paris	Chantier	M4 Mont Rouge - Bagneux
28	février	Paris	Fontenay-sous-Bois - Mardis	RATP - Lignes 14 et 15
10	mars	Grenoble	Chantier	Gavet EDF Galeries au Tunnelier
5	mai	Lyon	Conférences (CETU)	Géologie
16	mai	Paris	Conférences FNTP - Mardis	Projet unité de recyclage déblais de chantier avec SGP
9 - 15	juin	Bergen Norvège	WTC 2017	Congrès mondial des tunnels
23	juin	Lyon	Conférences Mercure Perrache	Nouveaux projets
7	juillet	Moutiers (Savoie)	Chantier	La Coche EDF Galerie Explosif
15	septembre	Modane (Savoie)	Chantier	Lyon Turin TELT SMP4
26	septembre	Paris	Conférences FNTP - Mardis	Projet fabrication éléments béton préfabriqué
13 - 16	novembre	Paris	Congrès AFTES	Congrès des tunnels et de l'Espace Souterrain
8	décembre	Moutiers (Savoie)	Chantier	Siaix Galerie de sécurité

Next congress: Aftes Triennial Congress, Paris

Palais des Congres 13 to 15 Nov 2017